The Open Access Journal of Resistive Economics (OAJRE)
Contents

Introduction: .................................................................................................................................................. 4
The Words of Managing Editor: .................................................................................................................. 5
The Words of Economics Editor in Chief: .................................................................................................... 6
The Words of Management Editor in Chief: .................................................................................................. 7
Aims and Scope: ........................................................................................................................................... 8
Members: .................................................................................................................................................... 14
An Institutional Approach to the Tehran Bazaar ......................................................................................... 16
Dr. Mojgan Hosseini Ghomi, Dr. Shahla Bagheri and Fardin Mansouri

 Ranking the Factors Affecting the Green Supply Chain with Economics - Based Approach Using ELECTRE (Case Study: Waste Management In Shiraz) .......................................................... 32
Pouria farahgol, Narges Bizhan and Mohamad Hossein Asia

 The Study of Effective Reasons of the Customer Satisfaction Increase in the Acceptance and Use of Green Electronic Banking Services with EUCS Model (Case Study: Parsian Bank) 43
Elham Koohi, Dr. Ehsaneh Nejat Mohammad, Amir Mohammadi and AliReza Koohi

 Saving Costs by Preventing Leaving the Sport: Prioritizing Reasons for Leaving the Sport of Bodybuilding Clubs from the Customer Perspective ................................................................. 60
Maryam Setayeshi, Rokhsareh Badami and Hassan Musazadeh

 Cuban Healthcare System: A Strategic Model for the Resistive Economy .............................................. 72
Mohsen Khosravi

 Application of Trade Gravity Model between Iran and Main Trade Partners (Panel Data Approach) ................................................................. 83
Dr. Majid Feshari

 Developing Strategies to Improve Knowledge-Based Resistive Economy Using SWOT Model ................... 96
Hassan Moosazadeh, Pejman Barimani, Samaneh Doost Mohammad, Alireza Eslami
Introduction:

Recently, resistive economics joined the economics literature. One of the main requirements for such economy is self-reliance, due to achieve excellence. Some definitions of resistive economics regard the persistence against sanctions. And other ones emphasize on reinforcement of national economy. First time, in 2005, resistive economics was introduced after the blockade of Ghaza, And in recent years, tighten sanctions against some countries causes to promote this approach and takes into consideration. The goal of resistive economics is to use the internal sources potential against sanctions and restrictions with minimal crisis.

The approach and process of Protecting the national production, labor and capital has different economic, political and social aspects. The main one is resistive economics which could be effective due to the development and uprising of economy’s activities. Resistive Economic can be evaluated as one of the pillars that support the national production which neutralizing sanctions by relying on domestic production. And implementing its principles lead to revolution in the national production.

According to rapidly growth of scientific connections which comes from promotion and usage of online web, we aim to publish an open access journal. Nowdays, regarding many open access journals indexed in Citation Indices and high impact factor of some of them, authors became eager to them.

On the other hand, the open access movement’s attempts to start rising level of scientific journals which includes professional evaluations. This entire increases the attractiveness of participating in the movement.

By using the open access publishing, this journal is looking for promoting discussion about resistive economics. All published papers are peer reviewed and would have acceptable scientific standards and also would reveal the various aspects of resistive economics according to economics literature.
The Words of Managing Editor:

Resistive economy is a school and a strategy to achieve the minimum vulnerability and optimal point on the circumstances that independent variables such as economic sanctions and global restrictions, rule on economy. Therefore, due to develop the theme, scientific aspects and features of this economy, this journal has been set up to convey the ideological foundations of the resistive economy to literature of global economy.

Toroudshomal Research Company According to its missions for protecting and promoting the intellectual heritage of humanities aims to establish annual conferences in order to cover the new and critical humanities Themes. Also we would publish the outcome of these events which are accessible for all researchers to improve the scientific boundaries and to remedy the increasing real-world problems. So, for the first time, we publish the international journal of resistive economics in five scope Economy under sanctions, Oil and gas economics and management, Military Management and Economics, Green economics and Entrepreneurship. And we are trying to introduce the object of resistive economics’ discussions to international R&D centers and make it popular between economists.

We are pleased with the open access, because:
- It is publicly accessible on the web.
- Readers have right to read, print and share it with others freely.
- In traditional publishing, authors leave many of his/her rights to publishers. But in open access, all rights belong to authors.
- This open access journal is peer reviewed.
- It needs fewer cost and time to accept article.

Mohsen Kelich,
Director of Toroudshomal Research-Industrial Company
The Words of Economics Editor in Chief:

History of scientific journal in Iran began from 3 decades ago. And so far it has remarkable progress in terms of quantity and quality. Retrospect at journals published in developed countries; we face to Evolution of screening and evaluating of paper and method of publishing which moved from traditional ones to electronic publishing. However, the vision and purpose of authors from publishing papers and publishers’ responsibilities in this scope has been somewhat changed. Maybe part of this improvement could be attributed to legislation which itself is acceptable. Providing access to scientific and scholarly content placed readers in a potential and strategic situation which plays a fundamental role in informing.

The potential Background of resistive economics _like special committees to develop scientific papers, scientific centers against sanctions for compiling new strategic approaches in the economics literature and also scientific journal management method, implementing electronic publishing could be found in the goals of Toroudshomal Research Company as a scientific collection. Open access journal of resistive economics would publish regularly despite of many ups and downs in the International events. In this way we need the Cooperation of professors, teachers and researchers.

We hope to be able to draw bright prospect in this field by benefit from the valuable comments of teachers, students, and researchers and take large steps in this path.

Dr. Abolfazl Shahabadi
Economics Editor in Chief
The Words of Management Editor in Chief:

Sustainable growth and development in general and economic development specifically, is one of the most important and most controversial issues and challenges in the world, and the national aspirations of the people of all nations.

One of the most important effective factors of such a noble aspiration is having an effective and efficient interaction among countries. And resistive economics, sanctions (economic, political, cultural, social), regardless of their causes, are the most important challenges (opportunities and threats) in this field.

Management of sanctions challenges and turns them into good opportunities in different countries and it depends on the function of the effectiveness of three M. Top Management, Middle Management and Operational Management (Malaysia's new economic architect, Mahatyr M)

Although managers can take many tools to manage the challenges associated with the sanctions that may be applied, but certainly in the role of creativity, innovation and idea creation, the most unique feature of entrepreneurs (economic, political, cultural, social) is undeniable and unmatched.

Talent and creativity, innovation and idea creation found in all humans, but the degree of expression, appearance, and use it in different ways is not based on a specific rule. And conferences are ideal place to hunt for any kind of creativity, innovation and ideas.

Creativities, innovations and ideas targeted and trapped at the journal and opportunities and new solutions will be facing managers and administrators, so that they can use them to create knowledge-based wealth (economic, political, cultural, and social) to manage the different aspects of the sanctions act.

Dr. HassanAli Aghajani
Management Editor in Chief
Aims and Scope:

Themes and Sub-themes

- Military Economics and Management

The economics of war:
- War military expenses
- Background and state of economy prior to war
- Peacekeeping funding
- Recent wars and world economy
- Most military countries and their economy
- Value of economic lost in war
- Defense budget
- Defense subsidy

Military service:
- Relation between Military service and GDP, Entrepreneurship, Unemployment, …
- Troops costs
- The impact of Conscript on economic growth

Military treaty organization:
- North Atlantic Treaty Organization (NATO) and world economy
- Southeast Asian Treaty Organization (SATO) and world economy
- Nuclear Non-proliferation Treaty (NPT) and world economy

Military Markets:
- International arms market
- Global military expenditures
- Arms producing companies
- Arms trade
- Arms race model
- Small arms market
- Global military expenditures
- FDI in military project
- Ratio of military expenses to GDP
- Black market arms
- World arms exporters and imports
- Money laundering in arms market
- Military new technologies and economic growth

Military companies/institution:
- Private military companies/forces (PMCs/PMFs)
- Military labor market
- Joint military projects expenditures or joint Military project costs
- Military pay scale

Military management:
- Human Resource Management
- Management of Financial Resources
- Industrial Management
- Business Management
- Knowledge Management
- Production Management
- Risk Management
- Strategic Management
- Time Management
- Crisis Management

**Cyber war and economy:**
- Economic infrastructure and cyber war
- International monetary transactions and cyber war
- Economic Information Warfare

**Terrorism and world economy:**
- Financial flows of terrorist organization
- Expenditure of national & international security
- Terrorism operations and world economy
- September 11, 2001 attack and world economy
- The effect of weapons of mass destruction (biological, chemical, Nuclear, …) on world economy
- History of military-economic thought and theories
- Militaristic Keynesianism
- Golden arches theory

**Economy under Sanctions**
- Explain the economic conditions of sanctioned countries (China, Libya, India, Cuba, Iran, Iraq, Pakistan, South Africa, Syria, Sudan, Afghanistan, Russia, North Korea, etc.) from the perspective of macro-economic variables (exports, imports, privatization, inflation, interest rates, exchange rate, GDP, per capita income, economic growth, tax, unemployment, etc.)
- Explain the economic conditions under sanctions from the perspective of micro economic variables (market, consumer, manufacturer, price, utility, and the price elasticity of production, replacement and return of …)
- Economic sanctions and social variables (general health, health, Racism, Poverty, migration, food security, environment, Social Capital, etc.);
- Economic sanctions and international politics and law (human rights, democracy, humanitarian aid, etc.)
- The impact of sanctions on the production and trade of energy (oil, gas, etc.);
- Terms of economic sanctions and international monetary and financial systems;
- The impact of sanctions on banking and international trade;
- Economic sanctions and Doing business, entrepreneurship, SMEs;
- The impact of international sanctions on international organizations and companies, FDI & FPI;
- The Nature and Models of Sanction;
- Sanctions Management;
- Typology of Sanctions;
- Sanctions and Resistive Economics;
- Management of Organizations and Companies In Terms Of Sanctions;
- Reduce the Social and Economic Effects of Sanctions;
- Geneva Agreement and Its Consequences;
- Military Economy;

**Oil and Gas Economics and Management**

**Theories and Concepts:**
- Economic Development and oil and gas
- Geoeconomics and oil and gas
- Oil and gas planing

**Oil and gas's demand and supply**
- Trade and markets
- Market Forecasting
- Oil and gas pricing
- Consumption of oil and gas product
- The analysis of international energy demand and supply

Alternative Energy sources
- Renewable Energy
- The global climate change and international cooperation on reducing carbon emissions;
- New energy saving technology
- Other sustainable energy
- Ecological economy, circular economy and low-carbon economy;
- New technologies and design for energy efficiency

Investing in oil and gas
- Financing of oil and gas
- Contracts
- Energy Security and Risk Assessment
- Project management and investing
- Investment in related projects such as refineries and petrochemical

Domestic and international Policy making
- Exporter’s policies
- Importer’s policies

International organization
- OPEC
- GPEC
- G20

- Green economics

Theories and Concepts:
- Environmental Economics
- Environmental Management
- Green industries
- Welfare Economics
- Development Economics
- Agricultural Economics
- Eco Socialism
- Green tourism
- Eco Feminism And Women’s Economics
- Strengthening economic competitiveness,
- Foreign Direct Investment
- Game Theory

Structural Questions:
- privatization
- Good Governance
- Doing Business
- NGO’s
- Consumerism
- Civil Society And Attitudes To Acceptable Economic Activity
- Environmental Management As An Industry
- Taxing
- Off Shoring
• Outsourcing
• Multinationals And Tariff Barriers
• Polluter Pays

**International Institutions and Corporate Activity:**
• Bretton Woods
• EU
• UN
• IMF
• World Bank
• WTO
• UNCTAD
• GATTs
• Sovereign Wealth Fund
• Trading Blocks
• New Protectionism
• International Governance
• Roles And Activity Within Multinationals
• Procurement
• Processes Of Globalization At A Practical Level
• Limiting The Power Of The Multinationals

**New Initiatives and Cases, Experience and Applications:**
• Green Solutions
• Green intelligence
• Eco Taxes
• Resource Management
• Renewable Energy
• Green Management
• Green building
• New Economic Indicators
• Zero Waste
• Reuse
• Recycle, Repair
• Quality Of Life And Consumerism
• Information Technology and environments

**New Paradigms of the Economy:**
• Biosphere, Non-Human Species
• Women and Minorities
• Post Agricultural Social And Economic Requirements And Organization
• Planning To Reduce Surplus And Not To Harness It For Power Over Others
• New Fertilizer and environmental effects

**Social Justice:**
• Less Developed Countries
• Subsistence Economies
• Purchasing Power Parity
• Income Distribution
• Poverty: Its Definitions And Effects
• Quality Of Life Indicators
• Tools For Ensuring That Policies Involve Justice
• Environmental Justice And Consequences Of Lack Of It
- Entrepreneurship

Entrepreneurship:
- Theoretical and Empirical principles about entrepreneurship and value creation
- Entrepreneurship and its role in sustainable development (economic, political, cultural, social)
- Entrepreneurship in various areas of science and technology (With the goal of creating jobs and creating value and wealth).
- The role of entrepreneurship in resistive economics.
- Entrepreneurship, from the perspective of Islam and Quran.
- Green Entrepreneurship.
- Entrepreneurship under sanctions.
- Military Entrepreneurship
- And …

Incubator centers and science and technology parks:
- Theoretical and Empirical principles about Incubator centers and parks
- Specialized clinics for consultation and brokerage firms, operating and maintaining knowledge-based businesses.
- Knowledge-based Businesses (companies) and commercialization of science and technology
- And …

Management in the knowledge Based SMEs:
- Theoretical and empirical principles about knowledge – based SMEs
- Production, financial markets, innovation, legal issues, strategic management, management consulting for SMEs.
- Business clusters
- Green business.
- And …

The relationship between universities, industry and society:
- Theoretical and experimental study on the relationship between universities and industry.
- University and industry mutual expectations (community)
- Community/ Models / Patterns / Frameworks for effective communication between universities and industry
- And …

Third Generation Universities (entrepreneur and value creation):
- Theoretical and Experimental Community on Third Generation Universities.
- The role of universities in society development of (economic, political, cultural, social).
- The role of Third Generation Universities in Resistive Economics
- Academic entrepreneurship and entrepreneurial University – Commercialization of knowledge and academic technology.
- Universities, Colleges, departments, new generations’ courses.
- Programs and entrepreneurial training systems in universities.
- University and industry mutual expectations (community)
- Community/ Models / Patterns / Frameworks for effective communication between universities and industry
- And …

Commercialization and academic goods & services sale (education, research and technology):
- Knowledge-based wealth creation (economic, cultural, social and political) in the different academic areas.
- Shops, exhibitions, academic products markets technology (didactic, research and technology),
- Academic products sales and after-sales service chain (supply chain management) (didactic, research and technology),

And …
- Businesses clusters, unions, guilds and organizations which support academic goods and services (didactic, research, technology).
- Models / frameworks / patterns of employment and money making in the various spheres of academic production (education, research, technology and others).
- And …

**Entrepreneurial relationships with various academic courses:**

- Theoretical and Empirical principles about entrepreneurship and academic courses.
- Entrepreneurship, employment and money making in different humanity courses (management, economics, accounting, law, political science, geography, literature, language, religion, theology, jurisprudence and Islamic law, physical education and sports science, etc.).
- Entrepreneurship, employment and money making in various fields of basic sciences (chemistry, physics, biology, mathematics, biochemistry).
- Entrepreneurship, employment and money making in various fields of Agricultural sciences (Agronomy, Horticulture, Soil Science, Landscape, Animal Science, etc.).
- Entrepreneurship, employment and money making from various fields of engineering (Electrical engineering, Civil engineering, Mechanical engineering, Industrial engineering).
- Entrepreneurship, employment and money making in various art courses (architecture, urban planning, tourism, restoration and archeology, industrial design, painting, graphic design, clothing design and sewing, cinema, film, theater, acting, script-writing, crafts, art research, public relations.)
- Entrepreneurship, employment and money making in various medicine courses (medicine, nursing, physiotherapy, laboratory, dentistry)
- Entrepreneurship in defense and military fields and others…..
- And …

**And other freebies in line with the objectives of the conference:**

- Knowledge Based Economy.
- And …
Editorial Board:

“Science does not know Borders”

The Open Access Journal of Resistive Economics (OAJRE) kindly invites distinguished research scientists (only with PhD) to join in and work on the scientific committees and editorial review boards of the journals and conferences. Membership in the Open Access Journal of Resistive Economics (OAJRE) scientific committees and editorial review boards can open windows of opportunity for your professional growth and development as free-of-charge. Through special scientific committees and editorial review boards, and numerous occasions for scientific exchange with colleagues, journal of resistive economics gives distinguished research scientists the power to enhance their knowledge, skills, and professional options.

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An Institutional Approach to the Tehran Bazaar

Mojgan Hosseini Ghomi 1, Shahla Bagheri 2 and Fardin Mansouri 3

ABSTRACT: Tehran bazaar is located in the south of Tehran-capital of Iran. Its fame isn’t because of historical case, but its social-political activities have given centrality to Tehran bazaar among Iranian bazaars. The aim of the study of the Tehran bazaar is done with an institutional approach. Our method is the case study, and specifically, the qualitative method. The data were gathered from several different types of interviews as well as non-participant observation in 2015. The findings show structural changes in Tehran bazaar that have occurred since 50 years ago. These changes have happened in the institutions in Tehran bazaar. Our main emphasis in the article is on the relation between religion and economy in Tehran bazaar as an institutional change. The weakness of the relationship between the institutions makes some problems in Tehran bazaar such as forgery and dishonesty in economic activities, to which we have to pay attention at the end of this article.

KEYWORDS: Tehran; bazaar, institution, religion, economy

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1. **INTRODUCTION**

The market, as part of the economic institution in contemporary societies, has been of interest to the thinkers of social sciences and economics. In spite of the existence of numerous works in this field, theorists have not addressed the social dimensions of the bazaar, but have been more involved with its economic aspects. Swedberg (2005) maintains that even the economic theories have often been unable to explain the complexity of the phenomenon well enough.

Douglass North and Bernard Barber (1977) noted that the literature on economics was more concerned with the implicit rather than the explicit study of the concept of the market. As Swedberg puts it, “There exists even less material on the market as a social phenomenon than as a price-making mechanism” (Swedberg, 1994, p: 257).

The Tehran bazaar, with its 200-year-old antiquity, is considered a traditional case. Tradition and religion are closely related; besides, Tehran bazaar has functioned as a religious base throughout history. Thus, the commercial prestige of Tehran bazaar has greatly been influenced by religion. Religion sets the moral norms for business in Bazaar. The adherence of Tehran Bazaar merchants to moral norms has made the old merchants to be loyal on their covenant of economic activities. They are committed, according to the religious values and traditions, to the terms of the contract, which usually is expressed verbally. In such a normative framework, if someone disobeys the terms of the contract, he/she will be severely punished by other merchants and people avoid dealing with him/her (Granovetter, 2002).

The present article aims to study the social institutions of Tehran bazaar. Since among the social institutions of Tehran bazaar, the institution of religion is of great importance, the study at hand will focus on it.

2. **LITERATURE REVIEW**

Mohammadi (2014) reviewed the influence of modernist on cultural characteristics and economic boom of Tabriz Bazaar, using qualitative method, in Master’s dissertation entitled “reviewing affecting factors on social change of Tabriz Bazaar, the second Pahlavi period so far”. He provided the research findings in aspects of economic, social, political and cultural and frame work changes; and sought to review Tabriz market changes and the reasons for these changes in any dimension. He writes: The most important economic changes of Tabriz bazaar are non-compliance of Bazaar conditions with modern economy and reduction in its boom, the loss of some guilds and non-creation of new guilds in the Bazaar; the most important social changes are shifting normative construction and reducing in observance of ethical norms; the most important cultural changes are decline in religious commitment and failure to observe religious norms, reduction in relation with religious scholars and the spread of education among merchants; and the most important political changer are undermining the power and cohesion of merchants.

Pourghasem (2013) reviewed the ethic status of carpet and gold merchants in Khoy city, using qualitative method and depth interview with participating observation technique, in Master’s dissertation entitled “ethic in Bazaar, a study of professional ethic of three generation of jewelers and carpet-sellers in Khoy bazaar”. According to researcher’s point of view, Bazaar in Iran is not only a place for exchange and economy, but also a social institution besides politic and religious institution ever. This social capital and the trust resulting of it, rooted in religion and resulted from it. Merchants by using their social basis besides proselytizing, with their certain ethics had been seen as a role model in the community. In the past, Bazaar had the name equivalent to confidence. An institution that acted as a mediator between the power and the masses. The position of Bazaar and merchants has changed due to generational change going on in Iran. The new generation that emerged, are youth that concentrated on economic activity and set aside the accompaniment with religion and politics. The first generation religion-based morality is deformed to custom-based
morality in second generation and professional ethic in third generation; and consequently, the second and third generations also lost their mediation role. And this event has more appearance in the third generation that has replace religious references by self-referential.

Habibi (2011) reviewed the main and subsidiary frame works of Grand Bazaar of Tehran, and economic and social elements, and central grouping of its activities in a study entitled “The history of Grand Bazaar of Tehran, bazaars and markets in its periphery in two hundred years so far”. The subject of this research is about three main pillars of Grand Bazaar of Tehran: framework aspect, economic organization and staffing organization. In addition to making all three subjects, understandable as parts of a whole and coherent structure; examined the the interaction of its parts in contexts such as the process of creating and manufacturing Bazaar space, Shaping the activities of production, distribution and exchange in Bazaar and communication with foci outside of it, and the pattern of organizing the labor force and employees in various parts of Bazaar in format of guilds and like that. In this study, the most attempt is used to examine the form of Bazaar and its morphology, indeed. From the author’s point of view, the purpose of social and cultural orientation of contemporary period is reducing the role and basic function of Bazaar in economic, cultural and political life of cities and replacing with modern bureaucracy. The consequence of these interventions are the loss of framework values, economic efficiency, and social and moral values of Bazaar that had showed it as a total and dynamic society at a time not so long. So that some of the irregularities and turmoil in Bazaar community—that had self-regulation and order-orienting quirk—by transforming its main functions, challenged the mental image of this valuable experience and is has been threatening the perspective of social life of this phenomenon in future society.

Slater and Tonix (2008) in a book entitled “Bazaar community (Bazaar and modern social theory)” believe that among current approaches about social and economic organizing, ideas related to Bazaar take an important role. In recent decades, Bazaar models have been dominating in strategies and changes related to managing social and economic affairs; whether this domination be in the format of neo-liberal restructuring of capitalist advanced economic, or in the format of in-transition economics discussion of post-communist societies, or structural adjustment programs in developing countries. The logic of Bazaar had given such a wide way of thinking about social institution and more generally about human that concepts included competition, investment, regulation and selection could be used on different issues such as people’s life career, access to public services and even private activities. The authors believe that nowadays, in different contexts, different interpretation of Bazaar is being invoked; including operational interpretations of ad agencies, the perceptions of managers using Bazaar model to adjust the relation between different parts, and nominal calculations that econometric specialists do.

3. THEORETICAL FRAMEWORK

3.1. Bazaar in sociological theory

Among the classical sociologists, Max Weber was the most interested in the discussion of market. He attempted to depict economical sociology. However, sociologists such as George Simmel and Emile Durkheim have also mentioned market in their writings. Simmel emphasized the role of money in society, and Durkheim underscored the effects of normlessness on the different aspects of individuals’ behavior, especially on economy. Weber stressed such notions as exchange, competition, and even the existence of a physical community for the process of bargaining. He pointed to the element of struggle or conflict in the market and used the term “market struggle”. Furthermore, he emphasized struggle among the participants in the market (Swedberg, 1994, p: 257).

Of the contemporary social scientists, Talcott Parsons, Neil Smelser, and Karl Polanyi can be mentioned. Parsons and Smelser (1956) presented some suggestions for the development of
market sociology. They claimed that market could be conceptualized as a distinct social system. They attempted to illustrate theoretically and based on (AGIL) model a different structure of the market. However, the picture of market was less abstract in Polanyi’s work (1957). He holds that in the past there were only two types of market, the local market and the foreign market, each of which had its specific regulations, but neither led to an economic breakthrough. However, there are two turning points in the history of Europe that have triggered the advent of modern economics: the creation of domestic (national) markets by the mercantilist government and the elimination of all market regulations during the mid-nineteenth century in England (Swedberg, 1994, Pp: 266-267).

Mark Granovetter, by investigating the role of friends and acquaintances in employment (job seeking), became a pioneer in the network approach to the market, and Immanuel Wallerstein presented the theory of the modern world system, in which trade and international markets played a key role (Swedberg, 1994, p: 267).

It is noteworthy that Polanyi and Bourdieu have similar views in that they both consider the market as a less conceptual entity. For instance, Bourdieu places more emphasis on the institutionalization of the market to the extent that he claims that the market is devoid of the element of conflict, though according to Swedberg (1994, p: 267), Bourdieu, like his rival Fligstein, believes in the existence of some kind of struggle in the market (Fourcade, 2007, p: 1023).

It is obvious that both the classic and neo-classic economists have paid much attention in their analyses of economic performance to the rational choice theory, and specifically to maximization of interest (Karimi, 2008). However, Bourdieu devised a new idea by propounding the concept of “interest” along with such concepts as “habit”, “field”, and types of “capital”. In fact, he linked an economic concept with social concepts and presented a new interpretation. Bourdieu’s main idea is that the economic life is the result of the contact between the actors and their desires (habits) in the economic fields, and that markets are deeply affected by the nature of this field. The economic field could be a firm, an industry, a country, or the entire world. If the case is an industry, its structure will include the power relations among the firms through which the capitals in their various forms (e.g.: financial, technological, social …) are maintained. In this case, the dominant and dominated firms are in constant conflict. What happens outside this field plays an important part in the struggle within this industry. For instance, the government is a power that affects whatever happens within this field. The market is part of, and dominated by, the dynamism of this field. According to Bourdieu’s view, analyzing the market through the concept of social networks is insufficient to investigate the role of politics, the viewpoint of the actors, and all the characteristics that the market as a social institution can possess (Swedberg, 2005, Pp: 247-249).

Bourdieu admits that distinct fields of the society have spaces with their own fundamental rules within which the actors act according to the habits based on their previous experiences. Indeed, they participate in the field that is profitable for them. Each field, too, has its own specific benefit. Therefore, we have worlds of religious, economic, capitals (Swedberg, 2005, p: 381).

3.2. Social Structure of the Market

Initially, it is necessary to mention some points about social structure. Generally, there are three different approaches to social structure: Institutional structure, Relational structure, and Corporal structure. In institutional structure, the social structure encompasses those cultural and normative patterns that determine the expectations of economic actors of others’ behavior and organizes stable relations between them. However, relational structure refers to the social structure that includes social relations and connections per se and is the pattern for the mutual relations and reciprocal dependence between the actors and their actions as well as the position and place that they have in the society (Lopez & Scott, 2006, p: 13).

In recent years, new approaches to the third dimension of social structure have emerged to challenge the existing dimensions. This viewpoint is rooted in theoretical linguistics,
anthropology, and more recently, in evolutionary psychology. These scientists believe that social structure is similar to the structure of oral and written language. According to this viewpoint, the institutional and relational patterns result from people’s actions. These people owe to the capabilities that enable them to shape themselves in an organized manner through their actions. These capabilities are indeed the behavioral qualities; thus, social structure should be equated with corporal structure. This structure is found in the habits and skills embedded in individuals’ bodies and minds, enabling them to create, recreate, and transform the institutional and relational structures (Lopez & Scot, 2006, p: 14).

In Parsons’ view, social structure is “a modeled system of social relations among actors”. He suggested that these models of social relations should be considered as normative models, or social institutions (Lopez & Scot, 2006, p: 43).

Parsons was inspired by the institution idea of Veblen (1899, 1904) and Commons (1924, 1899 – 1900). Commons defined social institutions as “definite and approved ways of bilateral dealings” which are common in the society. These institutions are manifested in the norms, customs, traditions, and rules which shape the people’s wants and deeds, like the actions in the market and election campaigns, which are based on specific economic and political institutions, which in turn are based on more common social institutions studied by sociologists. This exactly is Durkheim’s “non-arbitrary element of the contractual”; that is, the normative frameworks related to trust and commitment assumed in conventional relations (Durkheim, 1893).

In Parsons’ view, social institutions make up the skeleton of the society. These social institutions are such major structures as marriage, monogamy, endogamy, patriarchy, ownership, contract, bargaining, goods barter, bureaucracy, expertise, education, etc. In addition, there are minor institutions that have temporary nature, such as queuing, conversations among individuals, etc. These major and minor institutions are gathered under such institutional infrastructures as feudalism, patrimonialism, industrial system, and capitalism.

It should be mentioned that in the present article, the social structure of the bazaar is considered an institutional structure, based on the approach that Tehran bazaar is a social system made up of institutions. One of the most important institutions under whose dominance the economic action is carried out is the institution of religion in the bazaar.

3.3. Institutional Approach and Tehran Bazaar

One of the most influential subjects in the discussion of the bazaar lies in the realm of the modern science of institutional economics. This branch of thought can be traced to the works of Renald Coase, who put forward the concept of “social costs”. His main argument was that economic transactions involve “social costs”, and that these costs are different from the direct production costs. In Tehran bazaar, too, social costs or “transaction costs” include costs of time and money spent on information seeking in the bazaar, and costs of drawing up contracts and maintaining their execution.

In this regard, we can find similarities with Polanyi’s arguments on establishing market relations. Polanyi’s ideas are part of the criticisms of neoclassic economics. Oliver Williamson is considered one of the most important theorists of modern institutional economics. In Williamson’s approach, as in the customary neoclassic theory, too, economic organizations are assumed as unified computing agents that make decisions. According to this view, the organization can be explained based on maximization of profit. That is to say, in competitive conditions, corporate structures are created so as to achieve more efficient economic gains (Slater, 2007).

Both Coase and Williamson, by explaining economic institutions according to the quality of maximizing profit through reducing social costs, still remain within the framework of neoclassic tradition. Another branch of institutional economics, which is associated with theorists such as Douglas North and Jeffry Hodgson, puts aside the priority of attention to the market efficiency in order to explain different organizational frames. This set of works owes to a great extent to the “traditional” institutionalism mainly presented by Veblen. However,
several figures contribute to the newer versions of institutionalism. Although these viewpoints commonly take into account an evolutionary approach concerning the emergence of institutions, this approach is based on the analysis of the effects of historical changes on economy, namely, unwanted effects and consequences, rather than on a simple and clear-cut logic of maximization of interest. The most important point here is that these alternative views present an extensive definition of “institution”. According to these views, institution includes rules, ways, and norms whereby economic activities and market exchanges are arranged and organized.

In presenting a social model, the emphasis on the systematic nature of economic action is based on the assumption that people internalize these rules and adjust their expectations of others’ behavior on these grounds. These common expectations are placed adjacent to the more explicit rules devised by economic organizations as well as beside the legal rules which ensure the stability of the market transactions. Furthermore, the personal relations in unofficial networks also function along with the corporate structures and relational conventions in order to harmonize economic action. This interpretation can be compared to those of Mark Granovetter, who holds that both official and unofficial relations, such as the relations within and between firms shape economic processes (Granovetter, 1985; Slater, 2007). In this regard, it should be mentioned that Neil Fligstein, in an attempt to make a link between modern institutional approach and Bourdieu, remarks that in the market as a field, the formal and informal rules should be heeded. He continues that it is the visible social relations that cause the stability of competition in the market. Therefore, the entire social hierarchy within one field will be reproduced from one period to another. Modern institutional view and Bourdieu maintain that the social structures of the market affect the actors’ orientations and ultimately, these orientations lead to transformation in the form of market performance (Jepperson, 2002 as cited in Fourcade, 2007).

3.4. Tehran Bazaar

Tehran bazaar, with an area of approximately 110 hectares, occupies 16 percent of the total area of the metropolitan Tehran and is enclosed in the shape of a trapezoid by four main axes in the south of the city. The bazaar zone carries the heaviest load of the city traffic. Also, the highest percentage of referrals have entered this zone in search of employment, which is evidence for its economic importance (Karimi, 2008).

The bazaar is a part of the institution of economy in which relatively large numbers of structures, hierarchies, and behavioral similarities can be seen. Although bazaar has an economic atmosphere by nature, this does not diminish the importance of the other dimensions of it. The history of the past 100 years of Iran reveals the prominence of the social, religious, and political dimensions of the bazaar, or better to say, the bazaar traders.

3.5. Historical and Political Dimensions of Tehran Bazaar

Throughout history, whenever Tehran bazaar has sensed threat to its independence, it has overshadowed the political history of Iran by the reactions it has shown. The last of such events was the victory of the Islamic revolution in Iran. According to social scientists such as Ahmad Ashraf (1983 & 1988), the coalition of the bazaar and the mosque led to the formation of one of the most important forces in the triumph of the Islamic revolution of Iran.

In most of the works, the authors have not neglected the historical dimension of the Iranian bazaars. As mentioned before, one of the most important writings available on the bazaar and bazaar traders belongs to Ahmad Ashraf (1980). By reviewing the history of the past 100 years of Iran and highlighting the social, religious, and political dimensions of the bazaar, he reveals the prominence of the bazaar and tradesmen in the history of the country.
Ahmad Ashraf (1980), in dealing with the social characteristics of the merchants during the last years of Qajar dynasty, refers to their lofty social position and remarks that those who were placed in the upper rank of the social pyramid and hierarchy of the bazaar were also placed among the dignitaries along with the religious authorities and government officials in the social system.

Moreover, the tradesmen of the period, due to their commercial relation with the West, sent their children abroad to study. Hence, by learning the foreign language, they were able to get acquainted with the Western culture sooner than others and adopt some of the Western characteristics, manners, and way of thinking which suited the interests of their class, e.g. freedom, establishment of constitutional government, and democracy (bourgeois democracy) (Ashraf, 1980).

He describes the political characteristics of the prominent merchants and claims that the increase in financial power, and supervising the tradesmen’s affairs as well as the network of collecting and distributing on a large scale have caused the increase in the merchants’ political power. The increase in dissatisfaction with despotism, lawlessness, and arbitrariness of administering the country affairs caused the bazaar traders, along with the vanguard clerics and city intellectuals to take over the leadership of the anti-despotic and anti-colonial political movements and play a major part in these movements. The merchants’ collective campaign started with their attempts to solve their problems in creating the assembly of merchants’ representatives in Tehran and other major cities, and then became manifest in the tobacco boycott movement and constitutional movement (Ashraf, 1980).

Another research that evaluates the bazaar during three historical periods is that of Mohammad Tavakkol (2002). He acknowledges that the traditional bazaar has been the most influential social organization in the social-political changes of Iran during the recent century and even during the recent centuries.

Tavakkol examines the bazaar during three historical periods. The first period is in fact the time when the bazaar is considered as a power pillar. This period begins from the Safavid reign and continues until the establishment of constitutionalism. The second period is that of fight for power. It is the period when the bazaar is in conflict with the political power. In other words, after the establishment of constitutionalism and the problem of petroleum, the bazaar goes under pressure and gets involved in a fight for power that continues until the Islamic revolution.

The third period is the period after the revolution, i.e., the period of power climax.

During the Safavid reign, one of the social forces that took shape was the bazaar. The oldest bazaars of Iran were those of Tabriz, Qazvin, and Isfahan, which were Safavid power centers. He writes:

“If a government does not have the power to determine the status of the social forces through accurate analysis and prudence; in fact, if it does not establish organizational justice at the social level, it cannot maintain its power and will be involved in anarchy. The Safavid government had three institutions of power: first, tribal government; second, the clerics; and third, the bazaar. Of course, besides the attempts of the ruling power to establish a close relation between the bazaar and the clerics, there was an internal background for this relation. The bazaar needed an institution through which it could achieve canonism for its deeds and behavior; likewise, the clerics needed the bazaar and its aids. Today, there still exists a close connection between the bazaar and clerics. During Qajar reign, judicial, affairs had been consigned to the clerics, economy to the bazaar, and ruling power to Qajar tribe (Tavakkol, 2002, p: 36).”
This social order went on until the time prior to the tobacco movement. In fact, after this event, separation of the three pillars of power, bazaar, and clerics started. It was at this time that the bazaar changed from a socio-economic force into a social-political one.

During the Pahlavi reign, due to modernization and the increase in oil income, the economic power of the bazaar diminished. However, it gained a more active social and political presence (Tavakkol, 2002, p: 37).

Tavakkoli continues that:

*The only social force that has always defended Shiism - in its common sense – and has had organizational power as well has been the bazaar* (Tavakkoli, 2002, p: 38).

He believes that the bazaar has had ideology, social relations, civil-political organizations, distribution system, management, economic knowledge, and financial resources. Meanwhile, union relations, religious boards, religious authorities, and the existence of charitable institutions such as charity funds and interest-free loan systems have assessed the discipline and stability of the bazaar.

In analyzing the third period, he claims that:

*The bazaar was the most influential force which succeeded, after the revolution, in gaining a place in the management system of the country and playing its intended role. After the revolution, the bazaar went out of the circuit of work distribution which existed in the past, and as a social-political force did not evaluate its real and natural role and status and went beyond its true status, so like other political forces it fell into the route of expansionism …….. Each social force is formed based on some necessities. Whenever this force ignores its real status, it becomes vulnerable. The bazaar is no exception to this rule* (Tavakkoli, 2002, Pp: 42 – 44).

Another new research on the above-mentioned topic is a book by Arang Keshavarzian (2007) under the title of “The Bazaar and State in Iran”. In this research, Tehran bazaar has been studied from the viewpoint of political economics. In Keshavarzian’s view, Tehran bazaar is a highly complex case which can be studied from different dimensions.

He claims that since Tehran bazaar does not enjoy the architectural quality as that we can see in the spacious bazaars of Istanbul or Isfahan bazaar, it is not legible for historical investigation. Therefore, Tehran bazaar has not attracted the attention of the scientists who focus their investigations on such topics. In his research, Keshavarzian has used methods of field study and non-participant observation and documentation. During the two years of his scientific study, besides visiting Tehran bazaar (tea bazaar, carpet bazaar, and glassware bazaar), he traveled to other bazaars such as those in Kish, Qeshm, Khark, and Bandar Abbas islands, Bandar Lengheh, and Hamburg free port, where hand-made rugs were purchased. Thus, he interviewed both the tradesmen of Tehran and people who were directly or indirectly related with Tehran bazaar, and asked their opinions on the relationship between the bazaar and government. Also, he has interviewed the members of Chamber of Commerce, Minister of Commerce, Trade Unions Organization, Plan and Budget Organization, Markazi Bank, Tea Organization, Trade societies, and the Islamic Society of the Bazaar.

On the whole, the researcher has tried, taking into account the internal factors of the bazaar including the social and economic factors, to study the effect of the bazaar on the external dynamics or its political effect on other governments, especially since Pahlavi reign up to now from the viewpoint of political economics (Keshavarzian, 2007). Furthermore, Keshavarzian (2004) in the conclusion of his article “In Search of a Meaning for the Bazaar” states that:
“At present, particularly in today’s developing world, economies are mostly governed by governments. The networks of the agents not only deal with each other, but they also have interactions with external forces, which include in the present study the trade agents not affiliated with the bazaar, and more specifically, the government. I hope, by generalizing economic sociology to state economics, to be able to show that it is not solely the agents who create and accept relations within the network, but the kind of relations and the frame of networks are dictated to them by political economics. It is the politics that determines how the networks, resources, and official institutions should be linked” (Keshavarzian, b, 2004, p: 165).

3.6. Socio-cultural Dimensions of the Bazaar

In this section, we will deal with the socio-cultural function of religion in the bazaar. Religious societies and circles are places where the bazaar traders involve in creating relations outside the scope of their class or business.

During the 1350s (1970s), some of the anthropological researchers doing research on Tehran bazaar argued that the weekly meetings of the bazaar traders played a great role in creating the settled connections within the social relations. The weekly or two-weekly meetings or gatherings of the bazaar traders assembled the smaller groups of bazaar merchants, and in these meetings the previous week’s events were discussed. The administrators of these gatherings were the merchants of a definite neighborhood. The gatherings were organized by the neighborhood mosque. These societies did not take into account the class or union borderlines. These sessions were not restricted to topics on jurisprudence or theology, or to the presentation of examples of people’s religious beliefs.

They were indeed locations for the regular meetings of the members of the bazaar based on their trade union or ethnic background as well as places for their wives and daughters to meet each other. The topics of the discussions and traditions were sometimes linked to the worldly issues and included such matters as the economic and political news or even finding a suitable spouse for the son or daughter of a certain merchant. In the course of these meetings, members proceeded to raise funds for the merchants who had faced financial misfortunes, or for the construction of mosques, Hosseinieh (special mosques), theological centers, and hospitals. They also arranged wedding or mourning ceremonies, and in case it was necessary, they punished the bazaar traders who had committed “breach of the bazaar rules” by spreading rumors and disgracing them. Thaiss subtly concludes that:

“It is through these bazaar gatherings that every individual gets the chance to meet and talk with others ……. Or personal relations are created and expanded in the networks, or some relations are broken. It is through these interpersonal networks and the participation of the same individuals in several meetings during the week that the bazaar information, ideas, and rumors are spread” (cited in Keshavarzian, a, 2004, p: 22).

4. Research Methodology

In the present study, the qualitative method has been used. In the qualitative method, comprehensive interview is one of the known ways mostly used when the data are collected. Researchers utilize the deep (comprehensive) interview as their general strategy, or choose it from among the several available methods, for collecting data. Interview has specific strong points. The researcher can obtain plenty of data (through interview) very fast. It is possible to obtain a large amount of information from individuals. And after the interview, the result can be rapidly summarized. The researcher should have a considerable skill in these fields: listening, building
relationship with others, posing questions, taking necessary steps, and finding out the gist of the matter.

Sampling: Sampling is an accurate and effective way of collecting data about a large number of subjects, and if it is carried out based on scientific criteria, the results of a quantitative research can be generalized to the entire statistical population (Vaws, 1997: P: 86). However, in the qualitative research, the sampling method is theoretical, so the results cannot be generalized to the statistical population. The reason is that in the qualitative research, probable sampling is not necessary; furthermore, the social conditions are by no means the same in different places at different times so that it would be possible to replicate the research (Blake, 2000: 328). In the present research, theoretical sampling is the process of collecting data for the purpose of theorizing, whereby the analyst simultaneously gathers, codifies, and analyzes his data, and then decides which data to gather in the next stage and where to find them so that he can develop his theory as it appears by itself. It should be noted that the process of sampling comes to an end when we have reached the so-called theoretical saturation. In other words, in qualitative sampling, the number of the subjects is determined by the theoretical saturation criterion; i.e., when the researcher comes to the conclusion that having further interviews does not provide him with new information or insight and that the data are being repeated and nothing new is found out, he stops the procedure of sampling and data collection (Mohammadpur, 2010, Pp: 325-326).

In the research at hand, with regard to the research objectives and in order to obtain better and more complete results, we took into consideration the concept of sampling with maximum changes. In sampling with maximum changes, the environments, activities, events, and well-informed individuals are deliberately chosen in the way that they can provide the researcher with as many different and diverse situations as possible (Wimmer & Dominick, 2005, p: 181). At any rate, in the present study, we have attempted to select the samples who have experienced maximum changes, activities, and events so that they would present us with distinctive and extensive situations of different experiences and ideas to help us to arrive at better conclusions. To sum up, it should be noted that in this research, theoretical sampling has been used. This means that the researchers have tried to use deep (comprehensive) interviews with all the groups who were involved in economic or even non-economic activities.

5. **Research Findings**

In order to investigate the situation of Tehran bazaar, we had deep (comprehensive) interviews with 24 individuals who, in various social roles, were engaged in economic and non-economic activities in Tehran bazaar during the year 2009. The following table shows the summary information of the interviews.

<table>
<thead>
<tr>
<th>Interviewees</th>
<th>Number (Mean age)</th>
<th>Interviewees</th>
<th>Number (Mean age)</th>
<th>Interviewees</th>
<th>Number (Mean age)</th>
<th>Interviewees</th>
<th>Number (Mean age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>porter</td>
<td>1 (45)</td>
<td>Clergyman</td>
<td>2 (55)</td>
<td>Accountant</td>
<td>1 (36)</td>
<td>Importer of smuggled goods</td>
<td>1 (60)</td>
</tr>
<tr>
<td>apprentice</td>
<td>1 (30)</td>
<td>Prayer-leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank manager</td>
<td>2 (50)</td>
<td>Broker</td>
<td>1 (60)</td>
<td>Member of trade union</td>
<td>3 (65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owner of producing</td>
<td>4 (50)</td>
<td>Average</td>
<td>4 (45)</td>
<td>total</td>
<td>24 (55.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>workshop</td>
<td>veteran</td>
<td>merchant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 1: Occupation of the interviewees in Tehran bazaar (2015)**
The subjects were asked questions about the problems of Tehran bazaar and the comparison of present Tehran bazaar with that of 50 years ago. It should be mentioned that each interview took 1:45 on average.

The researcher has tried as far as possible to include in the interviews middle-aged individuals (mean age 55.5) with enough experience in the bazaar so that it would be possible to compare the old and new bazaar in the study.

5.1. Similarities and differences
The respondents, who were all makes, spoke around a number of pivots. Concerning the similarities, almost all were unanimous about religiosity in the bazaar. They stated that Tehran bazaar has changed to a great extent from the point of religiosity and observing religious behavior and that there is a considerable decline observed in religious behavior.

The most important point is that the majority of the interviewees (Approximately 70%) addressed this issue directly; that is; they focused their interviews exclusively on the institution of religion in the bazaar and its effect on the social system of the bazaar and the consequences that followed the decline of religiosity in the bazaar as an economic institution. For instance, in one of the interviews, it was said:

“In comparing yesterday’s tradesmen with today’s tradesmen, I should say that the tradesmen of yesterday were pious, benevolent, and religious; they were well-ordered in business. The status of the bazaar trader was as important as that of a major general in social prestige and religious belief. They used to recite Holy Koran at their leisure time”.

In another part of the interview, the same respondent said:

“In the past, when a bazaar trader had made a bargain and received a Hansel, but his neighbor hadn’t, he would send his customer to his neighbor’s shop, but nowadays brother takes his brothers customer”.

The old bazaar from the view point of another veteran was:

“In the past, traders and merchants used to be pious........ Now all of them have gone astray”. Then he continued: “In the past, cheating was rare, e.g., in weighing goods”.

Yet another veteran said in this regard:

“People used to be God-fearing and were possessed with proper Islamic ethics, but now they have all passed away”.

A clergyman said:

“In the past, it was believed that saying one’s prayers in the bazaar mosque would be more rewarding. The bazaar tradesmen generally studied business ethic first, and then started their business. In this case, the context would get a holy aura to prevent those committing sins”.

Some of the interviewees (approximately 16%) did not directly compare the old and new bazaar, but they pointed to the problems that were related to the consequences of the decline in the relationship between the institution of religion and the institution of economy. In fact, they somehow referred to the changes that have taken place in the institution of religion and have led to the structural changes of the bazaar, the kind of changes which, according to Parsons, would lead to structural changes if they happened in social institutions.
Moreover, the respondents paid special attention to the functioning of this institution. Whenever they talked about piety or “religious dignity” as they put it, they immediately mentioned the consequences of these changes and the previous functions of religion in the bazaar system. For instance, one apprentice, in response to the question of what he had learned in the bazaar, said: “Sometimes you have to keep away from [moral] principles in order to protect your interests”.

Other topics on which the rest of the respondents (14%) were unanimous were related to the other problems of the bazaar, such as bankruptcy of the producing firms, which had caused recession in the bazaar; the traffic load, which a respondent (a porter) mentioned; and problems of eroded texture and un-safety of the bazaar due to explosions and fires, which some respondents mentioned.

Differences in the views expressed by the respondents were related to the roles they played in the bazaar. For instance, one of the respondents, who owns a producing workshop, said:

“I turned off 6 machines in the workshop within the first 6 months of this year and 50% of the machinery in the next 6 months ……… Other factories are going out of work ……… The factory owners’ reputation is in danger”.

Another interviewee, a bank manager, said:

“If the bazaar goes into recession, the departments affiliated with banks will also suffer recession”.

One union council member had a nostalgic interpretation of the bazaar problems. He said: “In the past, we used to be as intimate as family members, but now we have grown to be strangers”.

6. CONCLUSION AND DISCUSSION

What went before showed the similarities and differences of the research findings. In this section we will deal with the theoretical conclusion, which has also been mentioned in some of the research findings section.

One of the factors effective on the changes in Tehran bazaar that the respondents referred to is the change in the population texture of the bazaar during the last fifty years.

The change in the population texture of the bazaar is divided into three parts: 1) the entrance of the second generation of bazaar traders; 2) the entrance of retired employees into Tehran bazaar; and 3) the entrance of women buyers and sellers into Tehran bazaar.

The last factor the respondents referred to was in turn the result of modern urban transportation facilities and the emergence of Tehran subway. In this regard, one of the respondents said:

“The subway drops off people in the bazaar and has made it easy even for women to come to the bazaar”. Another respondent remarked: “The bazaar is overcrowded with women; it didn’t use to be so”.

One of the mechanisms that can relate this change of the population texture of Tehran bazaar within the last fifty years to the structural changes of Tehran bazaar is the change of values. Tehran bazaar is an economic environment affected by its surrounding environment. The value changes that have happened in the surrounding environment penetrate into the bazaar through the three factors mentioned above under the heading of population texture change.

It should be mentioned here that values can be considered as one of the change factors. Society is first and foremost the outcome of the social performance of a group of actors, and it is the
motivations that make up the social performance, cause it to move and act in a certain direction, or prevent it from taking other routes or making other choices. Therefore, ideas affect social changes only when they turn into values that can provoke a strong motivation, or when they are presented to the people of the entire society in the form of a suggested ideological system (Rocher: 2004, p: 70). Thus, it could be said that cultural values are among the change factors as well as factors resisting against change (Kia, 2002, p: 24).

A social system faces crisis when cultural values are not synchronized; that is, when the gears do not fit in right. Such incongruities occur when the new values unsuitable to the social system (i.e. the values that are incompatible with traditional values) enter the society. However, new values in turn enter the society through the modernization of the society and by the entrance of the new technology which brings about a rapid change.

The rapid progress of technology and the changes resulting from globalization have caused social transformations. The emergence of these social transformations have affected the consistency and integrity of the cultural units and components of the society in the way that part of the culture has rapidly changed, but the other parts have not changed or have changed very slowly. This has led to the emergence of cultural retardation and backwardness, which is an example of the socio-cultural vulnerability of the society (Rafipoor, 1997).

It is noteworthy that if values are not supported cognitively, they change. But if they are supported, they will be safe from change and the attack of incongruent values (Hitlin, 2004, p: 379). One of the reasons why the traditional values were not reproduced concerns the internal factors of the bazaar, which are referred to as relational disorder in the domain of culture.

Challabi (1996) holds that the prevailing social relation in the cultural domain is of negotiative relation type. Here we will deal with moral negotiative relations. If the density, the frequency or dispersion of the performers involved in these relations is low, then the society has moral relation disorder.

Conversely, as a result of the expansion of the mentioned relations in the society, gradually the conceptual atmosphere of such moral subjects as justice, freedom, honesty, generosity, virtue, trustworthiness, etc., and a realistic understanding of them will also expand (Challabi, 1996, Pp: 163-164).

The respondents in this research have also pointed to this dimension of institutional relations, namely, the relation of religion and economy. They stated that these kinds of relations that were common in the bazaar in the form of attending religious ceremonies, public prayers, or the attendance of merchants in the certain lessons of theological centers pertinent to their economic activities, such as the ethics of business, which most of the bazaar traders of the past attended in the morning before starting their daily business, have declined nowadays.

In their opinion, this change is of importance when it also affects the bazaar functioning. Religiosity in the sense of observing the religious and moral norms in the bazaar has numerous outcomes. If one of the moral outcomes of religiosity should be honesty, then it is obvious how much the decline of honesty could be of importance in the economic transactions of the bazaar. Another topic the interviewees dealt with was related to the social dimension of the institution of religion, which referred to the decrease in the dominance of norms in the bazaar.

This part can also be added to the first topic; i.e., since Tehran bazaar is a social-religious community, the ethical norms of the bazaar in the past depended on the institution of religion. Hence, with the decline in religiosity in Tehran bazaar, it can be expected that the dominance of ethical norms will also decline.
Norms are rooted in social values, and values are of importance to this research in that they play a key role in reducing the social costs in economic transactions. It should be noted that many researches have confirmed the relationship between values and religion; e.g., Huismans and Schwartz (1995). They found out that there is a reciprocal effect between the religiosity of individuals and their values, and that those who possess the values of certainty, self-restraint, and submission verity toward external honesty have more tendency toward religiosity (Hitlin et al., 2004, p: 375).

Religiosity in the sense of observing the religious and ethical norms in the bazaar has numerous outcomes. One such outcome is honesty. It is quite obvious how much honesty counts in the economic transactions in the bazaar.

In a word, with regard to the section dealing with the differences, it should be said that although the respondents made their points more from a technical standpoint (e.g. the workshop owners) or from an organizational perspective (e.g. the bank managers or accountants), discussing the economic rather than moral issues of the bazaar, yet all of them –whether with a technical, organizational, or social viewpoint- had one thing in common, and that was the decline in the prosperity of Tehran bazaar.
REFERENCES:


Ranking the Factors Affecting the Green Supply Chain with Economics-Based Approach Using ELECTRE (Case Study: Waste Management In Shiraz)

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ABSTRACT: This study aims at prioritizing the factors affecting the green supply chain with economics-based approach using ELECTRE in Shiraz waste management. The goal of green supply chain is to control the destructive environmental effects on product life cycle by sharing information and coordination and cooperation of all members of the supply chain. The aim of this study was to rank the use of optimized conditions and strategies to provide requirements, equipment and machinery needed to perform analysis and making use of its results to organize the recycling and wastes in order to control the situation. This paper reports an applied research required data of which was collected through case studies. Experts, in the form of decision-making table, analyzed gathered information. Using ELECTRE method, as one of the compensating Multi-criteria decision-making approaches, we found that the first strategy (s1) is prior to the other two strategies: outsourcing and imported purchase. So the first strategy can be considered as an economic program of an organization at both national and international levels. The best option is to use available conditions, equipment and machinery and to support domestic production and resistive economy.

KEYWORDS: green supply chain, economics-based approach, method ELECTRE

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1. INTRODUCTION

During recent years, supply chain has transformed into something other than a mere research area. It is engaged in various issues such as engineering, sales, marketing, strategic management, logistic and economics by coordinating research areas and a variety of theories. In other words, green supply chain is now a complicated but applied issue (Hua, 2013). In the traditional view, supply chain management included guiding all members of the chain in an integrated and coordinated manner to improve performance and enhance productivity and profits. Besides, supply chain managers sought faster delivery of goods and services, costs reduction and quality enhancement. However, improvement of supply chain environmental performance, importance of social costs and destruction of the environment were not considered. In other words, today’s green supply chain managers in pioneer companies try to generate environmental satisfaction throughout the chain to benefit from green logistics and their environmental performance improvement as a strategic weapon to gain sustainable competitive advantage and establish their goals based on three important issues, i.e., green design (product), green production (process) and product recycling (Bokes & Stevels, 2007). At present, environmental pollution is the main problem on the earth and may potentially lead to human being extinction (if not considered and resolved). Supply chain management is a main process useful in every organization to consider the issue and its implementation. Supply chain management includes managing and coordinating a complex network of activities involved in delivering the final product to customers (Ninlawan et al, 2010). Over this definition, adding the term “green” (pointing to green accommodations, green production, green distribution and reverse logistics) leads to introduction of a new concept, namely, green supply chain management (Olfat et al, 2011). In response to growing environmental awareness throughout the world, green supply chain management evolves between upstream and downstream members of supply chain as a concept involving sustainability elements and a combination of environmental thoughts in management (Walker & Jones, 2012). Analyzing and using the theory of green supply chain management in the best way of analyzing the environment (Geng et al, 2017). Respecting the growth of consumerism and public tendency toward purchasing different products and considerable use of all disposable materials and products in the market (especially Iranian products with an approach to resistive economy and supporting it), generating wastes in the form of recycle and trash is increasing. Moreover, this is followed by financial and economic cycle, organizing waste management using available equipment and considering Iranian environmental issues is very important from several aspects. The first point is the issue of high pollution rates, agricultural pesticides, forest destruction and human diseases. The second, and the most important, point is the lack of attention to economic issues and those concerning “being green”. The budget approved for these issue in 2013 is reduced around -12.94, -7.77 and -1.24%, respective (as compared to that of 2012) (Soleymani, 2012). Assuming continuance of this situation, there is a long way toward zero or positive values. The present paper aims at prioritizing factors affecting green supply chain with economic-based approach in wastes management in Shiraz using ELECTRE compensative decision-making method. Shiraz organization of waste management employs a variety of machinery in both mechanized and man-operated forms. The machinery are used to prevent occurrence of mentioned events. Studies show that the organization needs better standardized machinery with more reasonable price. There are three ways to meet this need. First, it may purchase its required machinery in the form of imports. Second, it can outsource the machinery from other countries. Third, it may meet its needs using domestic machinery and products and improving available ones.
2. LITERATURE REVIEW

In a case study on furniture industry, Handfield et al found that green purchase (choosing green suppliers) and green production (present of green thought in the factory) mostly contribute to implementation of green supply chain (Handfield, Walton et al, 1996).

In an inclusive and well-detailed research, Min and Galle point to three important elements in waste control strategy based on their order of importance: significant recycling, reuse and green packaging. The most important factors affecting purchase form a supplier include correct removal of wastes, state regulations and implementation costs. Furthermore, high implementation costs and lack of managers’ involvement and buyers’ unawareness are among important obstacles of implementing green supply chain (Min & Galle, 1997).

Having identified obstacles and incentives, operative activities and efficiency as significant effective factors on executing green supply chain, Zhu et al found that state regulations, market and internal organizational factors are among the most effective sub-factors on implementation of green supply chain (Zhu et al, 2007).

Lee suggested that buyers’ enthusiasm toward green products has the strongest impact on implementation of green supply chain, and state regulations is the next important effective factor (Lee S. Y. 2008).

According to the research of Zhu et al, Sarkis and Li (2008) identified five main factors affecting supply chain and determined 21 subsets for these factors. The main factors are ranked, based on their importance, as follows: environmental management from inside the organization, customers’ cooperation, revival and return of investment (through recycling, etc.), green purchase and, finally, green design (Zhu et al, 2008).

Zhu, Sarkis and Li recognized four main indicators: internal environmental management, green purchase, customer cooperation, investment return and green design. Also, they related 22 sub-factors to the main indicators through factor analysis. They realized profound effect of strain of foreign countries’ customers and strict regulations (Zhu et al, 2008).

Thun and Muller investigated automobile industry in Germany and found that strains of customers and rivals are the most important incentives of implementing green supply chain. Moreover, they suggested that internal environmental guidelines and regulations are the most significant needs of every organization to move toward being green (Thun and Muller, 2009).

Hu and Hsu examined 21 different components and concluded that senior management support, evaluation and supplier reporting important factors affecting green supply chain while recycling-related issues were of least importance (Hu and Hsu, 2010).

According to the Malaysian study of El Tayeb et al, government regulations have the highest share in selecting the supplier and green purchase (El Tayeb et al, 2010).

Zhu et al studied three pioneer Japanese companies and found that senior management involvement, audit programs and ISO14001 Certificate are the most important factor influencing implementation of green supply chain. Moreover, internal management, green purchase, green design, customers’ cooperation and marketing process are considered as the main factors (Zhu et al, 2010).

Among 11 identified factors affecting implementation of green supply chain, Diabat and Govindan introduced state regulations and reverse logistics as the most important ones and
believed that cooperation with suppliers, customers’ cooperation and ISO 14001 Certificate are in the next orders.

Results of Lee et al revealed that implementation of TQEM, senior management involvement, customers’ cooperation in green design and middle management support are the most important factors influencing implementation of green supply chain (Lee et al, 2013).

In a research on Iran Khodro Company, Jalali Far et al concluded that senior management involvement, encouraging regulations and lack of sufficient information are the main (positive and negative) factors effective on implementation of green supply chain (Jalalifar et al, 2013).

In a paper on evaluating effective factors on successful implementation of green supply chain, Gandhi et al performed a case study using “DEMATEL” and found that senior management commitment and financial factors have a significant impact on approval of green supply chain (based on a causal relationship) (Gandhi et al, 2015).

3. THEORETICAL FRAMEWORK

3.1. Green supply chain

Seemingly, the main difference of this type of supply chain is the addition of the term “green” implying environmental protection, but what is in fact entered into the supply chain is something over environmental concerns. In other words, supply chain management not only relates environmental concerns inclusion in the supply chain, but also concerns productivity and profit enhancement (Nikbakhsh, 2009). Every member of a green supply chain provides other members and components with information, guidance and technical and scientific support to achieve environmental goals and this leads the chain toward minimization of customers’ satisfaction and obtaining health advantages (Razmi & Nasrollahi, 2013). Different aspects of a green supply chain include: green design, green provisioning, green resourcing, green production, green packaging, green marketing, green distribution and reverse logistics. Moreover, this type of supply chain is considered as a new approach to reduce wastes, minimize pollution, save energy, protect natural resources and reduce emission of harmful gases (Tanimizu and Amano, 2016).

3.2. Economics-based approach

Economics, as a major with independent scientific identity, is more than two centuries old. However, a unified, comprehensive and acceptable definition of this major and its approach is lacking. Economics-based approach is defined based on the following four scopes (Alavi, 2013):

A) It’s an act examining human behavior as a relationship between demands and rare resources with different applications.
B) It includes studying how communities make decisions on what goods to be produced using limited and rare resources, in which manner and for whom.
C) It’s an act looking into the way societies decide on allocating rare resources to produce goods and services in order to meet unlimited needs.
D) It includes identifying, evaluating and selecting methods used by human beings to produce and distribute goods and services from limited resources.

Usually, human tends to consume resources to meet more needs and demands. To understand and study these decisions is what economics is committed to perform. Hence, human and society behaviour is the main subject of economics.
4. METHODOLOGY

Data required to perform this applied research was collected through cases study. The data was gathered based on Delphi’s method and interview and validated by experts of Shiraz Organization of Wastes Management. Data analysis and prioritizing were performed using ELECTRe method. This is a compensating decision-making method composed of eight stages: quantifying decision-making matrix if it is qualitative, determining indicators’ weights using conventional methods (Shannon’s entropy), normalization using Euclidean norm, multiplying the normalized matrix by indicators’ weight matrix, determining coordinated and non-coordinated sets, combining effects of coordinated and non-coordinated matrices, and ultimate decision-making. Data concerning this method are presented in Table 1.

- Sufficing domestic production and completing available machinery (resistive economy)
- Ordering the production to foreign countries (outsourcing)
- Purchase in the form importing products and machinery (imports)

The first cased is represented by s1, the second case by s2 and the third case by s3 (the letter “s” stands for the term “strategy”). Based on experts’ views, effective factors on supply chain were considered to be as same as factors and economic indicators contributing to needed machinery provision.

The supplementary table of decision-making is designed based on importance of indicators and their increase or decrease (ranging from 1 to 20). Four factors are introduced for this research: costs (X1), service life (X2), software quality (X3), hardware quality (X4).

Table 1: supplementary table of experts’ decision-making

<table>
<thead>
<tr>
<th>Nature</th>
<th>-</th>
<th>+</th>
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</tr>
</thead>
<tbody>
<tr>
<td>X_i</td>
<td>X_1</td>
<td>X_2</td>
<td>X_3</td>
<td>X_4</td>
</tr>
<tr>
<td>S_j</td>
<td>5</td>
<td>8</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>S_2</td>
<td>4</td>
<td>10</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>S_3</td>
<td>8</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>W_j</td>
<td>0.305</td>
<td>0.092</td>
<td>0.336</td>
<td>0.267</td>
</tr>
<tr>
<td>$\sum = \sqrt{\sum y_{ij}^2}$</td>
<td>10.247</td>
<td>17.55</td>
<td>16.92</td>
<td>5.385</td>
</tr>
</tbody>
</table>

Here, the row W_i represents indicators’ weights obtained by Shannon’s entropy and $\sqrt{\sum y_{ij}^2}$ represented the column normalized by Euclidean Norm.

5. FINDINGS

Having divided the entry of every column by the sum that column, table 2 is obtained. Then, results are multiplied by a $4 \times 4$ matrix and finally V is obtained.

Table 2: Normalized table of entries

<table>
<thead>
<tr>
<th>Nature</th>
<th>-</th>
<th>+</th>
<th>+</th>
<th>+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sj</td>
<td>X1</td>
<td>X2</td>
<td>X3</td>
<td>X4</td>
</tr>
<tr>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>S1</td>
<td>0.488</td>
<td>0.456</td>
<td>0.769</td>
<td>0.743</td>
</tr>
<tr>
<td>S2</td>
<td>0.390</td>
<td>0.570</td>
<td>0.532</td>
<td>0.371</td>
</tr>
<tr>
<td>S3</td>
<td>0.781</td>
<td>0.684</td>
<td>0.355</td>
<td>0.557</td>
</tr>
</tbody>
</table>

Normalized table of entries × 
\[
\begin{bmatrix}
0.305 & 0 & 0 & 0 \\
0 & 0.092 & 0 & 0 \\
0 & 0 & 0.336 & 0 \\
0 & 0 & 0 & 0.267 \\
\end{bmatrix}
\]  
= matrix \( V \)

Table 3: Matrix \( V \)

<table>
<thead>
<tr>
<th>Nature</th>
<th>-</th>
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<th>+</th>
<th>+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sj</td>
<td>X1</td>
<td>X2</td>
<td>X3</td>
<td>X4</td>
</tr>
<tr>
<td>S1</td>
<td>0.149</td>
<td>0.042</td>
<td>0.258</td>
<td>0.198</td>
</tr>
<tr>
<td>S2</td>
<td>0.119</td>
<td>0.052</td>
<td>0.179</td>
<td>0.099</td>
</tr>
<tr>
<td>S3</td>
<td>0.238</td>
<td>0.063</td>
<td>0.119</td>
<td>0.149</td>
</tr>
</tbody>
</table>

Then, values of coordinated and non-coordinated set are determined.

Coordinated set:

\[
I_{KL} = \sum_{j \in AKL} w_j
\]

AKL:

\[
A_{1,2} = \{3,4\} \Rightarrow I_{12} = w_3 + w_4 = 0.336 + 0.267 = 0.603
A_{1,3} = \{1,3,4\} \Rightarrow I_{13} = w_1 + w_3 + w_4 = 0.305 + 0.336 + 0.267 = 0.908
A_{2,3} = \{1,3\} \Rightarrow I_{23} = w_1 + w_3 = 0.305 + 0.336 = 0.641
A_{2,1} = \{1,2\} \Rightarrow I_{21} = w_1 + w_2 = 0.305 + 0.092 = 0.397
A_{3,1} = \{2\} \Rightarrow I_{31} = w_2 = 0.092
A_{3,2} = \{2,4\} \Rightarrow I_{32} = w_2 + w_4 = 0.092 + 0.267 = 0.359
\]

Non-coordinated set:

BKL:

\[
B_{1,2} = \{1,2\}
\]
Members of on-coordinated set follow the coordinated set, in its reverse form. The following metrology is used for values of non-coordinated sets. Only one example is examined here (because of abundant calculations):

\[ NIKL = \frac{\text{MAX} \{ |V_{kj} - V_{ij}| \}_{j,e} BKL}{\text{MAX} \{ |V_{kj} - V_{ij}| \}_{j,e} \text{all indicators}} \]

\[ NI_{12} = \frac{\text{MAX} \{ |V_{11} - V_{21}|, |V_{12} - V_{22}| \}}{\text{MAX} \{ |V_{11} - V_{21}|, |V_{12} - V_{22}|, |V_{13} - V_{23}|, |V_{14} - V_{24}| \} \]

All non-coordinated members are obtained as above.

In general, coordination (I) and non-coordination (NI) matrices are as follows:

\[ I = \begin{bmatrix} -0.603 & 0.397 \\ 0.397 & 0.359 \end{bmatrix}, \quad NI = \begin{bmatrix} -0.303 & 0.151 \\ 0.151 & 0.420 \end{bmatrix} \]

Constant mathematical relations and available prerequisites are used to combine coordinated and non-coordinated sets (M = number of items):

\[ \bar{I} = \frac{\sum \sum I_{KL}}{M(M-1)} \]

\[ \bar{I} = \frac{0.603 + 0.908 + 0.397 + 0.641 + 0.092 + 0.354}{3(3-1)} = 0 \]

if: \( I_{KL} \geq \bar{I} \Rightarrow F_{KL} = 1 \)

if: \( I_{KL} < \bar{I} \Rightarrow F_{KL} = 0 \)

Then: \( F = \begin{bmatrix} -1 & 1 \\ 0 & -1 \end{bmatrix} \)

And if:

\[ NI = \frac{\sum \sum NI_{KL}}{M(M-1)} = \frac{1 + 1 + 0.151 + 0.303 + 0.402}{3(3-1)} = 0.696 \]
\[ \text{if: } N_{IKL} \geq \bar{N} \Rightarrow g_{KL} = 0 \]

\[ \text{if: } N_{IKL} < \bar{N} \Rightarrow g_{KL} = 1 \]

Then: \( g = \begin{bmatrix} -1 & 1 & 1 \\ 0 & -1 & 1 \\ 0 & 0 & -1 \end{bmatrix} \)

To achieve the final prioritization, matrices \( F \) and \( g \) are multiplied by the result (in an entry-to-entry manner):

\[
H = F \times g = \begin{bmatrix} -1 & 1 & 1 \\ 0 & -1 & 1 \\ 0 & 0 & -1 \end{bmatrix} \times \begin{bmatrix} -1 & 1 & 1 \\ 0 & -1 & 1 \\ 0 & 0 & -1 \end{bmatrix} = \begin{bmatrix} -1 & 1 & 1 \\ 0 & -1 & 1 \\ 0 & 0 & -1 \end{bmatrix}
\]

\( S1 \quad S2 \quad S3 \)

Result: \( S1 \gg S2 \Rightarrow S2 \gg S3 \Rightarrow S3 \gg S1 \gg S2 \gg S3 \)

This means that it is best for the Waste Management Organization to employ the first strategy (\( S_1 \)) and suffice available machinery (namely, respecting principles of resistive economy).

6. CONCLUSION

Findings indicate that according to factors introduced by experts and performed investigations, Shiraz Organization of Wastes Management is better to suffice domestic productions and enhancing available machinery to be able to consider both green and resistive economies. That’s because alternative methods may negatively influence environmental economics of these policies based on indicators and demands of authorities. Creating a coordinated set throughout the green supply chain is absolutely followed by a well-saved economy. Undoubtedly, a main effective factor on realization of green supply chain is to develop environmental concerns and their related benefits and harms. Outsourcing and whole sales from other countries may disrupt economies of Islamic countries and waste money and financial resources. We hope for a public and comprehensive employment of decision-making models. Hence, we suggest foreseeing to develop a valuable model based on the nature and morality of the organization in order to integrate individuals and stabilize obedience. More effort must be made to achieve organizational, of course through respecting emotions of other people and rights of stakeholder and colleagues’ cooperation.

In this way, all components should be studied and the preferable case be measured and operated in industrial and non-industrial environments. Moreover, discount mechanism may be employed among members of green supply chain in the case of imports. Pricing machinery by the manufacturer is not always following principles of resistive economy. Therefore, pricing by retailers and lower-order members of the green supply chain may occasionally standardize decisions. Besides, competitiveness and marketing strategies may be applied among manufacturers. In this way, competition leads to development of higher quality and more reasonable price. The content and nature of all issues presented in Literature Review section is consistent with the present paper but differ in the type of analysis method.
In other words, ELECTRE method is used in this paper to prioritize effective factors on supply chain but most research described in Section 2 used non-mathematical methods and, hence, are in line with research aimed at improving the status of the environment and wastes. The significant difference between this paper and other similar research is that the former accurately and functionally defines the meaning of resistive economy and shows that employing this guideline may improve and enhance economic cycle of a country. Since costs of machinery sales are estimated based on currency rate, the price of the machinery may not be approximated in an integrated manner. Therefore, a great deal of intermediary costumes practices are involved in this area. In general, the present research had no serious limitations. However, it is noteworthy that researchers could not control for all effective variables on the considered relationship.
REFERENCES:

Olfat, L., Firoozabadi, A., Khodaverdi, R. 2011. Requirements of green supply chain realization in Iranian automobile industry. Quarterly of management science, Year 6, issue 1, pp 123 – 140


Hua,s., (2013). supply chain perspective and issues in china a literature review. Hong Kong: Fung Global institute limited and Fung Business intelligence center.


The Study of Effective Reasons of the Customer Satisfaction Increase in the Acceptance and Use of Green Electronic Banking Services with EUCS Model (Case Study: Parsian Bank)

Elham Koohi, Ehsaneh Nejat Mohammad, Amir Mohammadi and AliReza Koohi

ABSTRACT: Electronic banking is the simple and controllable method in the financial management. Not only customers but also the banks widely use electronic banking benefits. One of the most prominent benefits of electronic banking that is so important in these days is being green of this industry. This study is considered the evaluation and analysis of the effective factors of the customer satisfaction increase in the acceptance and use of green electronic banking services with EUCS model. The methodology of this study is objectively applied and in terms of data collection is descriptive-survey. The dimensions of the effective factors in the increase of the satisfaction and public reception customers in the acceptance and use of green electronic banking in this study are included: services contents, appropriateness of services, services format (form and appearance), easiness in use, time saving. The statistical populations of this study are consisted of Parsian bank customers (the electronic banking branches of Pardis and Roodehen). According to the calculations the research samplings were measured 60 participants. The data collection instrument was the questionnaire that was designed by the researcher that also its validity was approved by the electronic banking experts and specialists and its reliability was estimated 87% based on the Cranach’s alpha coefficient. The collected data were analyzed by using descriptive statistics (mean, standard deviation) and Pearson correlation coefficient and regression analysis with the software of SPSS. The results of the study statistically showed that all of the factors including the contents of electronic banking services, the validity and accuracy of presented services, in the electronic banking area, as well as services form and format, easiness in services use and finally time saving have positive and direct impact on the customers satisfaction in the electronic banking services.

KEYWORDS: green electronic banking, services, customer satisfaction, EUCS model.

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1. INTRODUCTION

The significant development in the ICT (Information and Communication Technology) can develope all aspects of human life recently and today it is proposed some new concepts as an electronic government, trade, insurance, management, education and green electronic banking. In these days, the focus on the environmental issues and developments is not inclusive simply to the responsibilities of the environment experts but for this participation of all society and experts is needed. The environmental problems widely increased in the world such that the scientists and policy makers can’t solve those. This subject that development is not possible without maintenance of healthy environment because important after the holding of the earth conference in 1990 in Rio de janeiro and focus on the need for fast affairs into getting the sustainable development) Economical policy makers found out that environment health shouldn’t be sacrificed for economic growth policies, since even if decay of environment isn’t extent that threatening the human life can be harden the quality of life. Banks can have the efficient and strategic role as a part of formation of economic customer satisfaction system in this regard. Codifying and guiding the credit policies to stop the destruction of natural resources, decrease of industrial pollutions and protection of rare ecosystem as a part of economic and monetary policies collections (set) are on track on sustainable that today have irrelevance remembered about the wide or broad growth of green activities. The “green word is irrelevance used on broad range of social and moral environment and activities (Chadicchal, 2012).

The green banking is considered the technology integration and development in the convention behavior and habits in the banking business and the changes in the traditional trends and making the new area based on the constant attitude and in order to maintain the natural recourses accompanied to development and growth. In the green banking, it is certainly emphasized on the healthy productions by short looking at the performance at the world-class banks, it can open us the new horizon of business thoughts based on being green. In this way, by expanding of thought capacity and management in the business area and also highlighting the moral issues that is affected to competition increase, customer welcome. Society and government pressure, it can be observed that the green banking is getting more important and also the today’s business and affair have shown more sensitivity into their areas and have exactly committed more responsibility into this process. Not only the green banking need to the philosophy based on the vision and attitude that make the organization, responsible for the community but also need to proper and affective strategies in the area. These strategic are affected on the environmental changes and designed in response to those. Generally, our objective for using of this word in this study is particularly affected to the financial services and Productions adjusted with the environment (Hamidi, 2014).

Today, services industry is consisted of financial and monetary services as well as banking as an important part. There are a lot of changes about regulatory; structure and Technology into more integrate global banking area in the Industry of global banking. Banks are expanding into the borders by making different benefits and competitive services and restructuring for fast technology and meeting the customer’s Demands. For doing this, the nature of bank services and Customers relationship are constantly changing (Oveisi, 2011).

The management and maintenance of natural resources, agriculture and administration of structure on the optimized use such that it can ensure the consistency supply of human needs and satisfaction of present and the next generation are defined as a sustainable development. Also this kind of development can be used as a proper technology which is economically stable and socially accepted. In this way, achieving to the sustainable development is now on the agenda of all countries in the world and all of the states are trying to play their roles in the great global movement according to their cultural and belief. Among these elements, banking and banking development play a significant role as a sustainable development indicator so it can be directed the payment of banks facilities for the investments such that these can protect the environment
and also based on the wide growth and development. One of the mission and responsibilities of green Banking is creating the saving and preventing the indiscriminate use of some goods like paper and energy. And their accordance with environment criteria and promote the productions that are efficient and useful for the society and the environment to reduce the costs. This kind of banking can change the view of the people in the society into their environment with increase of their environmental awareness and knowledge level. Moreover, by superficially check, it can be found that for producing the one tone of paper, need 2 tones wood and 200 liters water and per production of one tone pulp, it is entered some waste pollution into the environment. It may be effectively prevented of this by changing the bank Process en and green banking development with IT and some Systems like ATM and shop system, internet banking on mobile bank to economize. one of the significant aspect of this is the paper-less transactions and services delivery 724 (seven days a week, 24 hours a day) that has severely shown by expanding electronic banking culture as one of the green banking Aspects and passing the banks from the traditional computer. Which constantly have been considering the customers visit to bank brunch and make some different forms for bank operations and the process changes actually have been significantly growing and this cooperate hare made a lot of saving and Frugality. Banks hare expressively decreased their waste and garbles by applying the supply chain management as well as frugality in the consumption such that in the relation, they could decrease their transaction costs to one twentieth. The green electronic banking (electronic banking) needs to an electronic government. Electronic government is one of the today’s needs of world that a lot of countries are following. Electronic government is used the governmental organization from new IT (information technology) and communication to provide and distribute the services and information instantaneously and hostelry and in the least time and cost but the high quality to the citizens, commercial and industrial sectors and other government customers such that they can be connected with the government by the computer system and have much participation in the administration of affairs and process and democratic t institutions. Furthermore it is important to identify factors that make the customers use the new technology like electronic banking services. This is true because identification of these factors help the bankers to apply their marketing strategies for new form of green electronic banking system (Javadin, 2005).

As a general, daily acceleration of IT make that bank customers mostly tend to communicate by internet and mobile lines with their bank accounts. Some of the incentive factors for reuse of these services are convenience and comfort of the customers and finally his/her satisfaction. Many of the scientists have argued that there is relationship between the customer satisfaction and their behavior. Especially when they are affected by the new and modern technology, the utility of them make in turn the customer satisfaction and acceptance and their comfort is derived from the services which can use them each time and place (Pronca, 2011).

In view of the above mentioned, if we have used the electronic banking services only once, we have found that this kind of banking saves people’s time and money. But the green electronic banking has some hidden advantages that feels just only in the macro-level and in the saving of paper consuming. Therefore, the researcher in this study face to the problem whether effective factors in the increase of customer satisfaction (content of electronic banking services, accuracy and reliability in the presented serviced in the electronic banking area, also the form and format of services, easiness in use of services and finally time saving in use of services) can be influenced on the acceptance and use of green electronic banking as well as plating and bank activities to make and create the competitive benefits in the green banking area or not? So in this article due to the above cases, the fundamental question that is raised can be raised assumptions green 1- Does the content of e-banking services has direct and positive impact on customer satisfaction. 2. Green accuracy of electronic banking services is direct and positive impact on customer satisfaction. 3. The format of e-banking services of green on a direct and positive impact customer satisfaction. 4. Green ease of use of electronic banking services has direct and positive impact on
customer satisfaction. 5. Save time in electronic banking services used green is direct and positive impact on customer satisfaction.

2. LITERATURE REVIEW

The review of background researches in the Internet services and green banking subject is shown that the most of those were considered two-side of the concepts. For instance Moqadasi Niadar researched about the effect of green banking on the customer behavior about bank services to achieve the sustainable development of case study in Saderat bank of Kermanshah, the finding result showed that green banking is kind of banking without paper, fuel and waste of energy. It is a new way of banking that can be the underline of sustainable development in the country if it turns to the main priority of bank services customers. Actually, the green banking and sustainable development are incorporated together as they are meaningless the one without the other. The subject of this study is the role of green banking on the consumer behavior of bank services and its effect on the sustainable development (Mogadasiniya, 2016).

Hamidi et al. considered in a study the review of green banking, IT (Information technology) and competitive benefits. The results indicated that some of the new strategies of bank system are new technology enhancement especially in the banking industry by using of the electronic services and underlying and utilization of mentioned equipment and applying resources to spread green activities (Hamidi, 2014).

Bakhshi et al studied on the consideration of Internet services and bank services relationship the finding results showed that there is a significant and meaningful relationship between being accurate, security and riskless of website with the green banking As a result, all of hypotheses are verified (Bakhshi, 2015).

Naghavi fard et al studied the study as effective factors of use Internet banking services from customers in Iran. The finding results showed that perceived behavior affects severely on the person’s intention in use of internet banking. Also this factor accompanies with facility use play the important role and has the high effective on the person’s attitude in internet banking (naghavifar, 2012).

Savo in the study as “the time of green banking has begun in Romania “ which conducted in Romani defined the ecological behavior of banks and considered the non-governmental organization roles and banking production in ecological management of bank. Also he explained that this behavior focus on the projects in which banks incorporated with environmental organization can committee some of the projects like paper, Recycle, silviculture with the building solar panels (savu, 2012).

Bihari researched the rental green banking importance as a ((profitability in Indian banks)). In this study, it has been considered the empirical relationships among the green banking implementation along with two other variables: net income profit and costs and the profitability in India by use of quick panel data regressing. The finding of this study showed that there is the significant relationship between income and cost with profitability whereas confirmed significant relationship has between green banking implantation and profitability (Bihar, 2012).

Chadichal, studied the consideration of quality dimensions of green banking Internet services impact on the management development with ((electronic customers)) in India and found that there are significant and meaningful relationships between quality dimensions of Internet services and in the green banking that is customer, Relationship management, customer maintenance and electronic customers that can control the environment damages of payment (chadichal, 2012).
3. THEORETICAL FRAMEWORK

What is the electronic-banking?

Electronic banking is the especial kind of banking that present the services for customers by use of electronic area (like Internet) actually, electronic banking is a kind of electronic service. In this kind of banking, all of the bank operations are done electronically and protected all of them by the proper security levels (Behmand, 2006).

3.1. Green e-banking

Electronic banking is a special kind of banking that present the service for the customers by use of electronic area (like Internet). Actually electronic banking is a kind of electronic services. In this kind of banking, all of the bank operations are done electronically and protected all of them by the proper security levels. Green banking is defined as a bank participation in the sustainable development. Some of the important issues of the 21th century that have been appeared are the environment protection and stable ecological balance so that the increase of a green technologies are moving into the practical areas including banking. In the global economy, industries and companies are bounded to the affection highly accurate environment policies. Since the banks are funded the cash for the industries and companies, they can face to their environment policies with the high debt and credit risk that can expand the concept of the green banking (Bahari, 2011).

Already, for banks the green was only the colour of money not it’s promotion but today, they are thinking about green branches, projects, output, industry balance sheet and paper recycle for banking book and so on (Bahl, 2011). Also the green banking is called the moral banking; since before the processing of loans, it is considered all of the factors to find whether this project love the environment and has the implicated meanings for the future or not. The loan is granted to the company if it had followed all of the safety standards of environment. Green banking is the practical method for maintaining our planet earth in the future. Generally, the banking section is considered as an environment lover and doesn’t put pressure severely on the environment by its internal operations but from the perspective of the relationship between banking section and companies which are production consumer of banks, the external effect of commercial unit on the environment is so remarkable. The banks are playing some different roles for acceptance that is deal with the main role in the financing projects, clean development mechanism, presentation of determined lending Standards for the industries and companies. A green bank like the other typical banks is accounted all of the social, environmental, ecological points not only in its operation but in the financial decisions and project verification of the natural resources. Further, green banks are insisted on the business population to do some environment lover activities, avoid the paper only on the on-line and electronic financial activities to lead the reduction of tree cut. In the green banks, the loan interest is less than typical banks, so these banks pay attention to the environment lovers as ecological benefits. Under the green banking, banks are thinking about loans like investments in the projects as a recycle, agricultural, Technology development, residual waste management and so on. The following part is introduced three types of projects that have been encouraged under the green bank and will be accounted by the third-party expert of the institute:

1) Sustainable development project and use of renewable natural resources.
2) A project that prevent and control the pollution and minimize the waste products.
3) A project that are supported the human healthy, bio-diversity, efficient delivery and use of energy (Mishur, 2013).

Electronic banking is the simple and controlled way in the financial management. Not only the customers but the banks are widely used of e banking benefits. It can be mentioned here to some
of those benefits that produce the public welfare. They are including “costs saving”, “independence in time and place”, “security”, “environment protection”. Some years ago the traditional banks and financial institution recognized formally the bank process or green economical activities. The actively identified the opportunities in the transactions about those activities adjusted with the environment as a section for investment and irreverently is about wide range of green activities. After that, green Banking was appeared and development so fast (Dato, 2015).

Green bank is the general expression that mentions to the collection of operation and instruction to sustain the bank economically, environmentally and socially. The greatest step for supporting the green local projects is finding the local bank in its own area (regain). In fact, green Bank means the synthesis of operation and technology development and receiver-service or customers habits changes (Jha and Bhome, 2013).

In this system, bank processes are efficient and effective tools to minimize or get zero the environments impact. As a general, the green bank activities take account of the environment, habitat, and land resources. The subject of green bank was begun with the discussion about banking and environment marketing in 1970 and during the time and with sustainable development that have been emphasizing from 1990, it showed the human aspects on the environment and next generation. the concept of sustainability in the green banking is proposed as a processes in business that consider the long-term values for customers and staff by use of green strategy and all of social, cultured, economical aspects of business. When it is talked about green bank it may be at first impressed electronic bank and the systems with less paper and certainly some part of discussion is about the employment in banks. This can finally lead to protection of the environment. This kind of saving is considerable in two dimensions: at first electronic Banking leads to decrease paper consumption and on the other hand help to grow environment development. Generally, one of the most significant advantages of electronic banking that is so expressive today is its being green of this industry. Whenever there are fewer branches of banks in the city, it can occupy the less space, energy and fuel consumption for transportation. In addition by having less need to printed money and bills with the paper, it can be expected to protect the environment. In the entire world, the banks and financial institutions like other organizations are concerning the impact on the environment. Also banks and financial intuition can be played determined role for the better life in the planet earth. The green productions and services from seals have been promoting among the different financial service-provider institutions, property management agencies and insurance companies. Although these financial institutions have more different business purposes than principles of sustainability and preservation or their compatible products, but diversity growth and speed of the development of such services indicate the growing movement to corporate of green financial productions with the other banking activities (Bakshi, 2015).

Generally the green banking as an umbrella overwhelm the delivery services and banks productions in the appropriate method with environment maintenance in the global dimensions and for doing this evaluate banking at operations. Most of the banks that follow the green banking patterns have been passed from two steps:

1. Determination and explanation of the green strategies, services, and process: by using of adequate affairs and situations, they have converted the strategies, productions, services and finally banks process into the compatible type with environment.

2. Creation of the green organization (enterprise): providing some organizations based on the IT (consisted of data centre), the green physical organization (including green buildings) and use of inventions and innovations that guide the banks to provide the services and design of the internal strategies for environment protection.
Some of the bad effects of recent storms, flood, draught and excessive heat of earth have made that government, companies and people think about the heating of earth and its effect on the present and next generation. Nowadays, the knowledge and commitment on the environment issues are growing and all of the industries in this area have been taken basic steps. Moreover, Final institutions and are directly and indirectly effected on the solution of environment problems. It can be mentioned to some of solutions such as electronic Banking services development, direction and management of environmental risk, funding of the projects and expansion of culture in the green banking service. Green bank is a kind of banks that pay attention on the environment and social factors as well as bank operations. This kind of banking is called moral banking too and also the profitability objectives is responsible for environment protection. The banks are centers and financial mediates that absorb the resources and are granted those activities (bonds and other bills) that are directly or indirectly using in the market, as a facilities. Moreover, some different channels like Internet bank have been used to present services and to increase customer’s access. But in order to provide the services and productions with the green bank process, it must be followed four principles

1. Design of the green electronic processes

Every kind of bank service and production must be followed some process for the customers. Green banking is redesigning these process for the first step and introduced as a mandatory in the implementation of green electronic banking. Among these notable items, it can be mentioned following issues:

• Supply chain management: it points to the techniques and methods to minimize the costs and use of paper in the process.

• Investment recourses management: allocation and equipment of all several recourses electronically to preserve the environment like opening deposit electronically.

• Customer relationship management: Use of electronic methods to communicate with customers can minimize the paper consumption and the costs of customer visiting in the bank.

• Production management: Design and offer the appropriate productions to supporting of those strategies that minimize the use of recourses and energy and decrease the effects of environment destruction.

2. The green Services and productions

Bank by developing the products and new services can lead their customers to environment protection services. Generally, these productions are included:

- Electronic banking
- Automatic payment and possibility of sending check e-mail and photo.
- Electronic bill, introduce and provide the new product through electronic channels and reports and Internet for customers.

Offer and help to promote companies that focus on the green activities.

Financing and banking facilitation grant to the companies and the people can encourage them to use the green activities. It can be mentioned to the following productions and services as an example:

Offer the special credit cards lines and facilities to the owners to improve the building equipment and reduce the environment impacts and also prevent the waste energy in their buildings.

Offer the credit cards that its wage pay to the active institution to support the environment.
Allocation of facilities to the different companies and industries that are supported proper changes and improvement and minimize the destructive effect on the environment.

3.2. Green electronic banking strategy

This principal of green electronic banking increase the knowledge of people about each kind of effects on the environment and their roles in the reduction of destruction effects by designing and providing the green bank strategies. Some of these strategies are following:

Development and improvement of green policies by use of different systems like Internet bank that firstly doesn’t need to constant energy and the secondly paper recipient is deleted and can save them electronically.

Encouragement and motivation of staff (workforce) by providing the necessary facilities and allocation of reward for following the green banking actions and use of their idea for it.

Encouragement of customers and domestic and foreign suppliers for using of green process.

The continuant and accurate pursuit of industrial trends into the environment protection and into the updating of all processes and green banking services and productions.

3.3. Other green electronic bank activities

Other activities that are practical in this area are following:

Redesigning of innovative financial strategies and solutions to protect the environment

Providing of new corporative or individual facilities to support these project compatible with environment like the kind of project that use the sun lights, wind energies, or those factories that their fuel have less effect on the environment.

The direct investment by bank in the project support the environment (by Dispersion of electrical issues of capital market).

3.4. Green electronic banking experiences

The maintenance of environment are significantly following through a lot of banks along with the green banking. By checking the reports of institutions about green electronic banking in different years it can be identified the superior bank and exactly considered the processes and services and their features. Some of the active banks in this area will be introduced:

3.5. Silicon Valley bank

“Silicon Valley “has proposed as a superior bank in the report of green bank in 2013. This bank is placed on California and has strong group in the business bank and is the most innovative Bank in the diversity of financial and banking services. This bank’s capital is 23,000,000 and with more than 160 staff can support the business, exclusive international banking among the 34 branches like England, China, India, …

The presented banking service by the bank are included assigned services in the future development and centre integration and Reserve Federal machinery. One of the main features of that, is presenting notable services in the electronic banking including: advanced electronic debt cards, electronic payment (ACH: Automatic clearing House) and electronic files payment through payment information and use of accounting system. The most important productions and services that are implemented by this bank to facilitate the green banking process and protect the environment are following.

1) Remote deposit services

One of the capabilities of the service is the facility in saving account with the least time and cost. In this case, it can make the possibility of the deposit opening through the Internet bank for customers.
Moreover, it can be given the possibility for the customer to send the necessary information directly to the client account with use of personal scanner or scan mobile.

2) Electronic bills

There is the possibility of concentration and reception and payment of different kinds of electronic receivable bills by the on-line banking. This is feasible by use of Internet bank and its processes like gain reception, cost payment, order and …

3.6. State bank of India

According to the reports green electronic banking was introduced as a state bank of Indian in 2013. This bank with 200 years old experience is working as the greatest commercial bank along with American cooperate in India with some of the property assets like types of deposits, investment, branches, customers and employees.

Indian government is the largest shareholder from 500 institutions with 61, 58% of ownership. Also this bank (of India) has been introduced in the list of top 1000 banks in the world and it ranked in 60th order in Banker journal in 2012. The establishment motivation of the state bank of India was referred to 1806 and the creation of Kolkata’s bank (however during the time was called Bangal bank).

Over time and with integration of Bangal Bank and two other banks (Modares and Bambiii) in 1921, the royal bank of India was and Indian Bank Formally began its activities. The state bank of India has established the broad group including New York, Chicago, Los Angeles, Washington and also it is consisted of more than 2000 branches in India and 173 offices in 34 countries. The assets of this group are amounted to 359$ that consisted of 2780 million dollars of deposit and more than 2088 billion dollars $ in capital and reserves. The state bank of India with more than 1500 local and international banks for exchanges of financial messages with the swift in all of global business canters can enhance commercial exchanges related to commercial banking by specializing the professional group and potent advisers.

The following are the most significant productions and services of this bank to facilitate of green banking and environment protection:

1. Current account with electrical abilities: the opening account of this bank is done electronically and it was used some processes of check information receiving digitally and imaginary like photo, signature, so it can play the prominent role for reduction of paper use.

3.7. Green Choice bank

According to reports of the green electronic banking in 2011, the “green choice bank” was called as a superior bank. The centre branch of this bank is in Chicago and has some different branches in New York and Canada. This bank is consisted of professional advisors team with high general knowledge about environment protection and energy. This group create and implement some beliefs and ideas like work on buildings adjusted with environment protection standards, use of electrical tools with advances technology in determent use of paper like electrical documents and digital signature. The green choice has been introduced itself as a supporter of business environment protection and provided especial green service to the customers and believed the reduction the use of paper through processes like electrical documents distribution technology for sending images check, Internet bank and so on. This bank suggests a lot of tools for green banking development.

The following items are some of the green banking productions and services:

1. Remote electronic deposits that allow the Customers to pay their checks and factors through Personal scan.
2. Electronic payment like bill and those factors without cost and paper that are more reliable and faster especially for Internet banking (online) customers and lack of stamp, money and paper envelope.

3. Use of new payment systems called Hamta file transfer for direct payment of current account without need to check.

4. Research and development for creating innovation of electronic deposits through smart phone channel, personal scanners and Internet bank.

5. Use more than 36000 ATM to transfer and receive cash without access limitation and electronic receipts (Heydari, 2014).

Generally, the customers are one of the effective environment factors on the organization. Management experts have recognized the customer’s satisfaction as the most important responsibilities and management priorities of organization and take account to the need for consistent and permanent commitment of top managers in the customer’s satisfaction as a prerequisite of success. In fact one of the prerequisites of successful and top work the organization and companies is the customer and always try to satisfy him/her. Among the successful factors in today’s business are the complete recognition of customer and his/her priority. Presentation some of the words like customer and customer satisfaction in the organization services especially banks have more significance rank because of complete dependence to the customers for maintenance. Some factors are implied this including different banking services providence to maintain the available customers and attract the of new customers and finally to get more proportion of competitive banking market. According to conducted survey, for the first time it was explained the conception “customers satisfaction” and its measure by Oliver in 1977. He proposed the customers satisfaction as a being favorite or pleasant experience of past purchase of production or service. Usefulness of modern technologies make the customers satisfy and be relaxed about production services use in every time and place (Sadeghi, 2008).

A green electrical bank has some goals, polices, streamlines, productions, and services and promotional activities, relationship, values, the organizational culture, pricing, quality support and so on. The banks in the internal dimension follow many activities banks along with the general strategies of being green. They emphasize the green productions and services and view the green electronic banking activities that focus on being green of market and customer satisfaction in the selection of target market, and their employees based on the green goals trained and supported of their group assemblies’ activities and their innovations.
4. CUSTOMERS SATISFACTION MODEL OF GREEN ELECTRONIC BANKING SERVICES

Reference: Pikkarainen and others, 2006, P162-1634

Figure 1. Customers satisfaction model of Green Electronic Banking services

Customer satisfaction of green electronic banking services as called EUS (End-user computing satisfaction) which has been considered through some independent variable (electronic banking services contents, reliability and accuracy, format, easiness of services and time saving. The EUCS model was selected for two reasons. Firstly, it can be better estimation of our propose for study satisfaction user of consideration of electronic banking. Secondly, this model has considered through different studies and researches. In some of the models the satisfaction is only a part of the larger model whereas in the EUCS model, this kind of satisfaction is the key variable. Finally, Leino in 2001 has argued that if the size of expected sample is small, the independent variable shouldn’t be so large so after some several studies, this proper model, EUCS, was selected for this study (Pikakarainen, and others, 2006, P 162_163).

5. OPERATIONAL DEFINITION OF VARIABLE

Table 1: Operational definition of variable

<table>
<thead>
<tr>
<th>Subject</th>
<th>Operational definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>The content of services</td>
<td>Variety of information to the customers through green electronic banking services</td>
</tr>
<tr>
<td>Reliability and accuracy of</td>
<td>Reliability and accuracy of information to the customers through green</td>
</tr>
<tr>
<td>services</td>
<td>electronic banking services</td>
</tr>
<tr>
<td>Services format</td>
<td>The clearness and usefulness of information to the customers through green</td>
</tr>
<tr>
<td>Easiness in services use</td>
<td>easyess and begin simple in use of green electronic banking system</td>
</tr>
<tr>
<td>Time saving</td>
<td>Updated information reception whenever is necessary and as the shortest time as possible</td>
</tr>
</tbody>
</table>

6. RESEARCH METHODOLOGY

The present study is objectively applied research. On other hand, in terms of collected data method, this study is classified into the non-experimented descriptive studies. Among the several descriptive studies, the method of this study is survey in which the finding information of study was collected in two ways library and local investigation such that it is done through questionnaire distribution, investigative information and review of literature through the library recourses. It was inspired of previous researches for the questions in the questionnaire and changed in terms of research. The questions of this study are consisted of six sections. At first, it was asked some
questions about, education and gender. In the second section, it was included the service contents, reliability and accuracy, format, easiness of use and finally time saving of use in the Likert framework (very small, small, average, a lot, many). The population of this study is consisted of the Parsian bank customers in branches of Pardis and Rudehen who are applying at least one of the electronic banking services (on-line) in this banks. In terms of broadness of statistical population by using the sample size formula with unlimited population, it were selected 60s participants as a sample. The method of sampling in this study is randomly simple and validity of the questioning is approved by the professors as well as experienced experts. The reliability of this was calculated 89% by Cranach’s alpha coefficient that is more than 7% and concluded that this question is reliable.

7. DATA ANALYSIS

There were 60 respondents that 25 belonged into 29-20 and 20 ones into 30-39 and 15ones into 40-49. 35of the respondent were male and 25 were female. 80 ones of them were diploma, 15 advanced diploma and 37 bachelor and higher degree. To analyze of data it was used of SPSS software also for questions test, it was used the descriptive statistic (mean, standard deviation) and for the consideration of relationship between dependent and independent variables and research hypotheses, it was uses Pearson correlation and regression analysis. The table 2 is shown the finding result of descriptive statistics (mean and standard deviation).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services contents</td>
<td>2.1</td>
<td>.79</td>
</tr>
<tr>
<td>Reliability and accuracy</td>
<td>3.51</td>
<td>1.20</td>
</tr>
<tr>
<td>Services form and format</td>
<td>2.65</td>
<td>1.27</td>
</tr>
<tr>
<td>Easiness in the use of service</td>
<td>3.46</td>
<td>1.19</td>
</tr>
<tr>
<td>Time saving</td>
<td>3.70</td>
<td>1.46</td>
</tr>
</tbody>
</table>

In the deduction and hypotheses analysis, the significant level (sig) is .000 or .02 that is lower than .05 and all of the hypotheses were estimated in the confidence level of .95. The results of the hypotheses of Pearson correlations coefficient indicate that the most correlation are between the contents of green electronic banking services and reliability and accuracy of these services whereas the least correlation are between the services formats with easiness of using the green electronic banking services. There force, it can be concluded that every kind of changes in the services content can severely influence on the reliability and accuracy of green electronic banking services and this kind of influence is bilateral, it means that by changing of each one the other affection is observed. Moreover, any changing in the form and format can have the least changes in the easiness use of green electronic banking service. Table 3 is shown the hypotheses results of person correlation coefficients.

<table>
<thead>
<tr>
<th>services Content</th>
<th>numbers</th>
<th>60</th>
<th>60</th>
<th>60</th>
<th>60</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant level</td>
<td>000.0</td>
<td>000.0</td>
<td>.002</td>
<td>000.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>1</td>
<td>595.</td>
<td>.589</td>
<td>.393</td>
<td>.559</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reliability and accuracy</th>
<th>numbers</th>
<th>60</th>
<th>60</th>
<th>60</th>
<th>60</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant level</td>
<td>000.0</td>
<td>000.0</td>
<td>.004</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.595</td>
<td>1</td>
<td>.535</td>
<td>.352</td>
<td>.372</td>
<td></td>
</tr>
</tbody>
</table>

| numbers | 60 | 60 | 60 | 60 | 60 |
The first hypothesis: the content of the green electronic banking services directly and positively influence on the customer satisfaction. The result of regression analysis show that the intensity of the impact of electronic banking services on the customer satisfaction is $B = 354$. So in the significant level of sig$=000$, the green electronic banking services directly and positively influence on the customer satisfaction. The second hypothesis: reliability and accuracy of green electronic banking can positively and directly influence on the customer satisfaction. The result of regression analysis show that the intensity of reliability and accuracy of green electronic banking services is $B = 228$. Thus in the signification level of sig$=.000$ this reliability and accuracy of electronic banking services directly and positively influence on the customers satisfaction. The third hypothesis: the form and format of green electronic banking services directly and positively influence on the customer satisfaction. The finding results of regression analysis reveal that the severity of form and format impact of green electronic banking services on the customer satisfaction is $B = 255$. So in the signification level of sig $=000$ the form and format of electronic banking directly and positively influence on the customer satisfaction. The fourth hypothesis: easiness of use green electronic banking services directly and positively influence on the customer satisfaction. The finding result of regressing analysis show that the severity of impact in easiness use of green electronic banking services on the customers satisfaction is $B = 255$. Therefore, in the significant level of sig $= 000$, the easiness use of electronic banking services directly one positively influence on the customers satisfaction.

The fifth hypothesis: time saving in the use of green electronic banking services directly and positively influence on the customer satisfaction. The finding results of regressing analyses show that the severity of impact on satisfaction is $B = 299$. So, in the significant level of sig $=.000$, timesaving in use of green electronic banking services and positively influence on the customers the time saving use of electronic banking services on the customers satisfaction. Table 4 is shown the finding results of regression analyses.

### Table 4. The Results of Regression Analysis of Hypotheses

<table>
<thead>
<tr>
<th>Variable</th>
<th>sig</th>
<th>Beta B</th>
<th>Hypotheses result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services contents</td>
<td>.000</td>
<td>.354</td>
<td>Hypotheses verification</td>
</tr>
<tr>
<td>Services reliability</td>
<td>.000</td>
<td>.228</td>
<td>Hypotheses verification</td>
</tr>
<tr>
<td>Services format</td>
<td>.000</td>
<td>.246</td>
<td>Hypotheses verification</td>
</tr>
<tr>
<td>Services easiness</td>
<td>.000</td>
<td>.255</td>
<td>Hypotheses verification</td>
</tr>
<tr>
<td>Time saving</td>
<td>.000</td>
<td>.299</td>
<td>Hypotheses verification</td>
</tr>
</tbody>
</table>
8. CONCLUSIONS

Today, one of the development criteria in each country is the use of banking of its system. From the new methods of communicating between inter-banks and customers and also green electronic banking, there are some opportunities to improve the quality of presented services to the customers and enable them to access to services and information which is one of the requirements in the banking system of Islamic Republic of Iran. The increasing speed of technology along with human societies development, makes some wonderful changes in the surrounding areas, such that area in some of the events, the natural resources and environment in the technology alter and sacrifice for new presentation and services and make irretrievable damages on its body.

Meanwhile banks as middle layer and based on the social responsibility are equipped the resources in the ecologic and ecosystem section and by using of modern information technology are trying to establish the social development with new process of industry and nature in the green banking areas. In meantime by entrance of new concepts of sustainable development and to make and enhance of new system, the environment is getting important in the eco-system parts. And technology entrance is provided the proper area of cooperation and profitability for banks as well as environment. The green banking decreases the cost with process of standardization and prevents the green houses gases diffusion by investment on the pure energy and also crater the use of nature resources and operated the environment protection and development and biodiversity height to more into the sustainable development.

The present study is considered the effective factors on the customer’s satisfaction increment for acceptance and use of green electronic banking services with the EUCS model. In different sections, it was widely stated on the green electronic banking services and its types. Also, it was considered the customers satisfaction in view of several resources. During the study, it was proposed some different types of green electronic banking services and its different systems and finally, it was considered the hypotheses and the variables of study. The first hypotheses indicated that whether the content of green electronic banking services directly and positively influence on the customers satisfaction or not. The finding results of the first hypothesis indicated that the contents of the green electronic banking services is directly and positively influence on the customer satisfaction. That is shown the hypothesis verification. These results are consisted with the finding results of Moghadsinic 2016 and Sauvu 2012.

The second hypothesis Specified that the reliability and accuracy of the green electronic banking services directly and positively influence on the customers satisfaction. The finding results of the second hypothesis showed that the reliability and accuracy of green electronic banking services directly and positively influence on the customers satisfaction. That is shown that the second hypothesis is confirmed. These results are agreed with studies of Bahar, 2012 and Chadigal 2012.

The third hypothesis indicated that the form and format of green electronic banking services directly and positively influence on the customers satisfaction. The finding result of the third hypothesis showed that the format of green electronic banking services directly and positively influence on the customer satisfaction which is the indicator of third hypothesis confirmation. These finding are accompanied with results of Bakhshi 2015 and Sallve 2012.

The fourth hypothesis indicates that easiness of green electronic banking services directly and positively influence on the customer’s satisfaction. The finding results of the fourth hypothesis specifies that the validity and reliability of green electronic banking services directly and positively influence on the customers satisfaction which is approved the fourth hypothesis. Also, it is in line with the study of Bihari 2012 and Naghavifar 2012. And finally the fifth hypothesis revealed that the time saving in use of green electronic banking services directly and positively influence on the customers satisfaction. The finding results of the fifth hypothesis indicated that the time saving directly and positively influence on the customer’s satisfaction which is approved the fifth hypothesis that is accompanied with Chandigal 2012 studies. As a general, all of the hypotheses were accepts in the confidence level A% 95 and it was verified their positive and direct
relationship with customers satisfaction. According to the present study result all of the variable study including the content of services, validity and reliability and accuracy, easiness in Use, from and format of the services and time saving in applying of green electronic banking services positively and significantly influences on the customers satisfaction. So it is suggested that those bank which are used this kind of services to attract the customer’s satisfaction and in terms of the kind of correlation relationship and the intensity of relationship between each kind of variables in research.

And there is the most correlation between the contest of electronic banking services and the reliability and accuracy of green electronic banking services, also there is the least correlation between the services format with the easiness use of green electronic banking services. Therefore, it can concluded that every kind of changes in the services content can be influenced the mostly effects on the green electronic banking services validity and reliability. This is bilateral. It means that by changing of every one it can be observes the effect on the other one. Moreover, each kind of changes on the services content use of green electronic banking services. They can try to development and expend the customer satisfaction in the green electronic banking services in terms of more dimensions and variables. Also they to expand customer satisfaction and green electronic banking services. As a general, it can provide the appropriate place for investment in the ecologic sections by these process. In fact the banks are established the ecological projects growth and participation in the activities of this section as a part of new in the development and through this make the assured investment as well as new businesses according to the green Electronic banking objectives.
REFERENCES:
Oveysi, Soraya (2011). Corp Bank customer satisfaction with the quality of e-banking services in Tehran, a master's thesis, Business Administration, Tehran Payam Noor University, Faculty of Economics. (In Persian)

Green Banking guarantee sustainable development (2014) Publication of electronic banking, Tehran, center Fa or 8 November.


Tagavifar Mohammadtaghi, Zahedai, Mohsen, Torabi, Mostafa. (2012). Factors Affecting the Use of online banking services by customers (Case study: Bank Mellat), Journal of Iranian Research Institute for Information Science and Technology in 2251, ISSN (printed) 8223559, Round 27, No. 3, pp 539. (In Persian)

Hamidi, Gholamreza (2014) browsing on green banking, information technology and competitive Mythay, the National Conference on Computer Engineering and Technology Management, Tehran, martyr Beheshti University Auditorium, 18 June. (In Persian)


Seyyedjavadin, Reza, Yazdani, Shamsi (2005). Factors affecting customers intend to use Internet banking services (Case Study Saman), Knowledge Management magazine, Issue 70, pp. 45-61. (In persian).


Mogadasiniya, Hosein. (2016). Green Banking impact on consumer behavior banking services to achieve sustainable development and export bank of Kermanshah, the third International Conference on Green Economy, Babolsar, industry research firm Torud north. (In persian)


Saving Costs by Preventing Leaving the Sport: Prioritizing Reasons for Leaving the Sport of Bodybuilding Clubs from the Customer Perspective

Maryam Setayeshi11, Rokhsareh Badami12 and Hassan Musazadeh13

ABSTRACT: lack of sufficient physical activity will cost billions of dollars each year to the world. The aim of this study is to determine the reasons for leaving the sport of bodybuilding to provide solutions to avoid leaving the sport. The population of the city consist of Ganaveh clubs participants who were paid less than a year to fitness activities and in the last two years have left the sport of bodybuilding. Snowball sampling method was chosen. In this case, the phone numbers were collected from club manager and a coordinated questionnaire was sent to 100 people who were willing to participate in the study included 40 female and 60 were male and the age range was between 20-30 years and between 1-12 months who had a history of participating in the sport of bodybuilding. The research instrument was a questionnaire that the questionnaire contained eight subscales of facilities, coaches, other recreational activities, social environment, aspects of motivation, fatigue, pain and injury, time limits and economic aspects. The content validity, construct validity and reliability of the questionnaire were measured and confirmed its validity and reliability. Results: The results were analysed by T-test and Friedman. Results showed that in the scale of facilities, coaching and other leisure activities women more than men left the sport of bodybuilding. As well as the time limit, the first priority and the social environment, the last priority in both men and women have left the sport of bodybuilding. The findings of this study can be used for sports programming, educators and parents.

KEYWORDS: quit sports, fitness, sex

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1. INTRODUCTION

Lack of sufficient physical activity will cost billions of dollars each year to the world. It damages health care system. According to the researchers, just one hour of physical activity a day can prevent the creation of these costs (Weinberg and Gould, 2015). Evidence suggests that such interventions (regular physical activity) act as an excellent financial investment because these interventions reduce the risk of disease and require costly treatment for patients (national document non-communicable Disease Control and Prevention, 2006). But, unfortunately, despite many benefits of physical activity, level of physical activity of people with the advancement of science and technology, has had a significant decrease. In recent years, medical research has shown that a large number of diseases, directly, to the lack of physical activity is concerned. Therefore, its officials and experts have to encourage people to do physical activity. However, the first problem faced by the authorities, is how to encourage sedentary population to physical activity and sports (Weinberg and Gould, 2003, quoted by the preacher Mousavi and mosayebi, 2008, p. 88). Therefore, researchers have tried to identify factors involved in physical activity until they are confronted with consideration of work in the field of encouraging people to engage in physical activity and the second problem is how to keep people committed to do regular physical activity (Weinberg and Gould, 2003, quoted by the preacher Mousavi and mosayebi, 2008, p. 92).

Based on research evidence, third sport participants between the ages of 10 to 17 years old, left the sport in which they participated (Gold & Horn, 1984). Therefore, it seems, for many people, starting an exercise program is easier to adhere to it. This is thought-provoking and should be considered as a way to provide it. Accordingly, providers of sports centers have insisted on the loyalty of customers. Some of these centers follow the slogan "the customer is right" to have their walks (Heidarinejad, moral, Nia Shafi Sharifi Bahrain, 2016). However, research shows that on average, fitness centers lose 40% of their previous clients every year (like Ghahfarokhi quoted Ali, jug Qian, Jalali Farahani, Turkish, 2011). Quality of Service (Newman, 2001), the social impact of staff (Henry, 1389), facilities (like Ghahfarokhi Ali et al., 2011), the presence of qualified and committed teachers and payment of appropriate fees (kindness and Shamsipour, 2006) are the factors known as customer satisfaction.

Conversely, failure to achieve positive results in sports activities, conflict of interests, negative experiences, trauma, and dissatisfaction with the coach and the lack of a recreation of the reasons made lack of customer loyalty (Liper, 2009). Some of the customers that their motivation for continued participation in physical activity classes lose, for a long time may have retired from the sport (Petlichekof, 1996). This issue is important and needs to be special attention because it refused to participate in sport and physical activity, sports centers face with low customer and also endangers the physical health of clients (Behrasy and Badami, 2016) accordingly, researchers in recent decades, physical activity and exercise are the reasons for leaving. When studying the phenomenon, researchers have found that some customers leave unwanted physical activity and exercise withdrew due to injury while others are self-imposed and carried out other activities to achieve the physical activity which have abandoned and some considered costs that outweigh the benefits arising out of participation in physical activity (Clint and Weiss, 1986). Linder, John and Butcher (1991) acknowledged that the reasons for leaving the activity, the skill level of participants, gender and depends on the amount of time spent in training and matches. The importance of gender roles among different motivations for leaving the sport in research is somewhat ambiguous and some studies have pointed to important differences while other studies, have achieved few significant differences regarding gender, (Martin and Dodra, 1991). Similarly, the majority of foreign studies also have examined the reasons for leaving the sport at competitive levels (eg, Polomishno, 2013, Ankson, 2011, Heidari et al, 2014); A evidence-based reasons for leaving the sport may depend on the skill level (Behrasy and Badami, 2016). So, on this basis, the
aim of this study was to investigate the reasons for leaving the sport of bodybuilding on the basis of sex in customers who had done the sport of bodybuilding less than a year.

2. LITERATURE REVIEW

Sarrazin et al (2002) in a study of 335 participants aged 13 to 15 years from 53 female handball team league sport of handball leave France showed lower levels of intrinsic motivation (to success), respectively. Leaving mostly felt handball coaches are self-centered. They also found themselves less satisfied and felt less able to communicate with coach and less confident than larger players. Some players due to reasons beyond their control (injury) had left the sport.

Moliner and colleagues (2006) conducted a study to investigate the reasons for leaving the Spanish athletes, the results showed that other sporting activities and having different occupations, such as addressing homework exercise, are the most important reasons for leaving. The lack of interest in coaching, team atmosphere and lack of understanding of failure and lack of emotional support from friends are other factors of retiring from sports.

Frasrtvmas, Kut and Deakin (2008) examined sports dropout rate of youth participation in sports activities in terms of growth with emphasis on social psychology and situations and the status of the athlete's physique. 25 swimmers who quit the sport continued to swim in this study. The results showed that people who had abandoned their sports training and exercise program had fewer stages.

Moniro and colleagues (2009) examined the incentive to leave their main reasons for leaving the sport in young footballs exercise compared them with other team athletes. The research looked at 150 men and 150 women aged 14 to 18 years and questionnaires about their reasons for leaving the sport derived from Horne and Weiss's Church, and Googad questionnaires were used. Teens who participated in the sport of football, basketball and volleyball were selected. The primary reason for leaving their exercise, was being busy in other activities and lack of having a coach or team spirit.

Vekingston Guzman (2011) examined leaving the sport on the basis of self-determination theory. This study was performed in a 19-month period and considered satisfaction of emotional needs as predictors of dropout rates of exercise. The sample consisted of 857 athletes between the ages of 11 to 19 years with a mean age of 15 years.

Ankson examined (2011) the sport leaving and its causes in a group of successful athletes. 202 men and 98 women, aged 2 ± 16 years in 1975, 1983, 1989 years participated in this study. Questionnaires and interviews on the subject presented leaving the sport at the age of 17 was at its highest. The results showed that women had clearly left more exercise than men. Sports injuries, stagnation in athletic performance, training needs and lack of motivation are considered the main reasons for leaving athletic sport at an early age among other reasons. This can be because of social factors, participating in other sports, and need to work successfully, military service, marriage and other notable reasons for leaving the sport at different ages. according to the five-level of sport leaving based on qualitative research Anukson, Heidari, Badami, Baluch and Duffy (2014) considered 7 level. "Executive" and "Economy" factors were added to the previous levels. The impact of sports officials and law enforcement agents involved in the decision to leave the sport athletes noted and economic factors in any financial cost to exercise and participate in sports competitions is required to be paid.

Heidari, Badami, Baluch and Duffy (2014), designed a questionnaire based on the seven-level reasons and assessed reasons for leaving skaters in teenagers skating sports. The findings suggest that the role of education, law enforcement agents, coercion and restrictions in school and work, motivational aspects, and economic factors on leaving Skateboarding, is higher than average.
Similarly, economic factors, the highest and the lowest rating in the social environment factors affect quitting skating sport themselves.

In summary, the most common reasons offered for leaving sports include: injuries, lack of motivation, negative training environment or training with too much pressure, contradicting interests, spend time for other priorities and conflicts with the coach or sports games.

3. Theoretical Framework

Participation in sports has positive effects that some of them are mentioned below:

3.1. The effect of exercise on health

Regular physical exercise has benefits for health. People who are physically active are less likely to cardiovascular disease, cancer, osteoarthritis, and endocrine disorders (Folsam et al., 1997).

3.2. Effects of exercise on socialization

Exercise leads to Socialization. Socialization through sport is the effect of exercise on beliefs and attitudes. It is assumed that we learn lessons from participation in sport is transferability to other social aspects (Abdoli, 2008). In a society if physical education organizes based on principle, gives out individualism and self-centeredness from athletes and an individual can communicate with other members of the community easier (and Azizabad Farahani, 1995).

3.3. Effect of Exercise on the rights of others

Because the laws and regulations of each major sport skills and rules of the game for all players is necessary, Consequently, play is a position to teach the rules and social conventions, especially for children who are not involved in social rules in early ages and an individual can communicate with other members of the community easier. (Azizabad Farahani, 1995)

3.4. The effect of exercise on psychological states

Research shows that exercise has a physiological effect on the body that are the physiological effects of relaxation provider. The researchers say that sport causes euphoria (Azizabadi Farahani et al., 2004).

3.5. The role of sport in leisure

Leisure includes activities apart from the forces of occupation, family, and community in which a person acts as they like. As a result, leisure is not employment, but a valuable experience of life and in the words of Aristotle, the most serious concern is human leisure (Abdoli, 2008).

3.6. The effects of exercise and cognitive performance

The benefits of exercise have been known for cardiology for a long time. Nowadays, however, it is specified that exercise is beneficial for the whole body, even the brain. Exercise increases blood flow throughout the body and naturally increases blood flow in the brain (Lowell et al., 2004).

3.7. Disadvantages of leaving the sport

Today, the benefits of exercise classes is are clear. It seems, the efforts of researchers, educators, practitioners and all those who have a role in this field, in raising the awareness of individuals, has concluded. However, much surprise that despite the awareness of the benefits of exercise, about fifty percent of people who start exercise, leave it in the first six months (preacher Mousavi and mosayebi, 2008). Leaving of the sport, if doesn’t lead to the termination of exercise, can have irremediable consequences. At least its disadvantages, is that a person is deprived of the benefits of regular physical and mental exercise.
4. METHODOLOGY

This research is descriptive and causal-comparative method. In this study, the questionnaire was designed to leave the sport in order to identify the causes of leaving the sport of bodybuilding, then the validity, reliability and ultimately measurement of the research hypotheses were performed on athletes in bodybuilding. The population of the study were participants of Ganaveh city clubs who were involved in fitness activities less than a year and have left the sport of bodybuilding in the last two years. Snowball sampling method was chosen. In this case, the telephone number of club officials were collected and a questionnaire was sent to them. 100 people were willing to participate in the study included 40 female and 60 were male and their age range was between 20 to 30 years. And between 1-12 months had a history of participating in the sport of bodybuilding. In this study, a questionnaire was set based on the Likert scale. The questionnaire had two parts: the first part was devoted to demographic and the second part was devoted to the cause of leaving the sport of bodybuilding. The questionnaire consisted of 55 items that 9 items did not get the validity. To assess the validity, content validity ratio (CVR) was used. To determine the CVR seven experts were asked to comment on each item based on the whole three-part "approved items," "with the term, it is appropriate" and "inappropriate statements" about the case. To determine the validity coefficient, the following formula was used. In this formula \( n_E \) is number of professionals who have the option of "approved" response and \( N \) is the total number of professionals. If the calculated value is larger than the table, content validity of the items will be accepted.

\[
CVR = \frac{n_E}{N} - \frac{1}{r}
\]

The questionnaire contains 8 subscales of facilities, coaching factors, time constraints factors, motivational factors, social environment factors, the choice of other recreational activities, fatigue, pain and injury factors and economic and financial factors. How to distribute the items mentioned in Table 1.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>The questions distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>facilities</td>
<td>1 to 15</td>
</tr>
<tr>
<td>Coach factors</td>
<td>16 to 23</td>
</tr>
<tr>
<td>Other recreational activities</td>
<td>25 to 24</td>
</tr>
<tr>
<td>Social environmental factors</td>
<td>26 to 34</td>
</tr>
<tr>
<td>Motivational factors</td>
<td>35 to 39</td>
</tr>
<tr>
<td>Fatigue Factors, pain and injury</td>
<td>40 to 42</td>
</tr>
<tr>
<td>Operating time limits</td>
<td>43 to 44</td>
</tr>
<tr>
<td>Economic and financial factors</td>
<td>45 to 46</td>
</tr>
</tbody>
</table>

The construct validity of the questionnaire was confirmed.

Test reliability using Cronbach's alpha was performed, the results indicate the credit for all the sub-components (Table 2). Given that Cronbach's alpha is greater than 7/0 of all sub-components (Table 2), the analysis and statistical inference can be done on the sub-components.
To collect data, a researcher from the authorities, clubs Ganaveh city requested that the address or phone number at the time of leaving the sport (bodybuilding) were discussed between 20 and 30 years respectively less than a year and fitness activities are available to researchers. The researcher contacted them and explained the purpose of this research. Of those who were willing to participate in the study, email addresses were taken and a questionnaire has been sent to them. A small number who have expressed, via e-mail cannot fill out the questionnaire, and then questionnaires they post were collected.

Analysis of data from this study obtained using SPSS statistical software using descriptive and inferential statistics. The descriptive statistics, statistical characteristics such as average, and standard deviation were reported and inferential statistics department tested the research questions and the following statistical calculations were performed:

- To check the validity of the information received by the collective opinions of relevant experts as well as assessing construct validity, factor analysis was used.
- To determine internal consistency, Cronbach's alpha was used.
- To prioritize reasons for leaving sports, Friedman test was used.
- To check the validity of data items, factor analysis and deductive method was used.

### 5. FINDINGS

In Tables 3 to 6 rating factors affecting sport quit have been reported.

Friedman test was used to answer the questions above. Estimates relating to the tests for women and men respectively have been reported in Tables 3 and 4.

Friedman test results indicate that there is very significant difference between the different components according to leave an impact on the sport of bodybuilding in women and men.

#### Table 2. Cronbach’s alpha sub-components for all women and men

<table>
<thead>
<tr>
<th>The subcomponents</th>
<th>The number of items</th>
<th>women</th>
<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Facilities</td>
<td>15</td>
<td>0.935</td>
<td>0.865</td>
</tr>
<tr>
<td>Operating instructions</td>
<td>8</td>
<td>0.935</td>
<td>0.865</td>
</tr>
<tr>
<td>Other operating recreational activities</td>
<td>2</td>
<td>0.901</td>
<td>0.765</td>
</tr>
<tr>
<td>A social environment</td>
<td>9</td>
<td>0.924</td>
<td>0.847</td>
</tr>
<tr>
<td>Motivating factor</td>
<td>5</td>
<td>0.882</td>
<td>0.788</td>
</tr>
<tr>
<td>Managing fatigue, pain and injury</td>
<td>3</td>
<td>0.870</td>
<td>0.717</td>
</tr>
<tr>
<td>Operating time limits</td>
<td>2</td>
<td>0.834</td>
<td>0.839</td>
</tr>
<tr>
<td>Economic and financial factors</td>
<td>2</td>
<td>0.817</td>
<td>0.740</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>0.971</td>
<td>0.926</td>
</tr>
</tbody>
</table>

#### Table (3): Women Friedman's test results to determine the sub-components of leaving an impact on the sport of bodybuilding

<table>
<thead>
<tr>
<th>Sources of changes</th>
<th>Degrees of freedom</th>
<th>sum of squares</th>
<th>average of squares</th>
<th>Chi-square -Friedman statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significance level</td>
<td>0/000</td>
<td>13/14</td>
<td>1/88</td>
<td>29/93</td>
</tr>
<tr>
<td>Among the sub-components</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 4. Friedman's test results to compare men to leave the sub-components of an impact on the sport of bodybuilding

<table>
<thead>
<tr>
<th>Sources of changes</th>
<th>Degrees of freedom</th>
<th>Sum of squares</th>
<th>Average of squares</th>
<th>Chi-square statistic Friedman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among the sub-components</td>
<td>7</td>
<td>15.59</td>
<td>2.23</td>
<td>30.54</td>
</tr>
<tr>
<td>Error</td>
<td>413</td>
<td>198.72</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420</td>
<td>214.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**: Significant at the 1% level

That's why the average impact of the sub-components of sport quit of bodybuilding in women and men has been proposed in Figures 1 and 2.

**Figure 1:** Comparison of the different components of leaving an impact on the sport of bodybuilding in women

As seen in Figure 1 operating time constraints, other recreational activities and facilities have left the greatest impact on the sport of bodybuilding in women.

**Figure 2:** Comparison of the different components of sport quit impact on the sport of bodybuilding in men

In the men also shows the results of comparing the average of the following components (Figure 2), which time constraints and fatigue factor, pain damage has left the greatest impact on the sport of bodybuilding in men. On the other hand, social media platforms and operating instructions left the least impact on the sport of bodybuilding in men.

Tables 5 and 6, respectively, show ranking the result of the following factors in terms of the impact on women and men in the sport of bodybuilding.

### Table 5: Ranking of Factors Affecting leaving in the sport of bodybuilding in women

<table>
<thead>
<tr>
<th>Operating Facilities</th>
<th>Operating instructions</th>
<th>Other operating recreational activities</th>
<th>A social environment</th>
<th>Motivating factor</th>
<th>Managing fatigue pain and injury</th>
<th>Operating time Limits</th>
<th>Economic and financial Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

### Table 5: Ranking of Factors Affecting leaving in the sport of bodybuilding in men

<table>
<thead>
<tr>
<th>Operating Facilities</th>
<th>Operating instructions</th>
<th>Other operating recreational activities</th>
<th>A social environment</th>
<th>Motivating factor</th>
<th>Managing fatigue pain and injury</th>
<th>Operating time Limits</th>
<th>Economic and financial Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>7</td>
<td>5</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>
6. DISCUSSION AND CONCLUSION

The aim of this study was to prioritize reasons for sport quit in bodybuilding. According to research findings, average rating of sport quit of men and women in the highest average operating time limits factor and in social environment had the lowest mean. Similarly, among the 8 Subscales, time limit and facilities, other leisure activities and coach were first 4 priority in the women's sport quit and the time limit, fatigue, pain and injury, facilities and motivation were 4 first priority in the sport quit of bodybuilding in men, respectively.

Allocation of first priority of sport quit to time limit in both men and women is consistent with the findings of studies of Yazdanparast and Badami (1394), Heidari, Badami, Baluch and Duffy (2014) and Anoksen (2011). In the study of Yazdanparast and Badami (2016), coercion and restrictions are girls' first priority to leave the team sports. Also, Anoksen (2011) mentioned educational and job requirements are the reasons that lead to sport quit. Education and work requirements on the one hand and following exercise activities for athletes on the other hand can make contradictions between time priorities.

The second priority of women's sport quit is facilities factor and it was the third priority in men. In this regard, many studies have shown optimal service quality to customers' satisfaction and loyalty. Javadein Sayed et al (2011) by providing model showed that service quality of clubs or sports complexes customer's satisfaction and loyalty affect them. So, it seems, with the arrival of services to the sports industry as an extremely competitive service industry, offering excellent service, is a prerequisite for the survival and success of any club sport.

Another finding of this study showed that the effect of leaving the sport in scale facilities was higher in women than men. This finding is consistent with studies finding of Hak Lee et al. (2010). Golfer clubs in Korea about the impact of service quality on customer satisfaction and intention to re-register made conclusion that the importance of service quality and clean and new club and club facilities for women than for men is that it represents the influence of gender on reasons for leaving the sport.

Based on these findings, fatigue, pain and injury have the second priority dedicated to the sport of bodybuilding in men. Baker and Abernethy (2007) contended that, in many educational programs that focus on training hard, dropping out of sport is more likely. Gold Mobry, and also toffee (2001) have suggested that exercise leads to a feeling of tiredness and left repetitive and boring exercise. Also, sports injuries is one of the main reasons that makes the athlete unable to perform well. The ensuing lack of medical treatment and professional sports is also cause of leaving. In general, sports injury as a factor in leaving the sport, has been the most cited factor in literature (Slater and Tigman, 2010; Boucher and John Linder, 2002). Another finding of this study showed that sports and other recreational activities subscales were more on women in leaving sports than men and the third priority is given to women's sport leaving. In other words, women have abandoned the sport of bodybuilding exercises to a greater extent than men. This finding may be related to the fact that there are varieties of fitness activities for women than for men, and they have more freedom to choose the type of exercise.

Another finding of this study showed that coach is the fourth priority in women's sport leaving. This finding is consistent with study’s findings of Yazdanparast and Badami (2015), Heidari, Badami, Baluch and Duffy (2014) and Basman (2004). Basman results (2004) showed that about 75% of women and 57% of male athletes’ coach role in athletic success which is a "very high" estimation. Jackson (2001) found that "adolescent girls tend to coach athletes on the fun and excitement during exercise stress more than boys.

In a study conducted on young swimmers, it has shown that teens who feel support of their coach, still interested in continuing sport, but young swimmers who found their coach controller were
trying to leave the sport (Politer, Fortier, Valrond Breyer 2001). The behavior of coaches, have especially great impact on attitudes and clients, and multiple studies clearly shows great importance of relationship between client and coach to early end of exercise period (Martin Dale, and Jackson, 2001). In other words, the key importance of human resources in the modern advanced organization is to the extent that realization of the effectiveness of all methods and strategies ultimately is attributed to human factor.

Economic reasons were sixth priority for leaving sports among men and women. These finding is inconsistent with Heidari, Badami, Baluch and Duffy (2014) and Yazdanparast studies (2015). Economic factor was the first priority of leaving the sport in the study of Heidari et al (2014) and case study Yazdanparast and Badami men (2015), respectively. Perhaps this difference is related to differences in skill level case studies. In this study, participants had less than one year of experience in the study of Heidari et al (2014) and Yazdan Parsat and Badami (2015) was higher skill level of the participants.

In this study, the social environment has less impact on the sport of bodybuilding. This finding is consistent with research findings of Heidari et al. (2014), Yazdanparast and badami and is incompatible with the findings of Anokson (2011).

7. Practical Suggestions

The findings showed that the first priority of leaving the sport of bodybuilding in male and female clients have been attributed to time constraints. However, the reality is that more excuse of lack of time and the main thing is that exercise is not a priority in the lives of these people. In other words, culture exercise is not created because the people have time to watch TV and circulation. So, it seems, the first step in preventing quit sports, sports culture and put it in the first step is to create another, enjoyable the sport. If coaches and sports programs be satisfying and provide recreation and other community members as much as or even more than they are attracted to sports (preacher Mousavi and Mosayebi, 2008).
REFERENCES:


Heidari nejad, P., moral, E, Sharifnia, c and Sharifi Bahreini, n. (1394). "Assessment of service quality clubs Ahvaz from the customer perspective". Bulletin Y sports management and motor behavior, Year 11, No. 21, pp. 156-149.

National prevention and control of non-communicable diseases document and associated risk factors in the Islamic Republic of Iran in the period 1394-1404.


Yazdanparast, the almonds, the. (1393). "Reasons for leaving the team sports in adolescents”. Master's thesis, Islamic Azad University, Faculty of Physical Education, 45-60.


Siesmaa, E.J., Blitvich, J.D. and Finch, C.F. (2011). “A systematic review of the factors which are most influential in children’s decisions to drop out of organized sport”. In A.D. Farelli (Ed.), Sport Participation:


Cuban Healthcare System: A Strategic Model for the Resistive Economy

Mohsen Khosravi

ABSTRACT: Nowadays with increasing tensions between the countries and rising of right wing politicians in former liberal countries in response to the neoliberal globalization agenda and its devastating effects, most nations want to keep their sovereignty and become self-sufficient and somehow bring upon the resistive economy. Cuba, having a health status similar to the first world nations despite bearing the longest embargo in the history, has been advocated and hailed so much in healthcare during last decades and for this reason we supposed that it can be a role model for the resistive economy and the countries under embargo. We assessed the situation of Cuban healthcare system by comparing it to 6 other diverse nations and the world itself by using two materialistic criteria of efficiency and effectiveness and two spiritualistic criteria of ethics and equity. The results showed a massive characteristic distinction between Cuban healthcare and other nations. We concluded that Cuban healthcare system can be role model not only for countries tending toward the resistive economics but also whole the world.

KEYWORDS: Cuba, healthcare, resistive economy, embargo

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1. INTRODUCTION

Today in the 21st century the globalization agenda has reached its peak and is beginning to fall after such events like Brexit, the presidency of Donald Trump and rising of the right-wing politicians in former liberal countries (RT, 2016). In this situation, by rising of the tensions, most of the countries tend to concentrate on self-sufficiency rather than try to depend on others and somehow try to bring upon the resistive economy (New York Times, 2016). One of the most important and a critical part of a nation is the healthcare system. Today healthcare sector is the most in demand and its costs which has lead nations to put healthcare on top priority. By putting these facts in line, we can conclude that we are in a critical phase to select our vision of the future and make plan for it. In order to make the plan using the experiences and successful models in healthcare sector would be a very helpful step. One of the key attributes of a resistive economy is its intention toward eliminating dependency and most importantly efficiency without withholding any nation-wide ideals. Cuba has done a great job in this matter and even has been praised by international organizations and institutes for her efforts to keep an efficient and effective health sector without putting any of her revolutionary ideals on hold. Prior to the Cuban Revolution in 1959, Cuba’s healthcare provision followed a market-led model of healthcare (Demers, 1993), with healthcare services that were representative of third world health provision. There was suboptimal distribution of its doctors, the majority of whom were in cities such as Havana and Santiago de Cuba, which left significant numbers of people without access to health care. The idea of a national health system to reduce disparity and introduce universal care for Cuba began in 1960 by the revolutionary and physician Che Guevara. In his famous speech On Revolutionary Medicine, he said that the work of the Ministry of Health and other similar organizations was threefold: (i) to provide public health services for the greatest possible number of persons; (ii) to institute a program of preventive medicine; (iii) to orient the public to the performance of hygienic practices (Guevara C. 1968). Thus, the goal was to establish a unified national health service that would be available to the population of the 14 provinces. By 1961 the government had introduced measures which included a reduction in the cost of medicines, nationalization of pharmaceutical companies, mutual aid co-operatives and private hospitals, as well as widening the network of hospitals so that the Cuban healthcare system was a totally socialist one (Mesa-Lago, 2000). It’s astonishing to say that Cuba, despite bearing the longest embargo in the history not only never confronted financial problems the world has for funding healthcare sector but also staffed one of the highest ratios of doctors per population in the world and neither implemented structural adjustment policies we see today being implemented by countries which face financial problems (Feinsilver, 1993, Delgado, 1998, Preker and Harding, 2003, Lieberman et al, 2005, world health statistics, 2016). These facts have led researchers and writers citing Cuban healthcare system as “the black swan” or “the curious one” or “the Cuban paradox” (Spiegel and Yassi, 2004). This paper, tries to illustrate Cuban healthcare system as a significant strategic model for the resistive economy through two material indicators of “efficiency and effectiveness” and two moral indicators of “equity and ethics”. After showing the position of Cuban healthcare system in such indicators, a scientific and numerical conclusion will be asserted and the author will show the very reason why the Cuban healthcare system would be a significant model for the resistive economy.

2. LITERATURE REVIEW

Numerous researchers have been studied and acknowledged Cuba, one of the few communist countries survived as having an amazing efficient and effective health system despite bearing the longest embargo started right after its socialist revolution in the history and a potential role model for countries tending toward self-sufficiency in healthcare sector (Gary Clyde Hufbauer et al, 2011, Greene, 2003, Keck and Reed, 2012, Pol de vos et al, 2008, Zambrano, 2004, Aitsiselmi, 2004, sixto, 2002). Some has been focused on the reasons behind this outstanding efficiency and
has found that such factors like focusing on prevention rather than cure, human resources rather than other costly ones, traditional medicine rather than costly modern one and massive education on revolutionary ideas and fighting spirit have contributed a lot to the matter (Hood, 2000, Diane Appelbaum et al, 2006, Cooper et al, 2006, Greene, 2003, Nikelly, 1998). Some researchers have focused on the spiritualistic and ethical issues of the Cuban healthcare system like her free healthcare, her concentration on rural parts of the country and the ideology of considering healthcare as a human right and a revolutionary ideology called medical internationalism (Campos-outcalt and Janoff, 1980). For some, surviving the longest embargo in the history and having this significant healthcare status has been mind-blowing and interesting to search on, some have studied the history of the embargo and the effects it has had on the healthcare system specially in a period called ‘the special period’ when former soviet union and whole the eastern block dissolved (Nayeri and lopez-pardo, 2005, Luisa Iñiguez, 2012, De vos and van der stuyft, 2000). There have been some studies focused on Cuban innovative approach toward using healthcare as a mean to export products and being a forerunner in healthcare market in the world. Many have studied Cuban medical diplomacy, its positive effects on foreign relations, has praised Cuban contribution in times of healthcare crisis anywhere in the world especially in the 3rd world countries and even has nominated Cuba for a noble peace prize (Feinsilver, 1992, Feinsilver, 2006, Feinsilver, 2010). These studies are only some tiny part of the significant academic researches on Cuban healthcare and our limited study doesn’t have the needed capacity to assert whole, but it has been tried to provide most important and trending issues studied on Cuban healthcare.

3. THEORETICAL FRAMEWORK

Resistive economics imply to an economic theoretical agenda which advocates economic independency or some kind of autarky especially in the time of sanctions (Bozorgmehr, 2012). Today, healthcare is an integral part of a society and has one of the highest demands from the consumers, so having efficient and effective healthcare system which sustains the pressures to change the national ideas from the big powers is pivotal for any so-called resistive economy (the Henry J. Kaiser family foundation, 2015). Efficiency implies to the system’s outputs regarding the inputs and costs (merriam-webster, 2017). In the world of scarce resources a successful system is the one which achieves its highest goals with the least resources and healthcare system is not depart from this agenda. Regarding effectiveness, it’s a word which asserts the successfulness of any system or organization in achieving their goals (oxford, 2017). A role model system or organization is the one that is not only efficient but effective in his performance. Moral characteristics like ethics and equity are the transcendental parts of any system which imply the higher values which are more spiritual rather than material. This study tends to blend these material and spiritual variables to assert the legitimacy of the Cuban healthcare system as a role model for the resistive economy.

4. RESEARCH METHODOLOGY

This study tries to evaluate and assert Cuban healthcare system as a role model for the resistive economy by using two materialistic variables of efficiency and effectiveness and the two spiritualistic variables of ethics and equity. Author’s definition of such variables is just as it follows:
- **Efficiency**: healthcare indicators related to costs and the gains extracted from WHO health indicators.
- **Effectiveness**: healthcare indicators related to healthcare outcomes extracted from WHO indicators.
- **Equity**: emphasis on rural areas and characteristics like believing healthcare as a right to all citizens.
Ethics: factors like medical diplomacy and internationalism and aid to the 3rd world poor nations.

5. RESULTS

5.1. Efficiency and effectiveness

Most of the scholars in the healthcare sector assess the legitimacy of healthcare systems by their efficiency and effectiveness. Countries all around the world have been long searching for more efficient and effective ways to handle their healthcare sectors, for this very reason they have implemented structural adjustment programs designed by IMF and world bank to get more efficiency and effectiveness but not only haven’t got the results they wanted but also in some cases they got to a threatening position! in contrast Cuba while having one of the highest overall healthcare indicators in the world despite having one of the lowest per capita expenditures is neither a member of the World Bank nor a member of the IMF and have never used these adjustments(World Health Statistics, 2016). This makes it even more remarkable that the country was praised by the World Bank President, James Wolfensohn who acknowledged that ‘Cuba has done a great job on education and health’ (IPS 2001). One of the great contributors of the efficient and effective Cuban healthcare system is its focus on prevention and preventive approaches. It has been shown that preventive approaches are far efficient and more effective in long term than curative ones (Maciosek et al, 2010).

Table 1 - comparison of per capita expenditure on health between Cuba and several other countries
Table 2- comparison of density of health professionals between Cuba and several other countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Density of Health Professionals (per 10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuba</td>
<td>157.8</td>
</tr>
<tr>
<td>France</td>
<td>124.9</td>
</tr>
<tr>
<td>Great Britain</td>
<td>116.1</td>
</tr>
<tr>
<td>United States</td>
<td>122.7</td>
</tr>
<tr>
<td>Turkey</td>
<td>41.1</td>
</tr>
<tr>
<td>Iran</td>
<td>23</td>
</tr>
<tr>
<td>Germany</td>
<td>136.1</td>
</tr>
<tr>
<td>World</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 3- comparison of general governmental expenditure on health as percentage of total health expenditure between Cuba and several other countries

<table>
<thead>
<tr>
<th>Country</th>
<th>General Governmental Expenditure on Health as Percentage of Total Health Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuba</td>
<td>94.2</td>
</tr>
<tr>
<td>France</td>
<td>77.4</td>
</tr>
<tr>
<td>Great Britain</td>
<td>84</td>
</tr>
<tr>
<td>United States</td>
<td>47</td>
</tr>
<tr>
<td>Turkey</td>
<td>76.8</td>
</tr>
<tr>
<td>Iran</td>
<td>40.4</td>
</tr>
<tr>
<td>Germany</td>
<td>76.7</td>
</tr>
<tr>
<td>World</td>
<td>57.6</td>
</tr>
</tbody>
</table>
Table 4 - comparison of life expectancy at birth between Cuba and several other countries

Table 5 - comparison of Under 5 mortality rate between Cuba and several other countries
As tables above show Cuba has a significant efficiency by only spending 405 dollars on healthcare per capita which is amazingly half of what Turkey and one third of what Iran spends on! (Table 1). In terms of effectiveness the health indicators of Cuba not only surpass Turkey and Iran, but also is on par with countries spending much higher on healthcare per capita like United States and Great Britain! (Table 1, 4, 5, 6). As mentioned earlier, one of key contributors of such efficiency and effectiveness for Cuba is her resistive approach towards the structural adjustment policies of world bank and IMF despite bearing harsh times for more than 5 decades due to the embargo and more importantly losing her close allies after the collapse of the eastern block specially the Soviet Union (Nayeri and Lopez-Pardo, 2005). As table 2 shows density of healthcare professionals in Cuba is one of the highest in the world and as the table 3 illustrates most of the expenditure in the Cuban healthcare system is governmental and just a small amount (nearly 6 percent) is spent by the private institutions and people themselves which is in fact due to the high number of health tourists traveling Cuba for its cheap and high quality healthcare services whose services are not supported by the government.

### 5.3. Equity and ethics

Achieving world-class indicators with just a small amount of money has been a significant achievement for Cuba, but the most significant achievement of Cuban healthcare system isn’t its efficiency or effectiveness but its free healthcare for all the citizens and its medical internationalism (Feinsilver, 1993). Some may argue that Cuban revolution hasn’t achieved any remarkable growth and their first world health status are nothing new and they have had this status well before their revolution, but the point is that before the revolution there were notable differences between the urban and rural sectors. In the last four decades, the Cuban government has successfully reduced those gaps. For example in 1959 there was only 1 rural hospital; by 1989 there were 64. In addition, Cuba has been able to maintain and even raise many of its health indicators to levels comparable to those of industrialized nations (Sixto, 2002). Overcoming severe limitations of access to health care and preventive medicine was a major goal starting in 1959; infant mortality dropped dramatically. Training doctors was a priority. Medical diplomacy which included sending health professionals abroad shaped the country’s international profile. Establishing “polyclinics” in the 1960s-1970s helped bring specialty medicine to underserved

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### Table 6- comparison of Neonatal mortality rate between Cuba and several other countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Neonatal mortality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuba</td>
<td>2.3</td>
</tr>
<tr>
<td>France</td>
<td>2.2</td>
</tr>
<tr>
<td>Great Britain</td>
<td>2.4</td>
</tr>
<tr>
<td>United States</td>
<td>3.6</td>
</tr>
<tr>
<td>Turkey</td>
<td>7.1</td>
</tr>
<tr>
<td>Iran</td>
<td>9.5</td>
</tr>
<tr>
<td>Germany</td>
<td>2.1</td>
</tr>
<tr>
<td>World</td>
<td>19.2</td>
</tr>
</tbody>
</table>

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*Graph showing neonatal mortality rate for different countries with Cuba having the lowest rate.*
areas; starting in 1984, family physicians and nurses who lived and worked in neighborhoods became central (Pérez, 2008). Medical university of ELAM in Havana, possibly being the largest medical school in the world by enrollment with approximately 19,550 students from 110 countries reported as enrolled in 2013, grants many in need third world students free scholarship every year (Nussbaum, 2006, porter, 2016). The other thing that has made Cuba exceptional in healthcare sector is that Within Cuba and abroad, health is a major symbol of the revolution and means of projecting Cuba as “a world medical power” (Feinsilver, 1993; Eckstein, 1994). Remarkably, Cuba is now providing assistance to other Latin American countries whose health systems have collapsed or are in serious trouble (De Vos 2005). Cuba is quoted to have more doctors working abroad on humanitarian missions than the World Health Organization which an incredible fact is showing how ethics and solidarity is important for the Cuban healthcare system (Aitsiselmi, 2003). since the 1959 Cuban Revolution, Cuba has sent thousands of medical personnel overseas particularly to Latin America, Africa and, more recently, Oceania and of bringing medical students and patients to Cuba (Prensa Latina, 2008). In 2007, “Cuba has 42,000 workers in international collaborations in 103 different countries, of whom more than 30,000 are health personnel, including no fewer than 19,000 physicians.” (Huish and Kirk, 2007). Cuba provides more medical personnel to the developing world than all the G8 countries combined (Huish and Kirk, 2007). Moreover it is widely believed that medical workers are Cuba's most important export commodity (Foreign Affairs, 2010, P.69).

5.3. Conclusion and discussion

Regarding the facts mentioned, Cuba has done an outstanding job in achieving her goals in healthcare with just a small amount of money which has made her healthcare system of the most efficient and effective systems in the world. The amazing fact is that Cuba hasn’t limited her efforts to achieve materialistic goals and has tried significantly to fulfil her idealistic views of healthcare as a right and internationalism. These facts easily make Cuba an outstanding model for the resistive economies all around the world who want to have a cost-effective healthcare system which not only ensures their materialistic virtues but also fulfils idealistic ones.

6. PRACTICAL SUGGESTIONS

- More through researches on Cuban healthcare system
- Concentration on innovative approaches like medical diplomacy
REFERENCES:

RT, “Globalization fears see EU right-wing populist parties flourish”, 2016


Julie M. Feinsilver, Healing the Masses: Cuban Health Politics at Home and Abroad, University of California press, 1993


"Cuban Physicians to Aid 81 Nations”, Prensa Latina, March 29, 2008

Robert Huish and John M. Kirk (2007), "Cuban Medical Internationalism and the Development of the Latin American School of Medicine", Latin American Perspectives, 34; 77 Foreign Affairs, July/August 2010. Page 69


Arthur G. Nikelly, Health Care in Cuba, Public” Health, 102, 19 25, 1988


Pol de Vos and Patrick Van der Stuyft, Institute of Tropical Medicine, Belgium, 2000


Felipe Eduardo Sixto, AN EVALUATION OF FOUR DECADES OF CUBAN HEALTHCARE, ASCE 2002

Julie M. Feinsilver, Fifty Years of Cuba's Medical Diplomacy: From Idealism to Pragmatism, Cuban Studies, Volume 41, 2010, pp, 85-104

Julie M. Feinsilver, healing the third world: Cuban Medical Diplomacy, Cambridge, MA: Harward University press, 1992
"Iran develops economy of resistance" by Najmeh Bozorgmehr in Isfahan; Financial Times; September 12, 2012


https://www.merriam-webster.com/dictionary/efficiency

https://en.oxforddictionaries.com/definition/effectiveness

"Path to becoming a doctor via the third world", Paul Nussbaum, The Philadelphia Inquirer, Dec. 3 2006

Application of Trade Gravity Model between Iran and Main Trade Partners (Panel Data Approach)

Majid Feshari

ABSTRACT: The main objective of this paper is to test the Dutch Disease hypothesis in the Iranian economy by application of trade gravity model. This study tests the Dutch Disease hypothesis on the country's non-oil exports which are a combination of exports from the manufacturing, mining and agricultural sectors. The econometric model has been estimated by using of panel data approach during the 1990-2015. Empirical results indicate that the oil exports instead of shrinking the country's non-oil exports have had an expansionary effect on it. In addition, for test of robustness, we use oil price variable instead of oil exports, and the findings still show that oil price has a positive and significant effect on the non-oil exports. Hence, the existence of Dutch Disease in Iran is rejected. In other words, there is no evidence of the adverse economic effects of oil booms on the non-oil exports in Iranian economy.

KEYWORDS: Dutch Disease, Panel Data Approach, Gravity Model, Trade Partners.

JEL CLASSIFICATION: Q33, Q13, F12, F41

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1. INTRODUCTION

It is widely assumed in the literature that natural resource booms tend to harm the countries in which they occur. Most famously, Sachs and Warner (1995) show that economies with a high ratio of natural resource exports to GDP in 1971 tended to have low growth rates during the subsequent period 1971-1989. This negative relationship holds true after controlling for other usual determinants of economic growth, such as initial per capita income, trade policy, government efficiency, and investment rates.

Sachs and Warner (1995) conclude that “one of the surprising features of modern economic growth is that economies abundant in natural resources have tended to grow slower than economies without substantial natural resources.” Such a statement deserves careful scrutiny if only because of its implications for both development policy in the third world, and for macroeconomic policy in industrialized countries. At the same time, there is a growing debate among academics, development and environment related lobbyists and policy makers regarding whether or not resource abundant countries should be encouraged to exploit their resource bases. A growing literature is dealing with an increasing number of aspects of the “resource curse”. There are two main areas of active research. The first can be termed the “political economy of mineral rent generation and distribution.” The second covers the “general equilibrium effects of a minerals boom”, including the spending effects of the mineral rents. This paper focuses on this second literature and what is probably the best-known and the most classical formulation of the resource curse hypothesis, namely the Dutch Disease —hereafter DD — hypothesis.

The recent literature on the economic growth has shown that the countries with natural resource endowment have experienced a lower economic growth in comparison to the countries with poor natural resources. Most of these empirical research concluded that economic growth has an inverse relationship with the natural resource abundance, so called resource curse. The typical example is related to the oil exporting countries. The empirical evidence regarding the growth rate in the newly industrialized East Asia in comparison with the oil exporting countries confirms this view point. For instance, on average, per capita income growth rate 1 percent in Iran and Venezuela, 3 percent in Iraq and Kuwait, and 6 percent in Qatar over long run (1965-2007). In industrialized East Asia (Hong Kong, Singapore, South Korea, and Taiwan) with little natural endowment, the growth rate has been on average more than 4 percent over the same period (Gylfason, 2001).

The recent studies on the impact of the natural resource abundance on the poor economic performance have emphasized that the resource abundance does not itself directly have an adverse effect on the economic growth, but affects the growth rate indirectly through different channels and mechanisms such as long-run deterioration of the terms of trade, exogenous fluctuations in the revenues of the exportable natural resources, the Dutch Disease, mismanagement, and institutional quality, including corruption, bureaucratic quality, democracy, instability, leads to lower economic growth.

Generally, different aspects of the resource curse have been analyzed mainly based on two different grounds, namely the distribution aspects as well as allocation aspects of a natural resource boom which latter one is relevant to our discussion concerning Dutch Disease. The Dutch Disease hypothesis states that the natural resource booms leads to stagnation in the manufacturing exports. Thus the contribution of this paper in comparison with other empirical studies is to test the validity of Dutch Disease phenomenon by applying trade gravity model and panel data technique between Iran and main trade partners during the period of 1990-2015. For achieving this purpose, the rest of the paper has been organized as follows:

In section two. The literatures of subject are reviewed. Then, the methodology of research will be explored in the following segment. The section four is devoted to the estimation and the analysis of empirical findings. The last section is concerned with the concluding remarks.
2. LITERATURE REVIEW

In this section, the nature of Dutch Disease will be explored by a simple model, and then the empirical results relevant to the Dutch Disease are briefly reviewed.

The Dutch Disease refers to a situation in which a boom in an export sector leads to a shift of production factors towards the booming sector and an increase in the prices of non-tradable goods and services, thus hurting the rest of the tradable goods sector. Its name arose from the effects presumably caused by the discoveries of North Sea gas on the Dutch manufacturing sector. Corden (1984) notes that the term appears to have been coined in The Economist of November 26, 1977. Dorrance and Leeson (1997) trace the idea itself back to Meade. Meade spent six months in Australia in 1956. While there, he observed the effect of growth in Australia’s resource exports, and identified what came to be called the DD (Corden, 1996). The first paper approaching this question is actually by Meade and Russell (1957). Corden (1984) and Corden and Neary (1982) are the cornerstones of a vast DD literature that developed around how a natural resource boom can trigger a process of “deindustrialization”.

Corden and Neary (1982) present what they call and what has come to be known as the “core Model” of Dutch Disease economics. They assume a small open economy that produces three goods: two are traded at exogenously given international prices; the third is a non-traded good whose price is determined by domestic supply and demand. The traded goods sector includes a booming good, and a non-booming one. The non-traded good is typically thought to be produced by the service sector (but it can be extended to the construction sector, etc). The main model assumes capital to be sector specific whereas labor is assumed to be mobile. A resource boom affects the rest of the economy in two main ways: the “resource movement effect” and the “spending effect”.

On the supply-side, an exogenous increase in the value of the booming sector’s output raises the marginal product of labor in that sector. A shift of labor to the booming sector from all other sectors will ensue and a contraction of the tradable sector will result from its reduced use of production factors. This is the resource movement effect. This factor movement also leads to an increase in the price of non-traded goods since, ex ante, it results in excess demand for non-tradable. Since the price of tradable is exogenously determined in world markets, the rise in the prices of non-tradable is equivalent to an appreciation of the real exchange rate.

On the demand side, the boom, leads to increased income at home and therefore, to increased demand for all goods. Since the price of tradable is set on world markets, this extra spending raises the relative price of non-tradable, resulting in a further appreciation of the real exchange rate. In response, labor shifts from the tradable sector to the non-tradable sector resulting in a contraction of the non-booming tradable sector. This is the spending effect.

A boom in a natural resource sector either by increasing its world price or its export revenue will lead to absorb the resources labor primarily from the tradable manufacturing sector and consequently wage rate goes up and spread to other sectors including non-tradable sector. subsequently, it will lead to price increase in that sector, but in the tradable sector such as manufacturing goods, since price is given internationally, the output level declines(resource shifting effect). In addition, an increase in the export value of natural resource tend to raise the domestic income and induce demand for the non-tradable goods to go up as well as production; which intensifies labor movements from the contractionary manufacturing sector and further deepening its stagnation (the spending effect). Both effects reinforce each other and the final result is reduction in the tradable manufacturing output.

Furthermore, in this process, as result of increasing price of non-tradable relative to tradable sector, the real exchange rate tends to appreciate which implies loss of competitiveness of the manufacturing sector. Overall, the output and exports of this sector drop (deindustrialization). The pattern of production will change from the tradable sector in favor of increasing non-tradable goods.
Therefore, the booming natural resource exports leads to four consequences and subsequently four propositions for the existence of the Dutch Disease have been suggested as follows:

1. The overvalue of national currency in the case of fixed exchange rate and a real exchange rate appreciation under flexible exchange rate regime.
2. An increase in the production of non-tradable sector.
3. Declining output of the manufacturing sector.
4. The manufacturing exports of the economy decline.

According to Stijns (2003) suggestion, since access to statistical data in less developed countries are often difficult, the forth proposition which states a negative linkage between a booming resource sector and the manufacturing exports seems the most appealing proposition for testing the Dutch Disease. We adhere this proposition as a testable hypothesis in the case of Iran.

Dutch Disease was studied for the first time by Georgy (1976), and Snape (1977) and then it was continued by Corden and Neary (1982), and Wijnbergen (1984 and 1985) and other researchers.

McMahon (1997) studied Dutch Disease in 8 developing countries. The results of this study indicate that Dutch Disease doesn’t exist in these countries, but the main cause of their slow economic growth is due to poor economic policies in dealing with the natural resource booms.

Gelb (1988) and Spatafora and Warner (1999, 2001) analyzed the performance of the oil producing countries in dealing with oil resources. They investigated the long-run effects of macroeconomic shocks for 18 oil countries in the period of 1965-1989. The findings showed that the positive shocks in the terms of trade have increased investment and consumption, but their balance of payment has been deteriorated and the production of non-tradable sector has been increases by overvalued of domestic currency (appreciation of foreign exchange rate).

Based on the early globalization in the 19th century and by developing a model of two sectors economy (natural resource and manufacturing), Findlay and Lundahl (1994) has shown that the intersectoral linkages has resulted a resource booms can accelerate economic growth.

Kuralbayeva, Kutan and Wyzan (2001) in Kazakhstan, Looney (1991) in Kuwait, Roemer (1985) in Nigeria, Mexico, Venezuela and Looney (1989) in Saudi Arabia showed that the oil booms has been accompanied by increasing in foreign exchange rates . The researchers argue that the rising exchange rate has stagnated industrial production. However, the growth rate of the manufacturing sector has been greater than or equal to that of non-tradable sector in the economies of Kuwait, Nigeria, Indonesia and Mexico.

Gylfason (2001) has shown that the economic growth is inversely related to the share of physical capital in national wealth. The transmission mechanism from the natural resource abundance to economic growth has occurred through four channels as: a) the Dutch Disease b) rent seeking c) more confidence, and d) ignoring education.

Stijns (2003) studied Dutch Disease hypothesis and the effect of resource booms on the country’s manufacturing exports using a gravity model of trade over the period of 1970-1997. The results show that a one percent increase in the world energy price has led to a decrease in the net energy exporter’s real manufacturing exports by almost half a percent. Similarly, after instrumentation, a one percent increase in an energy exporting country’s net energy exports is estimated decrease the country’s real manufacturing exports by 8 percent.

Olusi and Olagunju (2005) investigated the phenomenon of Dutch Disease in Nigeria during the period of 1980-2003. The results indicate that the presence of Dutch Disease in this country has been attributed to the stagnation of production and export of agricultural sector by oil price booms.

Makochekanwa (2007) studied the Dutch Disease hypothesis in Botswana's main exports during the 1999-2006. The overall results of study indicate that diamond boom have not negatively affected the exports of copper, meat, meat products, soda, ash, textiles, vehicles and hides. Thus, one can concluded that resource curse and DD has not hurt the country’s six major exports.
Oomes and Kalcheva (2007) investigated Dutch Disease hypothesis in Russia over the period of 1985-2006. For this purpose, they discussed the symptoms of Dutch Disease, which include: (1) appreciation of real exchange rate, (2) slower manufacturing growth; (3) faster service sector growth; and (4) higher overall wage. The main findings of this study show that the Russia has all of the symptoms and Dutch Disease hypothesis is confirmed for this country.

Egert and Leonard (2008) by using a monetary model and ARDL approach have studied Dutch Disease hypothesis and the effects of exchange rate fluctuations on non-oil exports of Kazakhstan economy. The empirical results of this study indicate that the rise in the price of oil and oil revenues might be linked to an appreciation of the U.S. dollar exchange rate of the oil and non-oil sectors. But appreciation is mainly limited to the real effective exchange rate for oil sector and is statistically insignificant for non-oil manufacturing sector. In another study, Shik Kang et al (2010) have analyzed the Dutch Disease hypothesis in the case of selected developing countries over the period of 1980-2008. The main findings of this paper indicate that the Dutch Disease hypothesis is confirmed for these groups of countries. In next study, Martins (2013) has investigated the Dutch Disease hypothesis in Ethiopia during the 1985-2011. The results of study show that the existence of Dutch Disease is confirmed in this country.

The other study which has been studied on Iranian economy can be stated as follows:

Bakhtiari and Hagh (2001) evaluated the effectiveness of various aspects of oil revenue boom on agricultural sector in Iran by using TSLS approach. Findings show that the Dutch Disease has emerged as a phenomenon of anti-agriculture in Iran, but due to poor communication between the oil and agriculture sectors, the increase of oil revenues has been indirectly on agriculture. Also, One of the causes of the negative impact of oil revenue on the agricultural sector is import’s increasing.

Paseban (2004) studied the effects of oil price volatility on the agricultural production in Iranian economy over the period of 1971-2000. The empirical result of study shows that the Dutch Disease hypothesis is confirmed in Iran and the oil prices volatility has a negative and significant effect on the agricultural sector.

KhoshAkhlag and MosaviMohseni (2006) analyzed the relationship between the Dutch Disease and oil revenue shocks in Iran by using applied general equilibrium model during the 2001. The results of this study indicate that 50 percent shock in oil revenue has resulted a decline of the tradable sectors such as agricultural and industrial sectors.

Nazari and Mobarak (2011) investigated the relationship between natural resource abundance, Dutch Disease and economic growth in the major petroleum exporting countries by using a panel data approach over the period of 1960 - 2008. The main findings of study show that natural resource abundance tends to increase not only the growth of service sector value added and the ratio of sum of the service and manufacturing value added to GDP and decrease the growth of manufacturing value added and share of manufacturing exports in total exports.

Overall, in the case natural resource booms, most of the empirical studies have confirmed the existence of Dutch Disease. Hence, the main contribution of this study is to test of Dutch Disease hypothesis in Iran and main trade partners by using of trade gravity model and panel data technique over the period of 1990-2015.

3. METHODOLOGY AND DATA

Application of the gravity equation in the context of international trade for the first time is traced back to Tinbergen (1962), Poyhonen (1963) and Rose (2000). The gravity analogy comes from the fact that trade between two countries is a function of their GDP, that is their economic mass, and as a measure of distance between these countries.

In analyzing trade, the basic gravity trade model which has been used in empirical work over the years was original specified by Tinbergen (1962) and Poyhonen (1963) as follows:
\[ Trade_{ij} = \alpha \frac{GDP_i^\beta GDP_j^\beta}{D_{ij}^\beta} \] (1)

Where represents bi-lateral trade between country i and j, while and denote gross domestic product of home country (i) and foreign trade partner (j). is used as a proxy for bi-lateral distance between two trading countries. In the formula above, are parameters and the sign of are expected to be positive, while that for will have a prior negative sign. Taking logarithm of equation (1), the resulting linear formulation becomes:

\[ \ln(Trade_{ij}) = \ln(\alpha) + \beta_1 \ln(GDP_i) + \beta_2 \ln(GDP_j) + \beta_3 \ln(D_{ij}) + \mu_{ij} \] (2)

Equation (2) is core gravity equation which has been used in empirical studies, though with added right hand side (RHS) variables, with each RHS variable added depending on the particular facet of trade being analyzed, the objectives to be achieved and availability of data.

We follow the model developed by Stijns (2003) & Makochekanwa (2007) and Martins (2013), we extend the gravity model to the non-oil exports of Iran by adding the Dutch Disease indices to right hand side of the equation (2) and other control variables where in this extended model trade flows indicates the non-oil exports of Iran. The final empirical model for Iran has been specified in terms of the logarithm as follows:

\[ \ln(NOEXP_{ij}) = \alpha + \beta_1 \ln(GDP_i) + \beta_2 \ln(GDP_j) + \beta_3 \ln(D_{ij}) + \beta_4 DD_{ij} + \beta_5 CB_{ij} + \beta_6 Z_{ij} + \mu_{ij} \] (3)

The subscripts i and j represent the home country (in this case Iran) and the foreign trade partners respectively and t (=1...T) The period of time (year).

NOEXP_{ij} refers to non-oil exports in terms of dollars from country i (Iran) to country j (trade partner) during time of t; GDP_i: indicates Gross Domestic Product of Iran in terms of dollars (according to base price of 2010), GDP_j: Gross Domestic Product of trade partners j in terms of dollars (according to base price of 2010); D_{ij}: geographical distance between Iran (i) and trade partner (j); DD_{ij}: two variables oil exports of Iran and World oil price in terms of logarithm has been designated as Dutch Disease Indices; CB_{ij}: shows the common border of Iran with the trade partner j (which is dummy variable where text value one if there exist a common border and otherwise zero). Z_{ij} represents other control variables such as population of Iran (Pit) and trade partner population (Pjt) and shows disturbance term in above regression model.

Based on the theories, the expected sign of the coefficients are: \( \beta_1, \beta_2 > 0 \), \( \beta_3 < 0 \) and \( \beta_4 < or > 0 \). Indicates that there is inverse relationship between the expanding natural resource exports and non-oil exports, consequently the Dutch Disease hypothesis will hold true in this case, and otherwise this hypothesis will be rejected.

4. EMPIRICAL RESULTS

The data on time series of GDP_i, GDP_j, P_i and P_j are annually collected for the period of 1990-2015 from World Bank Indicators (2016) and the rest of data has been extracted from central bank of Iran data base.

The panel data regression model has been used to estimate the main equation 3. At first, the result of variables unit root tests by IPS and ADF-PP are presented in Table 1. The stationary of the panel data is necessary for examining the co-integration relationship among the variables of the model, as most of the time series data has unit root problem which makes regression results spurious. In this study we use ADF and PP unit root test for solving the unit root problem in our panel data series.
Table 1. Results of Unit Roots Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>IPS</th>
<th>ADF-PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln GDP(_i)</td>
<td>-3.052709*</td>
<td>-3.433104**</td>
</tr>
<tr>
<td>Ln GDP(_j)</td>
<td>-2.488616**</td>
<td>-2.560738**</td>
</tr>
<tr>
<td>Ln D(_{ij})</td>
<td>-4.129177**</td>
<td>-5.77677**</td>
</tr>
<tr>
<td>Ln DD</td>
<td>-5.420642**</td>
<td>-5.415577**</td>
</tr>
<tr>
<td>CB(_{ij})</td>
<td>-4.73254**</td>
<td>-4.172798**</td>
</tr>
<tr>
<td>Ln NOEXP</td>
<td>-5.298616**</td>
<td>-5.690364**</td>
</tr>
</tbody>
</table>

Note: The asterisks ** denote the significant at 5% level.
Source: Authors Computations

The results of both IPS and ADF-PP show that all variables are stationary at level so we can reject null hypothesis of non-stationary for all variables. In the next step, we test the homogeneity of cross section by using of F test which proposed by Leamer (1980). The results indicate that the null hypothesis has been rejected at 5% level and we can use the panel data technique for model estimation. To choose the best methods between random and fixed effects, we use the Hausman test. The results of this statistics show that the random effect method is a suitable method for estimation of model. So, the results of model estimation by this method have been tabulated in table 2.

Table 2. The Results of Random Effects Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intercept</td>
<td>-24.25</td>
<td>-23.22</td>
<td>-23.39</td>
<td>6.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* (6.35)</td>
<td>* (-2.39)</td>
<td>* (-3.23)</td>
<td>(0.14)</td>
</tr>
<tr>
<td></td>
<td>Ln GDP(_i)</td>
<td>0.58</td>
<td>0.75</td>
<td>0.84</td>
<td>2.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* (8.24)</td>
<td>* (2.25)</td>
<td>** (2.85)</td>
<td>* (2.74)</td>
</tr>
<tr>
<td></td>
<td>Ln GDP(_j)</td>
<td>0.303</td>
<td>0.32</td>
<td>0.28</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* (3.10)</td>
<td>* (3.58)</td>
<td>* (2.85)</td>
<td>(3.56)</td>
</tr>
<tr>
<td></td>
<td>Ln D(_{ij})</td>
<td>-0.34</td>
<td>-0.72</td>
<td>-0.61</td>
<td>-0.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* (-2.89)</td>
<td>*( -3.25)</td>
<td>** (-2.09)</td>
<td>* (-3.36)</td>
</tr>
<tr>
<td></td>
<td>Ln DD</td>
<td>-</td>
<td>0.61</td>
<td>0.66</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>* (5.29)</td>
<td>* (4.40)</td>
<td>(3.71)</td>
</tr>
<tr>
<td></td>
<td>CB(_{ij})</td>
<td>-</td>
<td>-</td>
<td>0.54</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*** (1.60)</td>
<td>*** (1.52)</td>
</tr>
<tr>
<td></td>
<td>Ln P(_i)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-0.93)</td>
</tr>
<tr>
<td></td>
<td>Ln P(_j)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-0.68)</td>
</tr>
<tr>
<td></td>
<td>Number of Observation</td>
<td>368</td>
<td>356</td>
<td>353</td>
<td>349</td>
</tr>
<tr>
<td></td>
<td>Number of Cross Sections (Countries)</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>
The results of Table 2 reveal that gross domestic product of home country (Iran) as well as foreign countries (trade partners) have positive and significant effects on the non-oil exports of Iran and the geographical distance between Iran and trade partners has negative effect on the non-oil exports. Therefore, the gravity model is still valid in the case of Iran. In addition, the coefficient of DD, Iranian oil export as a representative of Dutch Disease index is not only statistically significant and also positive which indicates the natural resource abundance has enhanced the non-oil exports. Moreover, the estimated coefficient of common boundary variable is positive and shows that the common border has a positive impact on the non-oil exports.

The populations of home and foreign countries have negative effects on the Iranian non-oil exports. Therefore, the population effects reflect inward directions in the exports. As a test of robustness for the empirical results of the Dutch Disease model, the oil exports as a Dutch Disease index is substituted by world oil prices (which is determined exogenously). So the DD in the equation 3 represents the world oil price. This new vision of equation 3 has been estimated by the panel data approach and the results have been shown in Table 3:

Table 3. Results of Random Effects Model

<table>
<thead>
<tr>
<th>Model Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-57.16 *** (7.59)</td>
<td>-25.45 ** (3.89)</td>
<td>-19.57 * (2.56)</td>
<td>32.14 *** (0.23)</td>
</tr>
<tr>
<td>Ln GDP_{i_i}</td>
<td>2.31 * (11.26)</td>
<td>0.98 ** (2.07)</td>
<td>0.98 ** (2.07)</td>
<td>3.23 *** (1.78)</td>
</tr>
<tr>
<td>Ln GDP_{j_j}</td>
<td>0.32 * (2.68)</td>
<td>0.32 ** (2.34)</td>
<td>0.28 * (2.92)</td>
<td>0.35 * (3.52)</td>
</tr>
<tr>
<td>Ln D_{ij}</td>
<td>-0.74 * (4.28)</td>
<td>-0.75 * (2.83)</td>
<td>-0.63 * (2.2)</td>
<td>-0.71 * (3.33)</td>
</tr>
<tr>
<td>Ln DD</td>
<td>-</td>
<td>0.65 * (3.83)</td>
<td>0.64 * (3.85)</td>
<td>0.53 * (3.33)</td>
</tr>
</tbody>
</table>
The results of Table 3 confirm the earlier result. The sign of all estimated coefficients of the model consistent with economic theories, except that there is no negative relationship between oil price and the non-oil exports. In other words, the Dutch Disease hypothesis again is rejected.

Based on the new evidence, we can conclude that an increase in oil prices indirectly has strengthened the non-oil exports of Iran.

## 5. Conclusion and Policy Implication

The main objective of this research is to evaluate the economic effects of natural resource abundance on the non-oil exports of Iran within a trade gravity model over the 1990-2015.

For this purpose, the empirical econometric model has been specified between Iran and 23 main trade partners and this model is estimated by applying panel data approach. The empirical results of this paper indicate that there is no negative relationship between the Dutch Disease indices and non-oil exports in Iran during the period of study. In other words, the Dutch Disease hypothesis is rejected. This conclusion is consistent with the theoretical framework and historical evidence of the early globalization over period of 1870-1913 which has been analyzed by Findlay and Lunddahl (1994).

Although the share of the non-oil exports with respect to total exports has been low, but it cannot be attributed to the existence of the Dutch Disease in Iranian economy. As the results of estimations indicate, the trade gravity model still valid for Iran, but the natural resource export booms have not retarded the non-oil exports. On contrary, it can be argued intuitively that the petro dollars has enabled Iran to import capital goods as well as intermediate goods in order to accelerate and facilitate the non-oil production, specially manufacturing sector and expand the non-oil exports. Consequently the low level of non-oil exports can be caused by other factors.
rather than Dutch Disease and they should be taken into considerations in development policies formulation.

The important policy implications drawn from the results of this study are that the booming oil sector (either by oil revenues or world oil price) by itself has not eroded the non-oil exports, so the attentions of government policies should be focus on correcting other factors. It is suggested that the government should reduced its heavy reliance on the unprocessed raw materials such as oil exports by expanding non-oil exports through enhancing economic diversification and competitiveness. This policy can be achieved by absorbing FDI and using technology transfer. Furthermore, in development policies, the way that oil revenues should be spent in the government budget, the structure of industrial sector, improving institutional quality and other relevant factors should be taken into account.
REFERENCES:


Looney, R. (1991), Diversification in a small oil exporting economy; the impact of the Dutch Disease on Kuwait's industrialization,” Resources Policy,17(1), March: 31-41


Sachs, J., A. Warner and M. Warner (1999), Natural Resource Intensity and Economic Growth, Development Policies in Natural Resource Economies,


Stijns, J. (2003), An empirical Test of the Dutch Disease Hypothesis Using a Gravity Model of Trade, University of California, Department of Economics, USA.


World Development Indicators (2016), www.worldbank.org
Developing Strategies to Improve Knowledge-Based Resistive Economy Using SWOT Model

Hassan Moosazadeh¹⁶, Pejman Barimani¹⁷, Samaneh Doost Mohammad¹⁸, Alireza Eslami¹⁹

ABSTRACT: The present paper aims at investigating strategies of improving knowledge-based resistive economy using SWOT model. Hence, some general strengths, weaknesses, opportunities and threats of Golestan province are introduced. This is an applied, developmental research and is considered descriptive in terms of research objectives. Data and statistics profiled in the website of Global Bank were used as research data. Involves all countries the data of knowledge-based economy of which is available in the website (a total number of 146 countries). Considering research methodology and macroeconomic data, no sampling was performed and the whole population was studied. Kolmogorov-Smirnov test and linear multiple-regression analyses were used to test data normality and the effect of indicators of knowledge-based economy on goods and services exports of different countries, respectively. Moreover, SPSS software was used in this paper for data analysis.

KEYWORDS: Economic Development; Internal Factors; External Factors; Golestan Province; SWOT Model.

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1. INTRODUCTION

Lexically, development means expansion and improvement but it implies enhancement and improvement of a country’s economic status. Economic development does not mean economic growth since the latter is a quantitative factor the indicator of which is GNP (Gross National Production), whereas development is a qualitative, long-term variable implying overall growth of all aspects of life based upon social capital and knowledge-based economy (Lashgari, 2007). A consequence of this factor in developed countries is balanced development in all parts of that country. Economic power is effective on enhancement of life quality (Hudson et al, 1983). Economic development encompasses all subsections including electricity, water supply, gas, etc. (Ehteshami, 2003).

In the study of infrastructures and economic development, in general, infrastructures influence economic growth and total production (Eric, 2002). Moreover, most governments try to create infrastructure in those regions already having active manufacturing units. In this way, they may reach economic productivity (Salehi Esfahani, Teresa Ramirez, 2003).

Golestan province in the green zone of northern Iran possesses certain capacities and capabilities for development and is always one of divested provinces of our country. Among outstanding advantages of this province are being located (and dominant) on middle Asian markets, having social-economic relationships those countries, having different tribes and races, and unique handicrafts (Iran’s 20-year vision plan). Furthermore, the province always faces limitations in its development path. These limitations are divided into several parts the most important of which include reduction of agriculture efficiency rate, lack of industrialization because of agriculture, undeveloped human resources and lack of process industries. Each of these are also classified into different groups and have significant impact on deficient development of the province. Thus, it is feasible to determine long-term goals, prepare required strategies and achieve practical policies based on province’s vision plan (economic and planning vice-presidency of organization of planning and management of Golestan province, 2004).

The first step toward economic development is to identify the status of target region in terms of internal (strengths and weaknesses) and external (opportunities and threats) factors at present and to foresee knowledge-based economic improvement in that region. Development means overall growth and enhancement of life quality indicators in a certain country and is mainly related to expansion of human resources and social capital of that country and to the use of growth potentials in all regions. Hence, it is dependent on several elements that affect it as independent variables.

Respecting development indicators, Golestan province is considered as a divested one. Thus, it is necessary first to investigate effective factor on economic development of the province respecting knowledge-based economy and to propose strategies to reach executable solutions. The present paper aims at recognizing reasons for development, investment, and classifying them using SWOT model to present practical development policies fitting local status of the province. This is a descriptive research based upon documents, evidence and employing SWOT model in different regions of Golestan province. Results indicate that authorities and executives of Golestan province have to move toward development. Presented solutions should improve life quality while being practical.

2. LITERATURE REVIEW

In a research titled “Culture; the heart of knowledge-based economy in economic growth and development”, Poorfaraj et al (2012) found that knowledge-based economy requires some cultural changes that, on one hand, facilitate knowledge business and, on the other hand, provide for correct use of knowledge and modern technologies for the benefit of society.

Amjadi et al (2012) analyzed the effect of knowledge-based economy indicators on GDP and found that human development, economic regime and incentives, innovation systems, education, human resources and information infrastructure influence GDP of different countries.
Nazeman and Eslamifar (2010) studied knowledge-based economy and sustainable development. They demonstrated, in global level, a significant relationship between economic development and the extent to which an economy is knowledge-based. Moreover, the other point is general validity of Kuznets’ environmental curve in global scale. The research also found that improvement of pure sciences is not sufficient for achieving development and scientific and economic advance requires transformation of economic environment through the time and application of enhanced knowledge in the context of economic life, especially in globalization of production and business.

Behboodi and Amiri (2010) investigated the long-term relationship between knowledge-based economy and economic growth in Iran. They found a long-term association between different aspects of knowledge and economic growth in Iran. Besides, they indicated that these aspects positively influence economic growth. Moreover, ECM coefficient is small and negative. Therefore, deviation modification rate slowly moves from short-term to long-term.

Aliashrafpoor and Amirabbasi (2012) studied the effect of knowledge-based economy on general factors of productivity growth and found a significant, positive relationship between knowledge-based economy indicators and factors of productivity growth. Moreover, they concluded that indicators of technology and information communication have no significant impact on productivity growth.

Grant et al (2010) investigated information and communication technology for industrial coexistence. They demonstrated that several information and communication technology tools are designed and developed for industrial coexistence, but with ambiguous results. Furthermore, the paper presented a knowledge-based framework of information and communication technology for industrial coexistence.

In a research titled “knowledge and life: towards redefining knowledge-based economy and its relationship with sustainable development”, Sabao (2010) investigated several definitions of (and approaches to) knowledge-based economy, how it is measured and various theories on sustainable development.

3. THEORETICAL FRAMEWORK

The Global Bank defines four components of knowledge-based economy as follows:

1. Motivational system: a proper organizational economy and a good organizational regime must create appropriate motivations for correct use of knowledge. The economic factor should encourage efficient use and creation of knowledge. Moreover, the stable and transparent macroeconomics has to generate regular policies in competition. The economic regime must create the least price disturbances. The economy should be open to international trade and have free policies to support local industries in order to enhance competition (Dougan et al, 2005).

2. Innovations: An efficient innovation system is necessary for creation of novel technology. According to the classic economy theory, technical advancements are the main source of production growth, and an efficient innovation system is the main key to such advances. At present, production capability means capability in science and technology.

3. Education: Only an educated and skillful population may properly create, distribute and use knowledge. It is necessary to have skillful and educated population in order to generate efficiency, to acquire, disseminate and employ knowledge and this leads to an increase in overall efficacy of production factor and, hence, to economic growth and development. While basic education improves individuals’ capabilities in enhancement of learning capacity and making use of information, technique and higher education in engineering and scientific atmosphere are necessary for technological innovation (Dougan et al, 2005).

4. Information and communication technology (ICT): A dynamic information infrastructure facilitates effective communication, distribution and process of information. Information and communication technology is an important part of knowledge-based economy and is recognized as an effective tool to enhance economic growth and sustainable development.
ICT infrastructures refer to availability and efficiency of computers, telephones, radio devices and their various channels (Dougan et al, 2005). The more extended and open is the communicational atmosphere of a society, the more motivations are available for learning knowledge. In such an atmosphere, knowledge grows better and better.

4. **SWOT model**

One of the most important tools in conducting strategies is the SWOT technique through which data are compared. Basically, SWOT is a strategic planning tool (Hom Hack, 2001). Moreover, it is considered as a conceptual framework for systemic analyses (Noori et al, 2006). Nowadays, many strategy designers and evaluators use the SWOT model as a modern tool to analyze performance and the status of available gaps (Nilsson, 2001). Meanwhile, planners may employ internal evaluation matrix to identify and measure relationships between different issues and present solutions for them (David, 2004). Using this matrix makes it possible to conduct for selections or strategies (differing in terms of various actions in the space). Of course, some strategies are practically coincident or executed and implemented in a spontaneous manner (Harrison and Caron, 2003).

![SWOT Matrix](image)

Figure 1: Analysis process in SWOT matrix

5. **The Most Important Capacities and Capabilities of Golestan Province Based on Advanced Knowledge-Based Economy**

1. Supreme geographical strategic position being located on the international rail and road transportation, north-south shipping, having access to markets of CIS countries and connecting the market to free seas through territory of Turkmenistan;
2. being located at the connecting head of Middle Asia’s grains warehouse to the Persian Gulf through Kazakhstan, Turkmenistan, Iran railway;
3. Having a local and an international airport;
4. Facility of trading with countries neighboring the Caspian Sea through the Port of Khaje Nafs (being constructed);
5. Climatic, ecological, and soil diversity useful for investment on mechanized agriculture activities, especially wheat, medical plants, cotton, cooking oil, garden crops, livestock and sericulture;
6. The potential to develop process industries and packaging of agriculture crops;
7. The largest center for caviar fish and caviar process in Iran (with investment potential);
8. Possessing various ecosystems of Gorgan Gulf, international ponds and Golestan National Park and ecotourism attractions;
9. Availability of executive and technical requirements for investment on aquaculture and aquatics, emphasizing shrimp and fish nurture for export;
10. Slight social and economic costs of trade between Golestan province and CIS countries because of a proper and long related history;
11. The main centre of nurturing original races of horse for local and international use;
12. Capability of investment on tourism respecting several natural attractions (Savannah, plain, mountains, sea, beach, etc);
13. Possibility of investment on mine considering abundant mineral resources such as charcoal, limestone, mountain shell, etc;
14. Investment capacities in carpet and certain handicrafts industries;
15. Useful scientific, technical and vocational backgrounds in public and private sectors in different educational levels, and the possibility of exchanging professors and students; and
16. Investment opportunity I oil and gas section respecting the petrochemical center and refinery being constructed in the province.

Table 1: internal factors

<table>
<thead>
<tr>
<th>No.</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Golestan national park, ponds and other jungles</td>
<td>Traditional agriculture and animal husbandry</td>
</tr>
<tr>
<td>2</td>
<td>Better use of water and soil capacities for development</td>
<td>Low indicators of human resources</td>
</tr>
<tr>
<td>3</td>
<td>Possessing historical, cultural and religious attractions</td>
<td>Lack of infrastructure</td>
</tr>
<tr>
<td>4</td>
<td>Tourism attractions</td>
<td>Waste of water and energy resources</td>
</tr>
<tr>
<td>5</td>
<td>Horse nurturing and export</td>
<td>Undeveloped industry section</td>
</tr>
<tr>
<td>6</td>
<td>Unique handicrafts</td>
<td>Size reduction of farms</td>
</tr>
<tr>
<td>7</td>
<td>Possessing water resources and exporting them</td>
<td>Increased costs of public services</td>
</tr>
<tr>
<td>8</td>
<td>Proper interaction of Shia and Sunni</td>
<td>Deficient support of agriculture</td>
</tr>
<tr>
<td>9</td>
<td>Availability of mineral resources</td>
<td>Lack of investment in this section</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Immigration from rural regions to urban zones</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Production culture replaced by consumption</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Youth unemployment</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Deficient coverage of health care centers</td>
</tr>
</tbody>
</table>

Table 2: external factors

<table>
<thead>
<tr>
<th>No.</th>
<th>Threats</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High rate of natural disasters</td>
<td>Access to the international transportation corridor and Middle Asian markets</td>
</tr>
<tr>
<td>2</td>
<td>Far distance from capital city (Tehran)</td>
<td>Access to markets of Semnan, Mazandaran and northern Khorasan provinces</td>
</tr>
<tr>
<td>3</td>
<td>More developed adjacent provinces</td>
<td>Development capacity of business, cultural, scientific and sport activities</td>
</tr>
<tr>
<td>4</td>
<td>Immigration of investors and educated people to larger cities</td>
<td>Making use of strengths of neighboring provinces to meet own needs</td>
</tr>
<tr>
<td>5</td>
<td>Latent social divergence instead of citizenship convergence</td>
<td>Presence of province’s top managers in the government because of more acquaintance with province problems</td>
</tr>
<tr>
<td>6</td>
<td>Promotion of foreign cultures</td>
<td>Most part of the country are desert-like and northern provinces are green</td>
</tr>
<tr>
<td>7</td>
<td>Lack of industrial centers and migration to other cities</td>
<td>Location of the province on the road to Mashhad</td>
</tr>
</tbody>
</table>
According to the SWOT table of the province and observed problems relating economic development, certain long-term objectives are presented as followd based on improvement of knowledge-based economy (fitting the 20-year vision plan):

1- Supplying water resources for urban and agricultural use
2- Expansion of all aspects of transportations
3- Enhancement of human resource development indicators
4- Development of tourism
5- Total relationship with middle Asia and managing these relations
6- Development conformity with other northern provinces
7- Development of higher education in majors and fields required by the province
8- Creating process industries and development of ports and infrastructures
9- Development of employment and investment and avoid capital evasion
10- Developing the supreme model of executive engineer to encounter natural disasters
11- Development of public sports
12- Enhancement of citizenship security rate

6. DESIGNING STRATEGIES FOR DEVELOPMENT OF KNOWLEDGE-BASED ECONOMY IN GOLESTAN PROVINCE

Respecting long-term objectives to achieve sustainable development, some strategies should be defined so that policies could be conducted based upon them. Hence, the strategies include:

1- Developing service centers fitting population needs
2- Reinforcing and equipping business network and border market, especially for foreign business
3- Controlling and saving surface waters
4- Developing semi-industrial or industrial agriculture and animal husbandry
5- Expanding specific cultures with relative advantages fitting certain circumstances
6- Developing vocational educations
7- Expanding equipment’s and service infrastructure
8- Developing port, road and air transportations
9- Expanding required agriculture industries
10- Attracting free and non-governmental capital
11- Improving management indicators in middle and high levels
12- Using present, old and ancient cultural capacities
13- Reviving destructed jungles and presenting rewarding plans
14- Controlling flood and reducing drought side effects
15- Developing and equipping industrial zones and expanding process industries fitting industrial status of the province
7. METHODOLOGY

The present paper is an applied, incremental research and is considered to be descriptive in terms of research objective. Data and statistics profiled in the website of Global Bank were used as research data. Research population involves all countries the data of knowledge-based economy of which is available in the website (a total number of 146 countries). Considering research methodology and macroeconomic data, no sampling was performed and the whole population was studied. Moreover, SPSS software was used in this paper for data analysis.

8. FINDINGS

Kolmogorov – Smirnov test was used to analyze data normality. Results are presented in Table 3.

Table 3: Results of Kolmogorov – Smirnov test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kolmogorov-Smirnov (Z)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports of goods and services</td>
<td>1.814</td>
<td>0.003</td>
</tr>
<tr>
<td>Motivational system</td>
<td>1.124</td>
<td>0.160</td>
</tr>
<tr>
<td>Innovation system</td>
<td>1.064</td>
<td>0.207</td>
</tr>
<tr>
<td>Human resources education</td>
<td>1.101</td>
<td>0.177</td>
</tr>
<tr>
<td>ICT</td>
<td>1.005</td>
<td>0.265</td>
</tr>
</tbody>
</table>

According to results, the Kolmogorov – Smirnov coefficient of the whole data is between 1.96 and -1.96. Hence, all data follow normal distribution. Therefore, parametric statistics and regression analysis may be used to test research hypotheses.

Error independency was analyzed using Durbin – Watson test. If error independency hypothesis is rejected and error are correlated, it is not feasible to employ regression test. The value of statistic of this test is in the range of 0 and +40. If it ranges between 1.5 and 2.5, H0 is accepted and regression may be employed.

Hypotheses of this test include:
H0: there is no correlation between errors.
H1: there is correlation between errors.

Table 4: Results of Durbin – Watson test on the first hypothesis

<table>
<thead>
<tr>
<th>The first hypothesis</th>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Durbin-Watson value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Motivational system</td>
<td>Export</td>
<td>2.155</td>
<td>H0 is accepted</td>
</tr>
</tbody>
</table>

Based on results of Durbin-Watson test, regression analysis may be used to test research hypotheses.

Table 5: Results of Durbin – Watson test on other hypotheses

<table>
<thead>
<tr>
<th>No. of hypothesis</th>
<th>Independent variable</th>
<th>Dependent variable</th>
<th>Durbin-Watson value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Innovation system</td>
<td>Export</td>
<td>2.195</td>
<td>H0 is accepted</td>
</tr>
<tr>
<td>3</td>
<td>Human resources education</td>
<td>Exports</td>
<td>2.114</td>
<td>H0 is accepted</td>
</tr>
<tr>
<td>4</td>
<td>ICT</td>
<td>Exports</td>
<td>2.230</td>
<td>H0 is accepted</td>
</tr>
</tbody>
</table>

In this paper, regression analysis was used to test research hypotheses. Results of the first hypothesis testing are presented as example.

H0: The indicators of motivational system have no effects on exports of different countries.
H1: The indicators of motivational system have effects on exports of different countries.
The first hypothesis

<table>
<thead>
<tr>
<th>Correlation coefficient</th>
<th>Determination coefficient</th>
<th>Modification determinant</th>
<th>Determination standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.436</td>
<td>0.190</td>
<td>0.184</td>
<td>27.7450</td>
</tr>
</tbody>
</table>

According to the table above, the correlation coefficient between motivational system and exports is 0.436, indicating a 43% direct correlation between the two variables. Therefore, H0 is rejected and H1 is accepted. Moreover, the determination coefficient is 0.190, suggesting that 19% of changes in exports are explained by changes of motivational system.

Regression variance analysis was performed to verify a linear relationship between x and y. This is done using the F statistic.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>D.F</th>
<th>Average square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>24687.432</td>
<td>1</td>
<td>24687.432</td>
<td>32.070</td>
<td>0.000</td>
</tr>
<tr>
<td>Residue</td>
<td>105460.768</td>
<td>137</td>
<td>769.787</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>130148.200</td>
<td>138</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the table above, significance of the F statistic is 0.000. Therefore, the hypothesized linear relationship between the two variables is accepted. Results of correlation coefficient and regression variance analysis of other hypotheses are presented in table 8.

Table 8: Results of correlation coefficient and regression variance analysis of other hypotheses

<table>
<thead>
<tr>
<th>No. of hypothesis</th>
<th>Correlation coefficient</th>
<th>Determinant</th>
<th>Regression variance analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.404</td>
<td>0.163</td>
<td>26.738</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.000 (The linear relationship exists)</td>
</tr>
<tr>
<td>3</td>
<td>0.267</td>
<td>0.071</td>
<td>10.486</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.002 (The linear relationship exists)</td>
</tr>
<tr>
<td>4</td>
<td>0.461</td>
<td>0.213</td>
<td>37.074</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.000 (The linear relationship exists)</td>
</tr>
</tbody>
</table>

Estimated coefficients of the first hypothesis are presented in table 9.

Table 9: Coefficients and statistics estimated for the first hypothesis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients (B)</th>
<th>Standard error (ε)</th>
<th>Standardized coefficients (β)</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>18.603</td>
<td>5.099</td>
<td>-</td>
<td>3.649</td>
<td>0.000</td>
</tr>
<tr>
<td>Motivational system</td>
<td>4.912</td>
<td>0.867</td>
<td>0.436</td>
<td>5.663</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on results, the standardized coefficient β has a positive value and, hence, the relationship between motivational system and exports is positive (both change in the same direction). In order to validate the relationship, t statistic is used. Since the estimated value of t for β is larger than the
significance value, it can be concluded that $\beta$ is significance in confidence level of 95% and the direct relationship between the two variables is correct. Moreover, estimated $\alpha$ for the constant is also positive suggesting a positive Intercept. Since the estimated $t$ for $\alpha$ is larger than the significance level, it can be discussed that $\alpha$ is significant and Intercept is accepted. Regression equation of the first hypothesis is:

$$Y = 18,603 + 4,912x1$$

Where $Y$ represents exports and $x1$ represents motivational system indicator. Estimated coefficients of other hypotheses are presented in Table 10.

Table 10: Estimated coefficients of other hypotheses

<table>
<thead>
<tr>
<th>No.</th>
<th>Regression equation</th>
<th>$\alpha$</th>
<th>$t$</th>
<th>sig</th>
<th>Result</th>
<th>$\beta$</th>
<th>$t$</th>
<th>sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>$Y=19,060 + 4,814x2$</td>
<td>19.06</td>
<td>3.16</td>
<td>0.001</td>
<td>Accepted</td>
<td>4.814</td>
<td>5.171</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>3</td>
<td>$Y=28,744 + 3,077x3$</td>
<td>28,744</td>
<td>5.321</td>
<td>0.000</td>
<td>Accepted</td>
<td>3,077</td>
<td>3.238</td>
<td>0.002</td>
<td>Accepted</td>
</tr>
<tr>
<td>4</td>
<td>$Y=16,829 + 5,266x4$</td>
<td>16,829</td>
<td>3.325</td>
<td>0.001</td>
<td>Accepted</td>
<td>5,266</td>
<td>6.089</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Another assumption of linear regression is that average statistical residual of data must be zero and their variance should be a constant. Moreover, statistical residues must follow normal distribution. The statistic related to statistical residual is used to examine hypotheses above.

Table 11: Results of statistical residual

<table>
<thead>
<tr>
<th>The first hypothesis</th>
<th>Minimum data</th>
<th>Maximum data</th>
<th>Average</th>
<th>S.D</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated values</td>
<td>1,9192</td>
<td>6,6054</td>
<td>4,4217</td>
<td>13,3751</td>
<td>139</td>
</tr>
<tr>
<td>Statistical residual</td>
<td>-4,7123</td>
<td>1,5336</td>
<td>000</td>
<td>27,6443</td>
<td>139</td>
</tr>
<tr>
<td>Estimated values</td>
<td>-1,871</td>
<td>1.633</td>
<td>000</td>
<td>1,000</td>
<td>139</td>
</tr>
<tr>
<td>Statistical residual</td>
<td>-1,698</td>
<td>5,528</td>
<td>000</td>
<td>0,996</td>
<td>139</td>
</tr>
</tbody>
</table>

Figure 2: Histogram for statistical residue of the first hypothesis
As calculations of Table 11 indicate, the average of statistical residue is zero and its variance is a constant. Furthermore, the chart (a normal fitted one) suggests that data related to statistical residue follow normal distribution. Thus, the linear regression estimated for the first hypothesis is true. Results of statistical residue test of other hypotheses are presented in the table below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Average error</th>
<th>Error variance</th>
<th>Error distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.000</td>
<td>28.0908</td>
<td>Normal</td>
</tr>
<tr>
<td>3</td>
<td>0.000</td>
<td>29.5981</td>
<td>Normal</td>
</tr>
<tr>
<td>4</td>
<td>0.000</td>
<td>27.2441</td>
<td>Normal</td>
</tr>
</tbody>
</table>

9. RESULTS AND DISCUSSION

Throughout this paper, it is found that development of Golestan province is a long process requiring emphasis on social capital to bypass constrains and conduct resources strategies. What is important in this process is the ability to organize and manage a society to use the least resources to obtain the best results. In this way, management weaknesses must be recognized and removed as development and keeping on in development path differ significantly but both require supreme management.

Main hypothesis:
According to table above, correlation coefficient between motivational system and exports is 0.436 indicating a 43% direct correlation between the two variables. Therefore, H0 is rejected and H1 is accepted. Moreover, the determination coefficient is 0.190 suggesting that 19% of changes in exports are explained by changes of motivational system.

Regression variance analysis was performed to verify a linear relationship between x and y. this is done suing the F statistic.

In a research titled “Culture; the heart of knowledge-based economy in economic growth and development”, Poorfaraj et al (2012) found that knowledge-based economy requires some cultural changes that, on one hand, facilitate knowledge business and, on the other hand, provide for correct use of knowledge and modern technologies for the benefit of society. Aliashrafpoor and Amirabbasi (2012) studied the effect of knowledge-based economy on general factors of productivity growth and found a significant, positive relationship between knowledge-based economy indicators and factors of productivity growth. Moreover, they concluded that
indicators of technology and information communication have no significant impact on productivity growth.

Side hypotheses:
Based on table 7, significance of this statistic is 0.000. Therefore, the hypothesized linear relationship between the two variables is accepted. Results of correlation coefficient and regression variance analysis of other hypotheses are presented in table 8.
Based on results, the standardized coefficient $\beta$ has a positive value and, hence, the relationship between motivational system and exports is positive (both change in the same direction). In order to validate the relationship, $t$ statistic is used. Since the estimated value of $t$ for $\beta$ is larger than the significance value, it can be concluded that $\beta$ is significance in confidence level of 95% and the direct relationship between the two variables is correct. Moreover, estimated $\alpha$ for the constant is also positive suggesting a positive Intercept. Since the estimated $t$ for $\alpha$ is larger than the significance level, it can be discussed that $\alpha$ is significant and Intercept is accepted.

Amjadi et al (2012) analyzed the effect of knowledge-based economy indicators on GDP and found that human development, economic regime and incentives, innovation systems, education, human resources and information infrastructure influence GDP of different countries.
Grant et al (2010) investigated information and communication technology for industrial coexistence. They demonstrated that several information and communication technology tools are designed and developed for industrial coexistence, but with ambiguous results. Furthermore, the paper presented a knowledge-based framework of information and communication technology for industrial coexistence.

1- Applied suggestions
1- Providing proper political organizations
2- Providing proper administrative organizations
3- Providing efficient and independent juridical organization
4- Providing proper and empowered system
REFERENCES:


20-year vision plan of Islamic Republic of Iran.


Economic and planning vice presidency of Golestan planning and management organization, 2004. The place of Golestan province in the system of economic, social and cultural planning.


Aliashraf pour, Mohammad and Zahra Amirabbasi (2012), The Impact Of Knowledge-Based economics On Total Factors of Production Productivity Growth, Australian Journal of Basic and Applied Sciences, 6(8). (In Persian)


DOGAN. C; GOKDEMIR. L & KARAGOZ. M. (2005), The Role Of Knowledge As A New Production Factor In The Economic Growth Of TURKEY. Conference On Medium- Term Economic Assessment (CMTEA): Transformation Towards Knowledge Based Economy.


Drummond, John (2003), Care of the Self in a Knowledge Economy: Higher education, vocation and the ethics of Michel Foucault, Educational Philosophy and Theory, Vol. 35, No. 1.


Hom Haacke. L (2001); Using SWOT for Project Planning Sessions, PN.3 Hughes. A. Tourism as sustainable Industry in the Rural Community of Arising, West Scotland, MSc Thesis, Napier University


OECD. (1996), the knowledge based economy, Paris: OECD.


Quality Assurance Agency (2001) at: http://www.qaa.ac.uk


World Bank (2009), World Bank Knowledge for Development Program, Knowledge Economy Index (KEL) Rankings.