Islamic accounting with emphasis on ethical evaluation criteria

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Abstract — Financial and bank affairs development in the past 20 years ago in Muslim countries all over the world, economic scandals and fraud led into more concentration of ethical measures on accounting. Thus, the need to Islamic accounting to meet the demands of the society was increasing. This is due to the inconsistency of traditional accounting principles with Islamic accounting. The present study attempted to present a comprehensive plan in accordance to Sharia, ethical evaluation measures (justice, fairness and Zakat) to show how trading is launched and how accounting should be done. Also, it discussed the contrast of traditional and Islamic accounting, model, goals and features of Islamic accounting. The results of the study showed that ethical measures implementation can make the role of accounting more effective.

Keywords — Accounting, Islam, Quran, Justice, Fairness

I. INTRODUCTION

Accounting is one of the most important parts of business and economic unit providing processing data of commercial and economic activities of financial reporting and statements for decision makers. In addition, accounting is used as an instrument that institutions (management supervision) can respond to investors and stockholders. According to the above mentioned definition, accounting is a commercial and economic language presenting good methods for production of financial reporting and financial statements to the beneficiaries. According to the view of USA accounting board, accounting is a process to identify, record, classify and interpret the economic events for informed decision makers. Like other fields, traditional accounting

II. THE DEFINITION OF ISLAMIC ACCOUNTING

In Islam, human being is the divine governor of God on earth. As God said in Al-Baghare verse 30: I will appoint a Divine Governor on the earth”. Thus, any Muslim should do his activities based on defined framework, in accordance to Sharia. Thus, God controls our behavior and acts and the accountants are Raghib and Atid (recording the word and the speech of him) (Qaf, verse 18) and records all human activities.

Ather & Ullah considered Islamic accounting as a branch of accounting with the goals of achieving ethical and objective goals in accordance to Islamic Sharia. The importance of accounting is defined in Quran in Al-Baghare verse 282:’’ O, you who believe, when you contract a debt for a fixed term, then write it down and let a scribe write it down between you justly. And the scribe should not refuse to write, so to what Allah has taught him. This verse is mostly emphasizing on reporting and recording and honesty in commercial trading and observing fairness and justice in trading. Based on the above verse, two important measures of justice and fairness are investigated.

III. The criteria of measuring Islamic accounting

The accounting principles of Islam have close association with the basic commercial economic procedures being managed by Sharia. The main goal of Sharia is being sure of humanity, social justice, generation, religion, spirit and wealth. According to the Quran verse as to Allah belongs all that is in the heavens and on the earth and in Al-Baghare verse 282, it is said: He is the owner of anything and human being is only a divine governor on earth. According to Hadid verse: Believe in Allah and His Messenger and spend out of what He has made you inheritors: For those who believe and spend in Allah’s way there will be a great reward”. According to this verse, when power or money is transferred from one person to another or a group to another group, they are responsible for the benefits and they should spend out of them in good affairs. One of the important aspects of Islamic accounting is ethics and Islam is mostly based on ethical behavior. According to a tradition of Abohorayre, it is said, Mohammad (pbuh) is sent to complete good morality. In addition, fairness and justice are measured criteria in Quran. According to Anam verse, 152: Give full measure and full weight with justice (not giving little
or much and not receive much or little). There is no verse of Quran dedicated to people and it is mostly assigned to the society and governments and justice and fairness should be observed as a summary of ethics in commercial institutions based on the Holy Quran.

According to Shafi (1979), one of the goals of Islamic economy is that wealth should be given to all people instead of being concentrated on one or two people and there should be little gap between the rich and the poor.

Special institutions are established to achieve these goals. Almsgiving is a type of obligatory religious tax from the wealthy to the poor and the needy. Most of the Islamic researchers believe that the government can convince the wealthy to do it.

Shariati believed that Abuzar, one of the followers of the Prophet believed that extra money of the wealthy is directed to the poor with or without permission. Thus, Islamic view is different from western view and it should have its own accounting system and it is the difference with traditional accounting. The reasons of the evaluation criteria of Islamic accounting, justice, fairness and almsgiving are investigated.

IV. Justice
Justice has special position in Islam as the Holy Quran considered establishing justice the purpose of sending the Messengers and revelation of holy books. According to Hadid verse 25, : Indeed, we sent our messengers with signs and miracles and revealed to them Books of Religion and gave them the criterion for establishing justice among the people.

Imam Ali had great sayings about justice and the translation of some of them is as: Justice leads to society life, protecting the governments and their stability and construction. According to Islam philosophy, determining this right is with God and it can be said:
1- God is the owner of everything
2- Human being is the divine governor of God on earth.
3- God properties are given to human being as trust.

According to Bagahre verse 282, the justice principles can be determined:
1- Satisfaction and freedom of will in contracts: This condition is the important principle of all the contracts. According to Nisa verse 29, O, you who believe, do not devour each other’s wealth in vanity and illegal way: The profit obtained should be from trading based on mutual consent. Thus, if the contract is without mutual consent, the contract is cancelled.
2- Knowing about the object of trading and contract: Two sides of contract should be fully aware of trading and contract features and know the amount, material and price. This principle is focused on correct information in trading.
3- Loyalty to contract and contract conditions: God referred to fulfilling the obligations and contract and according to Al-Maede verse 1: O, you who believe! Fulfill the promises and covenants made by you.
4- Honesty in contract and trading: One of the attributes in the Holy Quran is honesty in speech. Thus, according to the above verse, honesty and being away from hell, trick and treason are of great importance. These factors lead to contract cancellation for two sides.

Allah ordered justice in all life aspects and warned through his Messenger to establish justice in case of injustice, or deciding about a challenge or dispute or even in facing with enemies. Some of the instructions are provided by Quran for protective measurements to observe Islamic regulations and rights for Muslims as followings:
1- Contracts: The concept of Islamic contract is important for any Muslim as a comprehensive concept of contract relations should be in human being life. To do the obligations, according to Maede verse 1: O, you who believe. Fulfill the promises. This verse shows the importance of various contracts in human life. Some of the contracts refer implicitly to human life as marriage, trading, war, social order and welfare but some of the contracts are dedicated to specific affairs of relationship with God.

The term contract is associated to the relationship between human being and God to worship only him and according to Al-Anam verse 162, Say, my prayer, my rituals, my life and my death all are for Allah, the creator of the worlds. Thus, contract between human being and God is used to be at service of Sharia concepts linking the world and afterlife to each other.
2- Witnesses: Islam emphasized that contract should be recorded in any suitable document and this is about commercial trading in all small and big scales and according to Quran, writing the trading features is an effective measurement to protect the trading conditions to any false claim. According to Quran: Commercial trading should be done in the presence of two male witnesses and two women and a man are adequate to write the trading features.

Fairness
Fairness means any person can behave as he loves people behave with him. According to a tradition from Imam Ali (pbuh), behave fairly with people and consider them equal with those you love (Mohamamd Ibn Yaghub Koleini). Thus, fairness is a general ethical principle and its examples are narrated about trading issues from Imam Ali and Imam Bagher (pbuh) and both of them ordered to fairness in trading. It can be said that in private sector, it is done for personal profit and if market activists are fair, some effects as fair price and avoiding preference in market, minimum reduction of negative performance of market, elimination of poverty and wealth balance, increasing self-esteem and brotherhood and elimination of conflicts are considered.
V. Almsgiving

Almsgiving is an important financial and social worship. This worship is the second Islamic principle and it is equal to saying prayer in the Holy Quran. Once with almsgiving, another one with charity and sometimes with spending out of property. According to Al-Baghare verse, the pious are those who believe in the unseen, are steadfast in performing prayers and spend out of what we have provided for them (Al-Baghare 3). In other verses: Establish prayers, pay alms and whatever of good deeds you send forth for yourselves, you shall find it with Allah (Al-Baqarah, 111).

In most of the Islamic accounting literature, almsgiving is the foundation of determining measurement tools and the reasons are as:
1- In Islam, almsgiving is a concept dealing directly with the assets measurement.
2- In most of the verses in Quran, almsgiving is obligatory for Muslims after prayer.
3- Accounting development in Islamic governments is associated with almsgiving.

VI. Islamic accounting model

The conflict between Islamic accounting and traditional accounting

<table>
<thead>
<tr>
<th>Traditional accounting</th>
<th>Islamic accounting</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is the process with the aim of being sure of decision makers to allocate resources to profitable and efficient activities by existing information of market and inconsistency with Islamic Sharia</td>
<td>It is the process with the aim of being sure of beneficiaries of an institution to be sure of activities of the institution in accordance with Islamic, social and economic sharia.</td>
<td>1-Definition</td>
</tr>
<tr>
<td>It is based on secular and capitalism nature</td>
<td>It is based on Islam principles</td>
<td>2-Nature</td>
</tr>
</tbody>
</table>

VII. The features and goals of Islamic accounting

1- Maximizing profit to maximize almsgiving (emphasis on society welfare not individual benefits)
2- Consistency of activity in Sharia
3- Creating balance between individual and social personality
4- Encouraging to investment for liberating human being from economic, intellectual and social oppression and environment protect
5- Exact information for decision making
6- Regulating suitable price of products via fair wealth distribution

VIII. The applied study recommendations

1- Islamic accounting at various dimensions needs deep investigation and great efforts should be made for clarification and determining various dimensions.
2- Fulfilling Islamic accounting dependent upon acting in accordance to Islam teaching and rules based on Sharia
3- Special measurements of financial institutions to the Islamic measurements and ethics and transparency

IX. Conclusion

Islam as a living method considered commercial activities more and God presented the required guidance for human salvation in the world and afterlife in Holy Quran and salvation should be selected as the final goal in economic activities and accounting is consistent with this goal as the tool of presenting information in economic environment. Thus, Islamic accounting features should be as guiding business unit to the criteria of evaluating ethics, justice and fairness and response via almsgiving.

It can be said, in accounting field, ethics is important and justice and fairness are the foundations of human life. The study of the ethical measurements of accounting needs much time. The traditional financial system suffers from various crises. According to an estimation, more than hundreds of crises were created in the four past decades. Islamic accounting is mostly used as one of the Islamic financial affairs to resolve the traditional accounting (Ather & Ullah,
Thus, traditional accounting should be replaced with Islamic accounting via more studies.

X. Reference


[8] Dr. Syed Mohammad Ather FCMAMd Hafij Ullah (2010) Islamic Accounting and Traditional Accounting Some Conflicts and Their Resolutions


The impacts of operations capabilities and marketing on financial performance in the Iran retail sector

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Abstract
This study grounds its main focus upon the resource-based view (RBV) of the firm and investigates the existing interconnectedness among operations capability, marketing capability, and financial performance. Applying archival data of 100 Iranian retail firms, it has been realized that marketing capability greatly influences the operations capability which in turn is noticeably and positively relevant to retail efficiency. The outcomes of the mentioned investigation also propose that operations capacity thoroughly mediates the relationship between financial performance and marketing capability. The findings of this carried out study offers in-depth insights for practicing managers to consider when they are supposed to improve functional capabilities in order to accomplish superior financial performance.

Keywords: Financial performance, Marketing and operational capability, retail, Iran

1. Introduction
The resource-based view (RBV) of the firm features grander financial performance to organizational resources and capabilities (Bharadwaj, 2000). Capabilities have been broadly defined and referred as “complex sets of skills and accumulated expertise enabling firms to coordinate and harmonize activities and get the best out of their assets” (Day, 1990). Song et al (2007) asserted that each business entity has a unique set of capabilities and resources, and some of the capabilities will be more closely linked to superior performance than others. Grant (2010) illustrated a hierarchy regarding the organizational capabilities, where the integrity of specialized capabilities are taken into great consideration such as broader functional capabilities marketing and operations capabilities. A growing number of researchers have explicitly emphasized the degree of prominence towards integrating operations and marketing perspectives in gaining competitive advantage (Calantone et al., 2002, Nath et al., 2010, Song et al., 2007). Although the integrated roles of the functional capabilities have become more critical than ever in achieving competitive advantage (Ho and Tang, 2009, Nath et al., 2010), operational and marketing roles have been examined inclusively within the literature of management scope (Karmarkar, 1996).

As the underlining literature unique to marketing has always focused upon creating the linearity of demand credited to the prospect client or customer demand and how to provide clients with a distinctive so called value proposition, namely; proposing that a firm can enhance its financial performance by improving its marketing capability (Vohries and Morgan, 2003). On the contrary, researchers engaged in management scope, have solely concentrated upon the supply management to fulfill the customer demand, for instance examining the efficacy of operations capability upon the entities performance (Terjesen et al., 2011). Barney (1991) grounded his discussion that the entire functional areas underlining any business facilitates products delivery and services but the two crucial factors in creating value for customers are operations and marketing issues which should be taken into great consideration. There has been an enormous and growing body of literature arguing the paramount role of integrated marketing and operational functions in improving firm performance (Balasubramanian and Bhardwaj, 2004, Grant, 2010, Hausman et al., 2002, Ho and Tang, 2009). It is widely believed that Mismatch between the two afore-mentioned functions results in customer dissatisfaction and production inefficiency while a proper fit yields sustainable competitive
advantage (Ho and Tang, 2009). Business leaders unanimously voiced that the assumed potential to integrate such cross-functional expertise is pivotal to both competitive advantage and long-term success (Wind, 2005). Interestingly enough, no other empirical research has casted light on the actual existing linkage among marketing capability, operations capability and their impacts on financial performance. To this aim, the present study, seeks to illuminate the existing connections among the mentioned three constructs in a holistic fashion.

What has been done within the framework of the current study was the adaptation of a certain perspective based on a resource applicable towards the development of any assumptions or theories and hypothesis formation objectives. The RBV reveals how an individualistic resource of a firm (For stance, the assets of both tangible and intangible entity and any institutional and organizational capabilities to be fallen in this category) influences its financial performance (Barney, 1991). Rare, worthy and unique resources could potentially bring about an advantage of competitive entity while chosen and deployed on the basis of strategically considerations (Theodosiou et al., 2012; Grant, 1991). Over the last recent years, the (Resource-based view or RBV) has been undergone an extensive adaptation in both the marketing and the literature associated with the operations management (Ruiz-Ortega and Garcia-Villaverde, 2008). By applying archival financial data of 100 retail companies and firms in Iran, We have managed to explore the links among marketing capability, operations capability, and financial performance and their interconnectedness.

The rest of the current paper has been organized as follows. At first instant, a quick literature survey on conceptions relevant to this study which is followed with research hypotheses are presented. Secondly, the design of the present study and the procedure of the adopted methodologies have been elaborated. Thirdly, presented outcomes of the current research are elaborated and discussed, and a bundle of theoretical and some implications connected to the management issue are drawn. Eventually, it has been recapitulated with an executive summary of findings and conclusions along with the main limitations and scope for any projected future research.

2. Literature review and research hypotheses

2.1. Resource-based view and capability

The RBV presupposes a business entity which could be a firm or company as a series of existing capabilities and various resources (Wernerfelt, 1984, Yu et al., 2013). It is regarded as an influential framework clarifying how competitive advantage is achieved through intra-firm resources and capabilities (Corbett and Claridge, 2002). Generally, any firm’s assets are categorized as tangible and intangible under the umbrella term of resources which could be utilized as any productive use (Amit and Schoemaker, 1993). The term “Capability” is referred as the potentiality and capability of the prospect company or firm to get the best use of its resource “to affect a desirable pre-determined end” (Amit and Schoemaker, 1993). It resembles to the so-called intermediate goods made by the company or firm enjoying the institutional or any organizational processes for the provision of “enhanced productivity to its resources” (Amit and Schoemaker, 1993, Yu et al., 2013). Compared to resources, capabilities have been incorporated within the dynamism of interacting with multidisciplinary of knowledge sources recognized as less transferable and more firm-specific leading to an advantage of being competitive (Peng et al., 2008). Capabilities can be widely fallen into categories reflecting the potential to accomplish rudimentary functional activities associated with company or firm and those directing the betterment and renewal of the existing activities (Collis, 1994). The RBV maintains that business entities enjoy various natures of resources and differing capability levels. A firm's existence is heavily dependent upon its potentiality to generate new resources, scaffolding on its abilities platform, and creating more distinctive and unique capabilities aiming the competitive advantage (Day and Wensley, 1988, Porter, 2008). The RBV has been extensively applied in the marketing literature to make the existing interconnectedness and interaction between the marketing and further associated functional capabilities and their influences on the improvement of the overall performance more consumable (Wade and Hulland, 2004, Song et al., 2005, Song et al., 2007). Previous studies (e.g. Ho and Tang, 2009, Ruiz-Ortega and Garcia-Villaverde, 2008, Song et al., 2007, Yu et al., 2013) have found that there is a significant relationship between functional capabilities and firm performance.

Furthermore, the RBV proposes that lack of homogeneity in any firm performance is heavily rooted in resources ownership enjoying differential productivity (Makadok, 2001). Wade and Hulland (2004) defined an entity’s capability term as “its potentiality to use resources (inputs) at hand to obtain the desirable objectives (outputs)”. Therefore, the present study applies a framework built upon an input–output framework functioning as the efficiency frontier function to grasp the optimum transformation of a company's existing resources to its purposes (Nath et al., 2010). Day, (1994) also suggested that “there is no feasibility to estimate all potential capabilities,
as each and every entity or firm improves its unique structure of capabilities reflected in the realities of its associated competitive market, previous commitments, and prognosticated emerging needs”. For the purpose of the present study, we will merely concentrate on the two paramount organizational capabilities (operations and marketing) (Day, 1994, Song et al., 2007, Yu et al., 2013) and examine their effects on financial performance. As noted earlier, From the RBV point of view an entity is regarded as a set of capabilities and potential resources and it is notable that some types of functional capabilities (for example operations and marketing) will eventually affect the overall firm performance (Day, 1994, Song et al., 2007, Yu et al., 2013). On the basis of the RBV, we develop a conceptual framework studying how a business entity enjoys its pivotal capabilities within the marketing and operations scope to develop financial performance.

2.2. Marketing capability
Turning into marketing capability, it is regarded as the consolidation of some certain processes, by which a company gets the best out of its intangible and tangible resources for the realization of compound client particular requirements, gaining product differentiation associated with competition, and the achievement of superior brand equity (Day, 1994, Song et al., 2005, Song et al., 2007, Yu et al., 2013). Marketing capabilities encompasses the customer and expertise knowledge regarding the competitive market, as well as the skills relevant to segmenting, advertising, targeting markets, pricing, and integrating marketing activity (Song et al., 2007, Ripollés and Blesa, 2012). Any business entity or presumed firm promotes its capabilities in the realm of marketing when capable of consolidating the employees' knowledge and skills with the accessible resources (Vorhies and Morgan, 2005, Ripollés and Blesa, 2012). Firms devoting efforts and resources to the interaction with customers and clients can boost those abilities relevant to their “market sensing” (Narasimhan et al., 2001). Once, such capabilities came to existence then it would be a rigorous task to mimic for competing entities (Day, 1994). Thus, marketing capability is regarded as one of the paramount sources of competitive advantage (Nath et al., 2010, Yu et al., 2013). The literature of marketing proposes that companies using capabilities to convert their potential resources into outputs on the basis of their combined capabilities and marketing strategies are somehow reliant on their business performance (Vorhies and Morgan, 2003). Vorhies and Morgan (2003) and Song et al. (2007) argued that marketing capability facilitates a firm to build and maintain long-term relationship with clients and channel members. Hence, marketing capability creates a strong brand image allowing entities to attain a higher firm performance. Empirical studies have discovered an eminent connection between marketing capability and financial performance (Vorhies and Morgan, 2003, Song et al., 2007, Nath et al., 2010, Yu et al., 2013). For instance, Nath et al. (2010) found that the capability of marketing exerts a significant impact on the performance of any business entity. Vorhies and Morgan (2005) also found that marketing capability is positively and significantly correlated with firm performance. Using the above arguments, the following hypothesis is proposed.

H1. Marketing capability imposes a positive influence on fiscal/financial performance.

2.3. Operational capability
Operational capability is a terminology pinpointing the consolidation of the integration of an elaborate bundle of activities carried out by an entity or a firm to strengthen its incoming output via the most effective usage of its innovation and technology, production capabilities, and flow of materials (Vorhies and Morgan, 2005, Nath et al., 2010). An ideal superior operations capability increases efficacy in the processes ongoing to do with delivery, reduction of the operational cost and achieves competitive advantage (Day, 1994). Operations capabilities are fundamental proficient enabling firms to achieve production-driven purposes namely, consistency of the quality of the product, cost reduction, volume and product flexibility, delivery speed and dependability (Terjesen et al., 2011, Wu, 2012). Superior operations capabilities have always been referred as a basis of competitive advantages and superior enactment or performance outcomes (Peng et al., 2008, Terjesen et al., 2011). It points out that a company is able to attain competitive advantage by adopting an effective flow process of material, attentive asset utilization, acquisition and dissemination of grander or superior process knowledge (Tan et al., 2007, Yu et al., 2013, Krush et al., 2013, Wu, 2012). Amongst the mentioned operational capabilities most commonly, robustly, and positively influential in competitive achievements are the elements enhancing a firm’s potential ability survive in this competitive market on the basis of time frame, cost effectiveness flexibility, and product quality (Wade and Hulland, 2004). Some empirical studies have identified the important effect of operations capability on firm performance (Peng et al., 2008, Nath et al., 2010, Terjesen et al., 2011, Krush et al., 2013). By applying a sample size of 167 UK-based superior technology manufacturing firms, (Terjesen et al., 2011) found that firm performance (like the growth of sales, sales return, and total return on assets) is to a great
extent anticipated by operations capabilities promoting meager operating costs and the quality of the product. Rosenzweig et al (2003), Ripollés and Blesa (2012) maintained that enhanced competitive capabilities (such as product quality, cost, process flexibility, and delivery reliability) generally improve business performance. Taking the archival data of 102 UK-based logistics companies, Nath et al (2010) and Wu (2012) also realized that operations capability significantly influences the business performance (such as profitability). Based on the above argument and the results of these empirical studies, the following hypotheses are accordingly proposed.

\[ H_2. \text{Operations capability has a positive impact on financial performance.} \]

2.4. Marketing and operations capability
The interdependence of manufacturing and marketing, in general, has been widely recognized for a long time (St John & Hall, 1991). Some previous studies (e.g. Song et al., 2005, Yu et al., 2013) have identified the high complementarity between marketing and operations capabilities. Johnston (2005) and Wang et al (2013) stated that “the links between design, manufacturing, and markets are the very essence of a business”. Customer needs to generate the product’s functional specification, which in turn generates the product specification (Johnston, 2005). In the predominant marketing research paradigm, the marketing function generates a spectrum of product concepts as a bundle of well-defined attributes, with price included as an attribute (Rosenzweig et al., 2003). However, there is little empirical research that has directly explored the linkage between marketing capability and operations capability. Based on a review of the literature, in this study, we would argue that marketing capability is an antecedent of operations capability. A firm’s marketing capability can strengthen its ability to develop innovative operations processes. Marketing capability spans processes established within organizations to decipher the trajectory of customer needs through effective information acquisition, management, and use (Krasnikov and Jayachandran, 2008, Wang et al., 2013, Ripollés and Blesa, 2012). It involves the processes enabling a firm to build sustainable relationships with customers (Day, 1994), which in turn will lead to improved operations capability such as new product development and more flexible delivery. Previous studies have highlighted the important role of marketing in improving operations capability, for example, viewing marketing capability as important determinants of new product development and success falls in this category. Moreover, Operations capability is “the skills and knowledge that enable a firm to be efficient and flexible producer or service provider by using the entire resources” (Krasnikov and Jayachandran, 2008). Overall, operations capability has been viewed as focusing on efficient delivery of high quality products/services, cost reduction, and flexibility improvement (Tan et al., 2007, Yu et al., 2013, Krush et al., 2013, Ripollés and Blesa, 2012). Operations capability can draw on marketing capability to further its goals (Bharadwaj, 2000). A superior marketing capability can provide high-quality consumer feedback to operations function. For example, operation can use inputs and get feedback from marketing function on various customer-ready prototypes, which in turn will enhance the likelihood of the final product being acceptable to consumers while being produced at as low cost as possible (Bharadwaj, 2000).

Operations capability should be developed in the context of the marketing capability. Using a sample of 117 leading retail banks, Roth and Van Der Velde (1991) showed how critical success factors are used to link operations and marketing in service firms. They suggested that the marketing strategy embodies the demand management, i.e., identifying, understanding, and creating need satisfying products and services, and that the operations strategy concerns the management of supply, i.e., the production and delivery of products and services. O’Leary-Kelly and Flores (2002) and Theodosiou et al (2012) also argued that the “time differential” element exists between marketing and operations decisions, in which marketing-based decisions are typically a source of input for the operations-based decisions. As standing example, in a typical marketing–operations planning cycle, the marketing/sales planning decisions serve as a primary input for the operations planning decisions which then follow (Vollmann et al., 1997). It can be argued that marketing and operations must not only be structurally aligned for competitive advantage, but also that marketing plays a pivotal role in affecting operations strategy and capability. The firm’s marketing capability (such as market knowledge about customer needs and past experience in forecasting and responding to these needs) can proactively generate operations capabilities in terms of quality, delivery, flexibility and cost. Based on the above argument, we propose the following hypothesis.

\[ H_3. \text{Marketing capability has a significant impact on operations capability.} \]
3. Methodology

3.1. Data
We chose retail firms in Iran to test our conceptual framework. All the data required for this study were obtained from the Financial Analysis database obtained from Iran. Initially, we obtained top 225 retailers, this selection criteria was carried out based on their turnover in 2012. Out of that, 125 firms did not have complete information. So, the final sample consisted of 100 retailers in Iran and these retail firms operated their business in both food and non-food sectors, such as supermarket retailing, home appliances, and fashion retailing. The results of demographic characteristics of these 100 firms are reported in Tables 1 and 2.

Table 1: The age (year) of the sectors

<table>
<thead>
<tr>
<th>Number of sectors</th>
<th>Percent (%)</th>
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<tbody>
<tr>
<td>1-10</td>
<td>39%</td>
</tr>
<tr>
<td>10-20</td>
<td>41%</td>
</tr>
<tr>
<td>More than 20</td>
<td>20%</td>
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Table 2: The feature of 100 retail sectors

<table>
<thead>
<tr>
<th>Number of sectors</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>43%</td>
</tr>
<tr>
<td>Non-food</td>
<td>57%</td>
</tr>
</tbody>
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3.2. Data envelopment analysis (DEA)
The RBV proposes that a business entity dedicates its potential resources (inputs) to create business performance (outputs) via the functional capabilities (process transformation) (Nath et al., 2010). Thus, in this study, we evaluated operations and marketing capabilities and retail efficiency via using Data Envelopment Analysis (DEA) (Cooper et al., 2007). DEA is a mathematical programming technique commonly applied for estimating the efficiencies with which different decision-making units (DMUs) (schools, hospitals, retailers, etc.) are able to convert their resources (usually called inputs in the DEA literature) to good performance (usually called outputs). To calculate efficiency scores employing DEA, two different assumptions can be made, i.e. constant return to scale (CRS) and variable returns to scale (VRS). The VRS efficiency score measures pure technical efficiency, i.e. a measure of efficiency without scale efficiency. On the other hand, the CRS efficiency score represents technical efficiency which measures inefficiencies due to the input/output configuration and the size of operations (Cooper et al., 2007). Scale efficiency can be computed by the ratio of CRS efficiency to VRS efficiency. Hence, scale efficiency of a DMU operating in its most productive scale size is one.

3.3. Measures
We measured functional capabilities of firms regarding their efficacy for conversion of marketing operations resources and marketing (function-driven inputs) to marketing and operations aims (function-driven outputs). The applied measures in the current study for operational capability, marketing capability, and financial performance are reported in Tables 3-5, respectively and described in more detail below. All Values are in thousands of USD.

Table 3: Marketing capability

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measures</th>
<th>Mean</th>
<th>S.D</th>
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<tbody>
<tr>
<td>Input</td>
<td>Stock of marketing expenditure</td>
<td>183436.40</td>
<td>68396.63</td>
</tr>
<tr>
<td></td>
<td>Relationship expenditure</td>
<td>31860.00</td>
<td>31914.56</td>
</tr>
<tr>
<td></td>
<td>Intangible resources</td>
<td>68125.52</td>
<td>121573.83</td>
</tr>
<tr>
<td>Output</td>
<td>Sales</td>
<td>427931.46</td>
<td>295671.59</td>
</tr>
<tr>
<td></td>
<td>Turnover</td>
<td></td>
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</tr>
</tbody>
</table>
Marketing capability is an integrative process, in which a firm uses its resources to achieve its market related needs of business (Vorhies and Morgan, 2005). Thus, we used the input–output framework to measure marketing capability and archival financial data which is the best way to do it. Following the work of (Nath et al., 2010, Yu et al., 2013), we used sales as the output measure. Using sales as an output for marketing activity is also supported in the marketing literature. We used three inputs as rations of marketing resources: stock marketing expenditure, intangible resource, and relationship expenditure. In the input–output classification, marketing capability of a firm measures how close it is to the sales frontier given in a set of resources. Thus the closer is the sales value realized by the firm from the sales frontier; the better is its marketing capability (Nath et al., 2010, Yu et al., 2013). We used input-oriented CRS DEA model (Cooper et al., 2007) to measure the efficiency of such transformation for the retailers. The DEA efficiency score measures marketing capability of each retailer.

As mentioned earlier, the present study employed DEA (Cooper et al., 2007) as a tool to measure input–output transformation. To measure retail efficiency, we used two inputs in this study, namely, total assets and number of employees (Yu and Ramanathan, 2008, Yu et al., 2013) (see Tables 3-5). We chose two output measures return on assets and return on capital employed which directly reflect how well a retail firm is able to convert its inputs to generate superior profitability (Nath et al., 2010). We used input-oriented CRS DEA model (Cooper et al., 2007) to measure the efficiency of such transformation.

We used two control variables: firm age and retail characteristic (food and non-food sectors). Firm age is the number of years since firm formation. Firm age was controlled in the current analyses because older retailers may possess more fully developed functional capabilities (Terjesen et al., 2011). Older firms will be more likely to overcome performance threatening liabilities. The effects of services and functional capabilities on improved retail efficiency are different among retailers (e.g. grocery retailers vs. clothing and footwear retailers).
4. Results

To test the hypothesized links in our conceptual framework, structural equation modeling (SEM) was used in this study. The results of structural model using AMOS 20 are reported in Table 6. The overall fits of the structural model are good, with the CFI, IFI, and TLI well above the recommended threshold of 0.95 (Hu and Bentler, 1999), the RMSEA less than 0.08 (Kline, 2011), and the SRMR less than 0.06 (Hu and Bentler, 1999). While firm age ($\beta = -0.065$) does not affect retail efficiency, retail characteristic ($\beta = 0.113; p \leq 0.10$) has a positive impact on retail efficiency. As shown in Table 6, the results indicate that marketing capability has a significant positive impact on operations capability, which lends support for H$_3$. Similarly, the structural model shows that operations capability is significantly and positively related to financial performance. Hence, H$_2$ is fully supported. However, marketing capability has no significant direct effect on financial performance. As such, H$_1$ is rejected.

Table 6: Results of hypotheses 1–3

<table>
<thead>
<tr>
<th>Structural paths</th>
<th>Standardized coefficient</th>
<th>t-Value</th>
<th>Hypothesis test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing capability $\rightarrow$ financial performance</td>
<td>0.0724</td>
<td>0.870</td>
<td>H$_1$: Not supported</td>
</tr>
<tr>
<td>Operations capability $\rightarrow$ financial performance</td>
<td>0.385</td>
<td>6.724</td>
<td>H$_2$: Supported</td>
</tr>
<tr>
<td>Marketing capability $\rightarrow$ operations capability</td>
<td>0.721</td>
<td>13.01</td>
<td>H$_3$: Strongly Supported</td>
</tr>
</tbody>
</table>

Model fit statistics: $\chi^2 = 2.5105$, df = 2, RMSEA = 0.076; CFI = 0.934; IFI = 0.976; TLI = 0.914; SRMR = 0.048.

To identify the particular extent to which operations capability mediates the effect of marketing capability on financial performance, we conducted the Sobel test (Sobel, 1982) to directly examine the significance of the mediation effects using the interactive tool provided by (Preacher and Leonardelli, 2003). As an additional test for mediation, (MacKinnon et al., 2002) suggested that the Sobel test is superior in terms of power and intuitive appeal. The Sobel test lends additional support for the mediated relationships hypothesized through a change in significance of the indirect effect. The result of the Sobel test provides support for the fully mediating effect of operations capability ($t = 3.73, p \leq 0.001$) on the relationship between marketing capability and financial performance.

5. Discussions

Our structural model strongly supports Hypotheses 2 and 3. Therefore, marketing capability has a significant impact on operations capability, and that operations capability is significantly and positively associated with financial performance. However, there is no significant direct relationship between marketing capability and retail efficiency. This finding suggests that operations capability is a mediator of the relationship between marketing capability and financial performance.

Although the value of marketing and operations capability has been recognized (Vorhies and Morgan, 2005, Song et al., 2007, Nath et al., 2010, Yu et al., 2013), few empirical studies have looked into the actual link between the two functional capabilities and their impacts on financial performance. Our structural path analysis suggests that marketing capability helps retail firms enhance their operations capability, which in turn leads to improved financial performance. Retailers with better resource performance transformation ability have superior market knowledge and create better value for their customers. This corroborates with market orientation. A retailer’s marketing capability depends on its ability to understand customer needs and build long-term relationships. Using its unique and inimitable marketing capability, the
lecturer can devote its marketing resources more effectively to creating superior customer value. To survive in an increasingly dynamic and competitive marketplace, better marketing capability leads to competitive advantage for retailers and help them strengthen operations capability (such as providing higher quality products and services at lower prices). Our finding of the positive effect of operations capability on improved business performance (retail efficiency) is consistent with the predictions of the RBV (Amit and Schoemaker, 1993) and previous studies (Nath et al., 2010, Terjesen et al., 2011, Yu et al., 2013). The empirical findings support the conceptual arguments from some researchers (Roth and Van Der Velde, 1991) who emphasized that the functional integration of operations and marketing has a significant impact on business performance. Hence, retail firms should consider integrating their functional departments (such as operations and marketing functions) in order to obtain financial benefits from the development of functional capabilities.

Our structural path analysis indicates that there is no significant direct path between marketing capability and financial performance, which provides stronger evidence of fully mediating effects of operations capability. The Sobel test results further confirm the significance of paths between marketing capability and operations capability and between operations capability and performance, thus casting operations capability as a mediator. This provides support for the argument that those firms that develop an effective operations capability are able to obtain superior financial performance compared to those who do not develop an effective operations capability (Terjesen et al., 2011). Our findings suggest that retailers operating in an increasingly competitive market should place greater emphasis on the development of operations capability because it is operations capability that directly affects retail efficiency. Superior operations capabilities are reflected in efficient and reliable delivery processes, cost reductions and control, increased volume and mix flexibility, and exceptional conformance quality, and lead to competitive advantage and the corresponding financial rewards. However, marketing capability should not be ignored because it strengthens operations capability and has an important effect on retail efficiency, but the influence is articulated through and modified by operations capability.

6. Conclusion

Drawing upon the RBV, we have developed a framework that examines the relationships among marketing capability, operations capability, and financial performance. For this purpose, one hundred retail sectors have been chosen in Iran. Our structural model has suggested that marketing capability has a significant positive effect on operations capability, and that operations capability is significantly and positively related to financial performance. More specifically, operations capability fully mediates the relationship between marketing capability and financial performance. The findings of this study also provide practical insights for practicing managers to consider when developing functional capabilities in order to achieve superior financial performance. More specifically, this study provides managerial guidelines for managers to decide how to devote their efforts and resources to developing different functional capabilities (such as marketing capability and operations capability), and which functional capabilities directly influences financial performance.

Future study may identify more relevant functional capabilities (such as IT capability, market-linking capability, supply chain capability, or financial capability) and examine their important roles in improving firm performance. Finally, some literature suggests that interactions among functional capabilities are critical drivers of competitive advantage. Future research may extend our research model by examining the potential interactions among different functional capabilities (such as marketing, operations, and financial capabilities). Such interaction effects may be tested using a multiple regression analysis or a lead-lag analysis.

References:


Measurement model and improvement of productivity by using factor-analysis techniques and PCDA

Dr. Meysam Jafari Eskandari, Parisa Hashemisohi

Abstract— This paper aims to improve productivity by sketching descriptive-analytic pattern in order to identity level of productivity and ultimately to know how productivity improved. This pattern is composed four independent parts. The first part produce and describe productive indicator values. The second part, using factor-analytic techniques to identify impalpable factors on the level of productivity. The third part using PDCA to sketch improvement plan after analyzing level of productivity. And finally, the fourth part provides practical steps for improvement and level of productivity.

Keywords— productivity indicator, factor-analytic technique, PDCA (Deming cycle)

1-INTRODUCTION

The productivity have always been considered throughout recorded history in different ways. The most visible sample was proposed in sixteenth century which simultaneously the steam engine was invented and communities were industrialized. Increasing the services in twentieth century, the productivity was extended to another service organizations and important issues were introduce in the field of productivity in organizations. The complexity of today's business world, growth of technology, knowledge of information and communication are factors which show necessity to have organizations with high effectiveness and performance which leads to increase organizational productivity. Accordingly, increasing the productivity of factors in government agencies leads to provide better service and thus to develop the society.

Surely, having unilateral attitude towards productivity regardless of external and internal variables will be useful in any organization. In according to detailed factors of productivity, qualitative and quantitative analysis can show best performances of systems and thus can help to improve the level of quality. Also using the specific techniques and analytic methods can be considered as basic ways to improve the quality and efficiency. Uninterrupted measurement and improvement of productivity in the current competitive world and the other hand environmental threats in field of growth and development of other systems show the necessity and importance of recognition, measurement, analysis and presentation of productivity solutions for organizations. The application of qualitative techniques such as factor analysis and Deming cycle has their own complexities which need to design pattern that were consistent with theoretical foundation and explain aspects of innovation issue. In this paper an appropriate pattern will be design to improve productivity of companies and government organizations by using factor analysis techniques and Deming cycle.

2-The concept of productivity

The productivity have always been considered throughout recorded history in different ways. The most visible sample was proposed in sixteenth century which simultaneously the steam engine was invented and communities were industrialized. Increasing the services in twentieth century, the productivity was extended to another service organizations and important issues were introduce in the field of productivity in organizations. Many factors affect the definition and attitudes towards the productivity. Most of definitions include efficiency, profitability, innovation, culture and so on....
In twentieth century productivity was discussed as the relationship between input and output. OECD defined productivity as ratio of output to factors of production. Generally, productivity measures the success of systems in using resources to achieve the goals.

Productivity views

3-1 economist's views
Economists know productivity as ratio of outputs to related inputs. Actually, productivity is conversion of inputs to outputs. Inputs include labor, energy, raw materials, stock, information, and purchased goods. Inputs and outputs should be expressed in terms of actual physical units.

3-2 accountant's views
Productivity approaches based on an accountant's viewpoint express financial performance by using financial ratios such as sales to human costs or profit to asset in order to produce a service or goods. Most of these attributes are focused on financial performance.

Number of indicators are created to provide a complete picture of organizational functions. Financial ratios based on sales, profit, assets, fixed assets, and etc. are applied to evaluate and compare the financial performance of organizations which put them between individuals and in different times.

Financial ratios including liquidity ratios, leverage ratios, attributes of performance and profitability. Liquidity ratios determine the power of short-term re-payment. Leverage ratios indicate the extent to which the organization's financial needs are self-funded. Activity ratios show the effectiveness of resources for current operations. Profitability ratios determine the overall productivity of management which includes profits from sales and investment. In the other hand, the profitability ratios show the effectiveness of management in India's office.

Industrial engineer's viewpoint
This view is based on the ratio of useful work (output) to energy consumption for doing jobs. For examples in a machine, the most ratio equals to one and commonly, is used to evaluate performance of human and machine.

Manager viewpoint
Management reflects the scope of philosophies, beliefs and responsibilities. Manager's task are planning, organizing, directing, controlling, and handling works to undertake and to encourage the labors. Their viewpoint on productivity depends on knowledge and skills, colleagues and subordinates and the condition in which they work is different and generally, the broadest perspective belongs to managers. In their viewpoint productivity include all aspects which are important in effective functioning of organizations. The approach includes efficiency, quality and relevant content.

Concept related to productivity

4-1 efficiency
Efficiency means knowing how to do the job and it will be improved when we produce more useful output towards per input. The fact is that efficiency is the attribute which compares aspects of performance with costs that are incurred for the performance.

4-2 effectiveness
Effectiveness means awareness of works that we do. In other word, means to do job in acceptable and proper purposes. Manufacturing activity may be effective but decrease in demand may leading to decrease in sales and profit and unlike high effectiveness the product will not work in the market. Effectiveness means directing resources towards the goals which are more valuable. For example focus on results, do the right thing at the right time and achieve long term and short term goals.

5-Difference between efficiency and effectiveness
As noted above, the efficiency is the ratio of outputs to inputs and effectiveness depends on output defined compared to standards and expectations. Effectiveness is a broader concept. Because it includes other factors such as standards, objective, expectations and success of organizations compared to stockholders. Effectiveness is comprehensible and acceptable. In effectiveness the identification and development of indicators should be possible.

6-Importance of productivity
At the national level, productivity is related with economic output. Productivity growth is an important factor in controlling inflation and other economic factors productivity is important in industry and organization. An organization will be more successful if it has more productivity growth than its own stockholders. Because increasing in production leads to decrease in costs and finally make the products more competitive.

Methods
7-factor analysis technique for assessing productivity
Factor analysis began when Harl Pearson, Charles Seaman and others tried to define intelligence. Because of this timely communication with combinations such as intelligence, factor analysis developed by scientists who were interested in mental measurement.

The main purpose of factor analysis is expressing covariance relationship among many variables based on random quantity which called factors. As an introduction factor pattern will be considered as following discussion. Suppose that we can classify the variables by their correlations.
This means all variables belong to specific group have more correlation with their own sample. It can be assumed that each group of variables indicate a combination which represent correlation, factor analysis can be considered as general from principal component. Both can be used to approximate the matrix of covariance. However, the approximation based on factor analysis is more subtle.

Prepare the scale through factor analysis
Factor analysis can be used to obtain a valid scale in order to filter and select key items after create a set of basic variable in factor analysis by rotating the variables, the final set can be construct to make scale.

Factor analysis indicate that variables gathered as cluster which have correlation with their own. This clusters like hidden variables are discussed. Question scale (measure) are also observable for each cluster. The variable which have no correlation with others should be removed because analyzed variables should have reasonable correlation.

Factor analysis
7-2-1 computing sample evaluation indicators
Since the extraction of factor are based on correlation between the variables, probably the factors have no logical and conceptual relevance. Thus ensure that analyzed variables have reasonable correlation between other variables otherwise the variable should be removed.

Before attempting to use factor analysis the significance of variables should be measured. One method of assessing the significance of variables computing sample evaluation indicators (KMO). If the value of this statistics is over 7/0 the correlation is convenient but if statistics is between 5/0 and 6/9 you should be careful and if is less than 5/0 the variable is not suitable for analyze.

7-2-2 extract components
The next step is to extract the component. For this aim the load factor should be calculated. The correlation between observed variable (measure) and each variable (hidden variable) called loading factor and its values are between -1 and +1. Variance indicated by each factor is sum of the squared loading factor which called eigenvalue. The first eigenvalue is always greater than one and is less for other next factors. Each variable to be in scale should have once non-zero factor or have variable with high correlation.

8-establishment of Deming cycle
Since the systems always have positive antropy (tendency to be disorder which due from process leads to reduce the adequacy of enforcement and the efficiency of tools and supplies), we need to add negative antropy to system by using Deming cycle and avoid disorder by innovation and applied dynamism. The foundation of Deming cycle is based on condition changes over time. In other word, the efficiency of organization will change over time.

Current state of the system is the level of production after analysis system is designed to improve system performance and then decision come into action. Conducting the decision the new different situation made and repeated again in the cycle.

Measuring and improving productivity
To produce indicators-priorities and chosen the subtle indicators by using factor analysis technique-measure the productivity-apply Deming cycle-steps to improve productivity.
The effective indicators in according to its definition is used as the quantity of homogeneous agent, and can show the direction and amount of desired quality during the time. Determine the importance of each attributes conducted by catching questionnaire from related expertise.

10-determining the productivity indicator

10-1- partial productivity
The attributes of partial productivity are obtained by dividing total output over inputs for examples:
Output/manpower, output/capital, output/material, output/energy

10-1-1- applications of partial productivity ratios
Determining of partial factors such as product type, quality, seasonal demand or output of particular unit which affect the total productivity.
Comparison of how each component such as quality indicator can related to each other and how each factor contributed to overall efficiency can be determined.
Comparison of independent production lines or units in factory, separate proportions which be made in different factories for similar production can compared with quality, customer, demand, cost, output of each product.
Surveying productivity change in a factor or when factors change with each other, for examples replacing persons who complete training courses with a beginner.

10-2- overall productivity
Overall productivity include partial factors. the efficiency of partial factors such as product, seasonal fluctuation or demand can be evaluated. When goods or services can be prepared on a rotating basic partial factor are compared based on determined standards. for example individual unit which produce different products can be noted. Different productivity ratios can help as a source of information to compare costs, benefits and sets of similar business activities and determine the rates of economic changes all and all indicators should tested practically.

11-determining indicators

11-1- choose indicators by using factor analysis
One of the most important functions of factor analysis is to reduce the number of productivity.
In fact, the intangible factors affect productivity by using factor analysis and measured and recognized productivity indicators.
The productivity is calculated based on indicators and results due to use of factor analysis.

12-applying Deming cycle
Deming cycle is use to improve level of productivity as follows:
*planning
*analysis of productivity
*enhancing the productivity
*guidelines set to improve efficiency
*implementation of guidelines (DO)
*monitoring (check)
*implement reform project
*determine optimal strategies to improve productivity
*the output of Deming cycle is partial and quantum solution for productivity
*in according, the series of reform activities are expressed in order to improve productions

***the findings
The sample of 40 potential indicators were selected by experts for this sample, a questionnaire with maximum indicators (5 points) and the lowest (1 point) designed and was conducted. questionnaire is given in appendix and results are as follow:
In this sample 22 indicators have 55 percentage points greater than or equal to average. And 18 indicators have 48 percentages less than average. SD for 40 indicators is 3/0.
To choose suitable indicators a set of indicators which have point greater than 5/3 was selected and embodied in the table for years 86 to 91.
In according to the impossibility of calculation the values of indicators the productivity indicators were removed and just 10 indicators were used.
In the factor analysis we have 2 major goals reducing the number of variables and factors which affect the issue. now we calculated the values of each factor by using Lisrel.
To facilitate the analysis of factors we can calculated based on factor which studied all the year.

Analysis findings
Analysis of results is conducted in order to improve performance after calculate values of factors. In the analysis the following assumptions is provided.
Factor 1 is sets of economic changes on the demand side in improving the productivity
Factor 2 is sets of rules regulations and legal context that affect productivity.
Factor 3 represents other unknown factors which affect the productivity.

13-conclusion
The suggestions can be provided in according to reform activities in order to improve productivity. this suggestions are due to law limitations. based on the key roles of manpower in improving of systems it is essential to focus on the legal regulation to increase the level of manpower.
Improving key performances and productivity define the government agencies as an continuous duty. And also regularity requirement and the need of such an organization are important in improving the productivity of government agencies. In the following specific areas of research, knowledge research was studied in a particular performance.

*the role and function of human in improving productivity of government agencies is high in documentation.
*use of IT tools to improve productivity of government agencies.

REFERENCES

A New Scheduling Model For Cross-Docking Regard to Uncertainty in Delivery Time and Goods ability

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Abstract—Simultaneous scheduling of goods cross-docking and transportation vehicles routing has been long under study. The present paper tries to introduce a new configuration in this area by adding some assumptions such as perishability principle and uncertainty in delivery time and limitations such as due date and minimum service level to the literature. Consideration of these assumptions and limitations will lead to a mixed integer scheduling model, in solution of which genetic algorithm will be used. Results approve the use of the mentioned algorithm in solution of the proposed model.

Keywords—Cross-docking; Transportation scheduling; Goods perishability; Uncertainty in delivery time; Minimum service level; Genetic algorithm

I. INTRODUCTION

Transportation equipment has been for long one of the most important properties of every business complex. Owners have always wondered how to make the best use of this equipment alongside with other factors and dimensions. As business improved, the need for simultaneous use of loading platforms, ergo transportation scheduling became more evident. Cross-docking is not just a virtual concept in theoretical studies, rather it is a concept practically used by private companies in transportation. Crossdocks are mostly used for fast transport of large loads of different types [3].

Vast practical and theoretical interest in the issue has led to formation of different outlooks to the problem from different dimensions, ergo different proposed solutions and methods [2]. These dimensions include: finding the proper location for lodge of crossdocks, design of the docks, forming and developing crossdock networks, transportation vehicles routing, allocation of platforms, and scheduling of trucks transportation, etc. Reference 6 is one of the earliest studies on vehicle routing. Based on a mixed integer scheduling model and using taboo search algorithm, the present paper tries to minimize transportation costs for non-split, non-interruptive deliveries at times of loading and unloading.

Issues such as receiving goods from the provider and their instant forward to the customer have also been investigated in the paper. The purpose is to minimize the total distance of transportation as related to the total time and based on assumptions such as non-split delivery, fixed and volume-dependent time of unloading, and presence of time windows. Optimization is sought through a mixed integer model using taboo search algorithm.

At one hand lays the issue of truck transportation in order to provide better spatial and temporal services to trucks. This issue is more complex for short-term operational cases [1]. It has been modeled as a workshop scheduling to minimize the maximum operation time. Based on possibility of parallel processing, Chen and Song were successful in developing the issue and presenting a mixed integer scheduling model, in solution of which they enjoyed different creative methods [2]. Introducing dispatching rules, Wang and Regan tried to solve the related issues based on 'the first to arrive, the first to enjoy services;' considering the arriving vehicles and special conditions such as special calculating methods in time of unloading, they tried to present a new configuration which finally led to the claim of saving time [4].

On the other hand, little attention has been paid to goods perishability in crossdocks; this could be due to [5] the fact that by studying the less-than-normal resistant goods, it has
been concluded that crossdock scheduling can be extremely complicated in some cases. As observed in review of the literature, very little attention has been granted to goods perishability in studies of crossdock scheduling. Furthermore, most studies have neglected uncertainty and have simply based their assumptions on absolute certainty. The other neglected concept here is minimum service level in presence of time windows; i.e. a customers' lowest level of expectation should be met before goods perish away. The present paper tries to take into account all these neglected concepts.

Section 2, below, deals with the problem's main configuration, major assumptions, as well as mixed integer model. Proposed algorithms will then be introduced and evaluated in section 3. The 4th section, finally, discusses the obtained results and adds some suggestions for further studies.

### 2. Problem Modeling

Before presenting the model, it is good to have a look at the following configuration.

As mentioned in review of the literature, there are some neglected concepts in previous studies which we are going to take into account here; they include:

- There is only one type of goods here, whose expiration date is previously known. Some part of goods' life, however, may have been passed after they entered into the crossdock.
- The number of entering loads is known but their time of entry is unknown; they are of uniform distribution.
- The number of outgoing vehicles is assumed to be infinite; i.e. outgoing vehicles' capacity is much more than entering load volume. All vehicles share the same capacity.
- The number of customer-demanded loads is known. Due date is also known and fixed.
- Each vehicle unloading loads cannot leave the platform until it has finished unloading.
- Entering loads are assumed to have the same volume; there is no possibility of either splitting or interruptions.

Modeling indices, modeling parameters, and modeling variables are respectively summarized in tables 1, 2, and 3.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>$i$</td>
<td>Entering load</td>
</tr>
<tr>
<td>$j$</td>
<td>Crossdock platform</td>
</tr>
<tr>
<td>$k$</td>
<td>Customer</td>
</tr>
<tr>
<td>$v$</td>
<td>Vehicle</td>
</tr>
<tr>
<td>$t$</td>
<td>Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>$i_{arr}$</td>
<td>Arrival time of load $i$</td>
</tr>
<tr>
<td>$order_k$</td>
<td>${o_{k,1}, \ldots, o_{k,m_o}}$ Set of customer $k$'s succession and volume of orders</td>
</tr>
<tr>
<td>$DueDate_k$</td>
<td>${dl_{k,1}, \ldots, dl_{k,m_d}}$ Due date in accordance with orders' succession</td>
</tr>
<tr>
<td>$trantime_k$</td>
<td>Transportation time of goods till they reach customer $k$</td>
</tr>
<tr>
<td>$cap$</td>
<td>Vehicle's capacity</td>
</tr>
<tr>
<td>$M$</td>
<td>A sufficiently large number</td>
</tr>
<tr>
<td>$pl$</td>
<td>Product life</td>
</tr>
<tr>
<td>$sl_k$</td>
<td>Minimum service level as expected by customer $k$</td>
</tr>
</tbody>
</table>
Table 3: Modeling Variables

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>$Lo_{k,j,o_k,b}$</td>
<td>Customer k's ordered load being unloaded from vehicle v at platform j at time t</td>
</tr>
<tr>
<td>$send_{k,j,o_k,b}$</td>
<td>Amount of goods sent to customer k by vehicle v at time t</td>
</tr>
<tr>
<td>$met_{k,j,o_k,b}$</td>
<td>Met orders of O_k at time t for customer k</td>
</tr>
<tr>
<td>$isd_{k,j,o_k,b}$</td>
<td>A 0/1 variable which shows whether the due date has been passed or not</td>
</tr>
<tr>
<td>isa_{k,v,t}</td>
<td>The k goods loaded on vehicle v at time t</td>
</tr>
<tr>
<td>ye_{k,j}</td>
<td>In case vehicle v drives to customer k at time t</td>
</tr>
</tbody>
</table>

The final model will be as follows:

$$MinZ = \sum_{k} \sum_{j} \sum_{o_k,b} transtime_{k,j}ye_{k,j}$$

(1)  $\sum_{t} met_{k,j,o_k,b} \geq sl_{k} \sum_{o_k,b} o_{k,b}$ \quad \forall k

(2)  $isa_{k,v,t} < \left[ (M(1-ye_{k,j})+cap)/M \right]cap$ \quad \forall k,v,t

(3)  $isa_{k,v,t} \geq \left[ (-Mye_{k,j}+cap)/M \right]cap$ \quad \forall k,v,t

(4)  $\sum_{i} \sum_{t} send_{k,j,o_k,b} \leq 1$ \quad \forall v

(5)  $dd_{k,n} \geq t - pl - isd_{k,j,o_k,b} M$ \quad \forall k,n,o_{k,b}

(6)  $dd_{k,n} < t + pl + (1 - isd_{k,j,o_k,b}) M$ \quad \forall k,n,o_{k,b}

(7)  $send_{k,j,o_k,b} = \sum_{r < t} (isa_{k,j,t} ye_{k,j,t} - \sum_{b < o_k} send_{k,j,o_k,b})i$ \quad \forall k,v,t,o_{k,b}

3. Solution

As seen, the proposed model is a non-linear mixed integer scheduling model, which is among the most complex problems in operational studies. Therefore, by using genetic algorithm, which is one of the well-known algorithms in
combinational optimization, we have tried to provide an evaluation of the model as well. In the following, first comes the configuration of the model; then an evaluation of its performance is produced.

- **Generation of the initial population:** Generation of the initial population of the algorithm has been carried out based on random generation of chromosomes. Each generated chromosome is checked in terms of possibility; if it is not possible, another response is then achieved. Avoiding repeated responses has been considered here.

- **Mating:** Here, two chromosomes are selected based on the value of their function; then they exchange genes through either single-point or two-point fracture operation. The obtained children are then examined; in the case they are not possible, the operation is repeated until proper children are achieved.

- **Mutation:** Single-point change and two-point movement are used in order to create a sudden change and avoid being trapped in local optimization. The process starts with production of a random number; then it goes through one of the two operators and continues with examination of possibility.

- **Elitism:** In accordance with previous repeats, each better value from previous repeats can enter the new period without any change. It should be noted that probability of mating, mutation, and elitism are respectively assumed to be 80, 15, and 5 percent based on range parameter.

- **Stopping condition:** Since uncertainty in arrival time was one of the most important assumptions in the present paper, it is sought to evaluate decreased values of obtained responses variances that if the value was less than a specific number, it could be stopped. Stopping threshold is considered to be 0.1. The following graph shows the convergence of variance to a value less than 0.1 as the amount of repeats increases.

Graph 1: Decreasing value of genetic algorithm response variance as repetitions go higher and higher

4. **Conclusion and Further Suggestions**

As mentioned earlier, a scientific approach to crossdock scheduling is of great importance, and various related hypotheses have been investigated so far. Considering the former concepts, the present paper adds some more considerations such as perishability, service leveling, and uncertainty in delivery time, and tries to have a more holistic approach to the issue. Also, a non-linear mixed integer scheduling model is proposed through use of which, besides use of genetic algorithm, the problem of the current paper is solved. It is suggested that uncertainty and some other concepts such as different capacities and costs of different vehicles, vehicles' return trips, interruption and split possibility, as well as customer persuasion through compromising in case of delays be considered in future studies so that the issue is developed more interestingly. Furthermore, exact hyper-innovative methods are welcomed in future studies, which can be evaluated as rivals of the current method as well.

**REFERENCES**


[6]. Wang JF, Regan A. Real-time trailer scheduling for

The relationship between the characteristics of buyers and choice of color mobile phones in Rasht city

Mohsen Bolandraftar¹, Reza Aghajan Nashtaei², and Ebrahim Chirani³

Abstract—In today's competitive market, the main issue for marketers is how to influence buying decisions to get good response for their efforts of consumers, the color can be applied for attracting Concentration, arousal and desire since it is highly related to object identity and important tool to shape the client's feeling and his reaction and marketers should take in mind different aspects of characteristics of a consumer to understand his goals and plans. In this study the relation between characteristics of consumer as an independent parameter and how to decide regarding selection of color of cell phones in Rasht city as a dependent factor has been investigated using Pearson chi-square and finally with confirming the hypotheses of this study, findings showed that in decisions of buyers there is a significant relationship between buyers features including personality factors (assertiveness, self-regard, independence, reality testing, flexibility and optimism), gender, marital status, age, income and education, with a choice of color mobile phones.

Keywords—buyer, color, personality, selection.

I. INTRODUCTION

In today's competitive markets, consumers have a very wide range of products to choose from [1]. The customer is regarded as the central element of all activities and from a competitive standpoint, organization's survival depends on detection and attracting new customers in addition to retaining existing customers [2]. In fact, marketing management is a science and art of selection of target [3]. The growing trend of products and competitors indicate that there is not a shortage of goods, but in fact it is the Customer deficiency [4]. Manufacturers realize the aspects that is more important from the view of customer to achieve greater success [5]. Customer preferences for products associated with his aim and behavior, if these settings were depends on attitude of customer, the product appearance could not be ignored since it has considerable influences on customer buying decision [6]. Although the products are to designed only to meet the functional requirements, but the key element in marketing is that it should be attractive as well [7]. Many factor that makes consumer to select a product from an array of products when faced with and upon decision, emotions overcome logic and drive buyers towards the attractive and beautiful products. Even if product is not functionally strong or is more expensive than other products [8]. Marketers must identify controllable features of product that are interesting to consumers to optimize the product and production goals [9].

II. PROBLEM DEFINITION AND IMPORTANCE

Humans consumption is based on a particular discipline in various aspects of life [10] and Marketing Management explores the everyday lives of shoppers and consumers to exercise their destination addresses [11]. Identifying patterns of consumer behavior is one of the key factors that can play a significant role in choosing the trading strategy [12] and the main issue for marketers is how to influence buying decisions, how to get good response for their efforts for the consumer [13]. Color can be employed to create focus, motivation and desire [14].

Use of colors not only can make the product different from competitors ones but also can influence feelings and emotions negatively or positively and shape consumer attitude regarding some products. This requires managers to understand the importance of color in marketing [15].

A successful marketing begins with understanding why and how consumers behave [16]. Expansive patterns of thinking...
in marketing is drawn from the field of business conduct to a wide range of normal human behavior [17] and buyer behavior involves an interaction between thought, emotion, behavior and environment [18].

Aesthetic encountering of clients with the goods should be able to satisfy a customer alone and may include the group of customers and nowhere is this as apparent as color [19]. Marketers should take into consideration the color of their products and any color which is relevance to products in marketing. These factors are under the control of marketer [20]. For this reason, managers when faced with making decisions on marketing activities, marketing ideas are welcome. Important decisions such as what products and what features should appear in the design and production [21].

In terms of conceptual and practical, color and appearance are very striking feature of all products [22], because they are strongly associated with object identity as well as an important tool for shaping the client's feelings and reactions [23].

To identify the effect of color on consumer behavior is particularly important because the clients mind is affected by colors [24]. In fact, the options for the product, at least in performance and price are the same, consumers prefer their beauty [25]. Experience has proven that most men need to change things around because think that is felt towards a new color spiritually [26]. The importance of color is to the extent that even the buyer may choose a product only based on color or unsuitable color selection may cause no device even efficient sell [27].

On the other hand, each country has its own preferences in color and function since the color is the most important visually factor in consumer sight [28]. Experience shows that company's sales figures can vary just based on interest, disgust or indifference in the color [29]. On this basis, studying tastes, needs, desires and attitudes of individuals to find their own particular color is necessary [8].

Consumer behavior patterns is obvious in many products or it is needed to be considered [30]. consumer with a combination of science and emotion in a general evaluation of a product resulted that he dislike it, so don't select and This is a behavioral process [18].

III. RESEARCH BACKGROUND

In a case study by Khodadadi and Rostamkhani [8] for the purpose of identifying tastes and interests of Iranian youths about colors it is presented that applicants are sensitive to color and it’s effects. Their tastes are more towards the warm range and red and pink has a sense of excitement in them. Arefi and Nekooyi [31] also determined that color and shape of the packing is practically related to perceptions about the identity. Raissi et al [32] investigated comparison between ratio of automobile production with different colors in USA and production of Iran Khodro company and it was showed that dark beige, brick, metallic, metallic light brown, brown, metallic laser are similar in two studies, however, the use of silver and gray colors is large in families and tend to colors such as red, blue and black is low.

While the silver color is on top of colors requirement is in both countries. In other research, the study of net shopping behavior, personality characteristics were studied through information sources and the results indicated that the security features for all online shoppers had the higher amount of average (groups of personality and demographic) [33]. In the other study, the analysis shows that companies can exit customers outside the state of being unhappy simply by offering features such as color and desired taste of product [4].

In a research which is done with the goal of determining the effects of demographic and physical factors on goods purchasing behavior of consumers in the mobile market in the Middle East, it is revealed that age, gender, family size, marital status, financial resources, education purchase behavior of customers are ineffective. However, income customers, value, performance, purchase volume and variety of product benefits influences consumers' purchasing behavior [34]. During study of color importance among the youths of different ethnicity in the United States of America also became clear that although the color importance is far more in girls than boys, but the importance of color is reduced with increasing the age and in general the color for people aged 15 to 24 years, regardless of gender, population and socio-economic background is important, but its significance have different preferences in terms of gender and different ages and can be changed depending on the type of product that [35].

IV. OBJECTIVES AND RESEARCH QUESTIONS:

We introduce people as shy, self-confident, flexible, seeking to dominate and have the impression that they are influenced by specific features [16]. Many schools which study human behavior in this case have agreed that the basis of human personality can be studied in the form of limited terms of character or traits [36]. Similarly, Kotler and Keller [13], based on Maslow’s theory believe that if marketers would like to understand the plans, objectives of customers, they have to consider different aspects of features of a buyer, including cultural, social and personal characteristics. In this study, the relationship between personal characteristics, including personality factors (assertiveness, self-regard, independence, reality testing, flexibility and optimism), marital status, gender, age, income and education of buyers.
were examined as independent variables. On the other hand, the color values in the society is one of the problems that in practice denied the necessary authority and powers of [14]. Names that have been chosen for the color based on social culture of each nation [37]. Were placed in two categories of main colors such as green, red, yellow and blue color and secondary colors such as sub purple, brown, gray and black in the end. Thus, the most comprehensive range of color classification based on psychological principles (not design) by professor luscher [38] the most famous researcher in the psychology of colors was examined for color choice as the dependent variable.

Accordingly, this study will attempt to determine the relationship between the characteristics of buyers, kind of choice of buyers and colors for mobile phone with a plan to explore the following questions:

1. Is there any relationship between personalities of buyer and choose of color of the cell phones?
2. Is there any relationship between sexes of buyer and choose of color of the cell phones?
3. Is there any relationship between marital statuses of buyer and choose of color of the cell phones?
4. Is there any relationship between ages of buyer and choose of color of the cell phones?
5. Is there any relationship between educations of buyer and choose of color of the cell phones?
6. Is there any relationship between incomes of buyer and choose of color of the cell phones?

And so the main research question is are there any relationship between characteristics of buyer and choose of color of the cell phones?

V. THE RESEARCH METHOD

The research method used in this research project is descriptive survey and target application. Since the study was a descriptive survey, like many similar descriptive studies questionnaire was used to collect information and to test the hypotheses. The study sample are all eighteen citizens and older in Rasht. Given the demographics of the city of Rasht in 2006 of 557,366 people [39], the study sample is less than this amount and the number of people in 2013 was estimated more than 100,000, therefore, to determine the sample size of the study sample, according to Morgan [40], 384 =n the sample size has been determined. According to the five areas of the city of Rasht, a total of 80 questionnaires distributed randomly among buyers of stores in each region and a total of 400 questionnaires were distributed which the 384 questionnaires were used accurate and complete. Thus, the sampling of this study is cluster sampling. The questionnaire was adjusted in two different parts, the first section was related to features of buyers and a second section based on choice of colors of cell phone.

For increased reliability (validity) of questionnaires professors and experts were used and to assess the reliability of the questionnaire, the Cronbach's alpha on the basis of SPSS software was conducted, and the number of 0.891 is achieved which indicates that the questionnaire is reliable.

VI. FINDINGS

Acceptance or rejection of hypotheses to the research findings are shown in the tables has been drawn and results are as follows:

Table 1: Pearson's chi-square test to examine the relationship between the personality of buyer and selecting handsets.

<table>
<thead>
<tr>
<th>variable</th>
<th>Level</th>
<th>green</th>
<th>blue</th>
<th>red</th>
<th>yellow</th>
<th>purple</th>
<th>brown</th>
<th>gray</th>
<th>black</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>personality</td>
<td>Have Lower level features</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>74</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>High Lower level features</td>
<td>14</td>
<td>41</td>
<td>113</td>
<td>43</td>
<td>34</td>
<td>11</td>
<td>26</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

It is seen in the inferential statistical analysis based on Table1, that sig= 0.000< 0.05 confirming the accuracy of the test and the result is that there is a relationship between the personality of buyer and the selection of color of cell phone.

Table 2: Pearson's chi-square test to examine the relationship between the gender of buyer and selecting handsets.

<table>
<thead>
<tr>
<th>variable</th>
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<th>brown</th>
<th>gray</th>
<th>black</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>gender</td>
<td>Male</td>
<td>5</td>
<td>17</td>
<td>37</td>
<td>3</td>
<td>13</td>
<td>11</td>
<td>33</td>
<td>72</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>4</td>
<td>14</td>
<td>79</td>
<td>37</td>
<td>30</td>
<td>2</td>
<td>11</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

105
As it is shown in table 2, P=0.000 is less than the error level of 0.05 and so there exist a relationship between the gender of buyer and the selection of color of cell phone.

Table 3: Pearson’s chi-square test to examine the relationship between the marital status of buyer and selecting handsets.

<table>
<thead>
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<th>variable</th>
<th>Level</th>
<th>green</th>
<th>blue</th>
<th>red</th>
<th>yellow</th>
<th>purple</th>
<th>brown</th>
<th>gray</th>
<th>black</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td>single</td>
<td>4</td>
<td>22</td>
<td>68</td>
<td>28</td>
<td>25</td>
<td>7</td>
<td>21</td>
<td>60</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>married</td>
<td>5</td>
<td>9</td>
<td>48</td>
<td>12</td>
<td>18</td>
<td>6</td>
<td>23</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

As it is presented in table 3, P=0.000 is less than the error level of 0.05 meaning that there exist a relationship between the marital status of buyer and the selection of color of cell phone.

Table 4: Pearson’s chi-square test to examine the relationship between the age of buyer and selecting handsets.

<table>
<thead>
<tr>
<th>variable</th>
<th>Level</th>
<th>green</th>
<th>blue</th>
<th>red</th>
<th>yellow</th>
<th>purple</th>
<th>brown</th>
<th>gray</th>
<th>black</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>18-25 years old</td>
<td>3</td>
<td>21</td>
<td>62</td>
<td>35</td>
<td>18</td>
<td>5</td>
<td>14</td>
<td>52</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>25-40 years old</td>
<td>5</td>
<td>7</td>
<td>52</td>
<td>5</td>
<td>24</td>
<td>7</td>
<td>20</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Over 40 Years old</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

As it is depicted in table 4, P=0.000 is less than the error level of 0.05 and so there is a relationship between the age of buyer and the selection of color of cell phone.

Table 5: Pearson’s chi-square test to examine the relationship between the education of buyer and selecting handsets.

<table>
<thead>
<tr>
<th>variable</th>
<th>Level</th>
<th>green</th>
<th>blue</th>
<th>red</th>
<th>yellow</th>
<th>purple</th>
<th>brown</th>
<th>gray</th>
<th>black</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>diploma &amp; high school</td>
<td>4</td>
<td>12</td>
<td>43</td>
<td>13</td>
<td>8</td>
<td>2</td>
<td>9</td>
<td>48</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>post secondary &amp; bachelor</td>
<td>5</td>
<td>19</td>
<td>72</td>
<td>26</td>
<td>35</td>
<td>11</td>
<td>23</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M.A &amp; higher education</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

As it is presented in table 5, P=0.000 is less than the error level of 0.05 and hence there exist a relationship between the education of buyer and the selection of color of cell phone.

Table 6: Pearson’s chi-square test to examine the relationship between the income of buyer and selecting handsets.

<table>
<thead>
<tr>
<th>variable</th>
<th>Level</th>
<th>green</th>
<th>blue</th>
<th>red</th>
<th>yellow</th>
<th>purple</th>
<th>brown</th>
<th>gray</th>
<th>black</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>income</td>
<td>less than 300000 toman per month</td>
<td>6</td>
<td>23</td>
<td>88</td>
<td>31</td>
<td>26</td>
<td>4</td>
<td>13</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>between 300-700 thousand Toman per month</td>
<td>2</td>
<td>3</td>
<td>13</td>
<td>5</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>17</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>700000-1000000 toman Per month</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than 1000000 toman per Month</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>6</td>
<td>3</td>
<td>19</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

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In Table 6, The amount of color choices in groups of various income level marked and noted that the P = 0.000 is less than error level of 0.05, therefore the null hypothesis that there is no relationship between income and the choice of colors was rejected and the opposite hypothesis is approved. There is a relationship between the income of the buyer and choice of color of cell phone.

VII. DISCUSSION AND CONCLUSION

he findings, according to study results collectively indicate that in the decision of the purchaser, the purchaser characteristics including personality factors (assertiveness, self-regard, independence, reality testing, flexibility and optimism), gender, marital status age, income and education level and color choices of mobile phones have a meaningful relationship.

The detail also shows that in different components of personality, people with high levels of personality and who are more than average in traits in this study, share a similar pattern of choice of colors of mobile phone while people with low levels of these components are different. Accordingly, if we consider these features as an effective character on a buyer's decision, and high-level of these features in decision-making we have to consider for this category of buyers, among each set of traits and characteristics red is suggested that additional factors such as aesthetics and color quality are also considered.

On the other hand, for others owing to the more environmental impact of confounding factors offering the color black as the greatest amount of interest and selection in this study can be useful. For example in higher levels of income according to the interest of buyers in the research the gray color is chose for higher prices phones with attention to the quality of abilities and other features of mobile phones and those easily prepared by the lower income groups, while, the red color is used for low-income levels as phone appearance. You can also share the desired color for the buyers choose the black color, although the first and second priority at all income levels, especially in the middle of them, this color is advised by target markets for a moderate level of income or levels of wider range of income.

REFERENCES


ISSN (Online): 2305-0225
Issue 12(S), June 2014, pp. 103-108

Appearance in Consumer Choice”, J PROD Product Development &


[27] S. Mosaddad, "The importance of the key principles of color selection of
products", International Journal of Engineering Science and Technology,

Kajiwara, S. and Ohsawa, “A comparative study of the emotional
assessment of automotive exterior colors in Asia”, Progress in Organic
Coatings, 72, 2011, pp. 528–540.

[29] M. Bolourian, "The role of packaging in driving sales", Business Survey
magazine, 96, 1994, pp.28-42.

Ethnocentrism as Major Dimensions in Consumer Purchasing Behavior
in Fashion Industry”, European Journal of Economics, Finance and

[31] A. Arefi, and M. Nekouee, "The Impact of Packaging on Food Image


[33] A. Babaei, and P. Ahadi, "Exploring the relationship between
personality characteristics and buying behavior of Internet users in Iran",

[34] V. Sharafian, M. Yazdani, and H. Asghari, "The Investigation of the
Effects of Demographic Factors and Physical Characteristics of Goods
on the Behavior of Purchase in Cell Phone Market in Middle East",
Journal of Basic and Applied Scientific Research, 2(7), 2012, pp. 6352-
6357.

choice among young aahispanic, Caucasian and African-american
groups in the USA", International Journal of Business and Social
Science, 3(6), 2012, pp. 1-6.


Abstract— Social capital is one of important organizational capabilities and assets that can help organizations to create and develop the human capital. Experimental evidences in knowledge-based societies clearly reveal the importance of knowledge creation process in relation to social capital in organizations. Social capital is a new concept that is posed in economic reviews in modern societies. In the absence of social capital, other capitals lose their effectiveness and make it difficult to pave cultural and economic development path. Introduce this approach on many economic issues is representative importance of structures role and social relations on economic variables. This approach in economic discussions shows the importance of structures and social relations on economic variables.

Social capital is essentially a collection of networks, norms and cognitions (understanding) that facilitates cooperation within groups and between groups in order to achieve mutual interests. Social capital is primarily based on cultural and social factors and identifying it as an investment in macro management level in developing countries and companies and firms can create a new understanding of social-economic systems and help managers in better guidance of systems. In fact, addressing this matter as a potential can have an effective role in economic progress and development of a country. Therefore, we have tried to present concepts and issues of social capital and entrepreneurship and its functional role in economic development; then we state the relationship between social capital and entrepreneurship by offering a pooled model.

Keywords— Social capital, business, economic development, sustainable entrepreneurship.

I. INTRODUCTION

In today's world of speed and inflammation, organizations give more value to entrepreneurship and entrepreneurs and even spend the large sums of money to detect and identify entrepreneurs and develop entrepreneurship among its employees. Recently, social capital has risen as non-tangible asset and the success and development factor of organizations.

Nowadays, we need more social capital than economic-physical-human capital for development. People who create social capital and use it have higher power and influence and obtain more successes and are more likely to become entrepreneurs.

Accordingly, regarding promotion of social capital in the organization's individuals as a motivating factor and the development of entrepreneurship and movement of people toward becoming entrepreneur is of interest in present article and a conceptual model is presented to explain it.

To insert images in Word, position the cursor at the Meaning of social capital that has recently entered in the literature of the social sciences, including economics, management, sociology and etc is complex, multifaceted and interdisciplinary concept that despite the novelty and complexity, have attracted the attention of many experts in the field and has greatly reduced ambiguities and shortcomings of theoretical economic-social arguments -[ 2 ]. Stating this approach in most of economic, social and cultural topics is an economic, social representative. Today, social capital plays more important role than physical and human capital in societies and organizations and social networks consistency relations among people and organizations [39]. Social capital was raised for the first time, before 1916, in an article by Haney Fan of West Virginia University, but despite its importance in social research until 1960 it use by Jane Jacob’s in urban planning was neglected. In the 1970s, this theory was introduced in economy by Laurie. Social capital is an interdisciplinary concept that is used in sociology, economics, psychology and other social spheres [8].

In recent years, using the term social capital [1] by Putnam and others [2] is common and it has been analyzed by other researches to understand the impact of social capital on the
development, management and delivery of services in various communities. Its influence on the values, culture and religion has been studied in the form of the social capital. People have an important role as social entrepreneurs in creating social capital. In recent years, the role of social entrepreneurs in the social capital literature has not seriously analyzed. This paper examines the gap between social entrepreneurship and social capital [30].

II. SOCIAL CAPITALS

Social capital refers to the correlation between individuals and it is a concept that has presented since the early 1920s and because it essentially has numerous definitions that have been presented by various thinkers and writers. Among these, we may mention some important thinkers such as Jacob (1961), Coleman (1998), Bourdieu (1986), Putnam (1995), Cox (1995) and Porter (1998), Fukuyama (1999) etc. but if we want to create a reconciliation between the different definitions of the foregoing people with a bit of modification, social capital can be defined as follows: “it is a collection of networks, norms and knowledge (understanding) that facilitate cooperation within groups and between groups in order to achieve mutual benefits”.

Maybe it isn’t unpleasant here to present the definition of World Bank for social capital in this brief to get a summary of the concept of social capital and finally being able to reach a conclusion for concept of social capital. The World Bank defines social capital as follows: “Organizations, relationships and norms that shape the quality and quantity of social relationships in a society”.

Overall, we found three levels of social capital that are social capital in informal institutions, horizontal local organizations (including hierarchical organizations) and formal institutions and macro structures.

As you know, there is no social capital as physical capital, unlike other capital, but it has been carrier of interactions and social and group norms and on the other hand, its increase can lower the level of management costs of society and operating and trading costs of economic units. Social capital is primarily associated with two key concepts and it is so fundamental.

One of the concepts for explaining the social capital is “trust network”. Trust network is a group that uses same information, norms and values in their mutual exchanges based on mutual trust. Fokoyama (1997) is believed that we must have enough information about the networks of trust in the system and related properties before entering the commercial, economic and social systems. Therefore, trust is considered as the foundation of any social and economic exchanges [21].

III. SOCIAL CAPITALS AS A KEY FACTOR IN ECONOMIC AND SOCIAL ENVIRONMENT

In recent years, the concept of social capital has been developed in the fields of social sciences, economics and recently in political science. They focus on social capital, especially in the economic field, mainly based on the role that this concept plays in creating and increasing human, economic and environmental capital [4]. Dominant trend of social capital in economic development focuses on the limitations of influencing economic approach in order to achieve sustainable development goals.

Social capital is a new concept that has presented in economic studies of modern societies [5]. Providing this approach on many economic issues indicates the importance of structures and social relations’ roles on variables economic. Social capital is primarily based on cultural and social factors and identifies it as an investment in macroeconomic management level and development countries and in management of companies’ level that can create new understanding of socioeconomic systems and improve efficiency of policies and decisions in large areas of society.

Nowadays, another social capital has been operated besides human, financial and economic capital [7]. This concept refers to links, the communication between members of the network as a valuable source of reference that lead to achieving the goals of the members with creating norms and mutual trust. Social capital that has sociological background is presented as a successful instrument that people have accepted them. Social capital is considered as a suitable basis for human and physical capital productivity and a way to obtain success [13]. Managers and those who can build social capital in the organization paved their career and organizational success way. On the other hand social capital gives meaning to life and makes it easier and more enjoyable [10].

Today, social capital plays a very important role in physical and human capital in organizations and communities and collective and group relations networks which creates coherence between human beings, organizations and human beings and organizations with organizations. In the absence of social capital, other investments lose their effective ness and it is difficult to pass cultural and economic development ways [16]. In traditional approaches for development management, economic-physical capital and human resources played the most important role. But in the present era, we need "social capital" more than economic-physical human capital for further development, because other capitals are not efficiently applied in society that has not enough social capital without
this capital. Other investments are wasted and remain incomplete. Hence, social capital is considered as a guiding principle to achieve development and those managers are considered successful who can achieve more production and development of social capital in relation to community [22]. Research on training and development as investments in human capital was conducted by economic researchers in the late fifties and early sixties. However, basic definitions of the human capital theory research working on knowledge base focuses on formal education, but correlation level of education with productivity and economic growth showed that more studies with work experience ultimately leads to improved productivity[33].

Recently, social capital theory of sociology as a potential influence was derived on organizational performance. Social capital can be considered as resources in social networks that are used by people; an investment by individuals in useful interpersonal relationships in markets [19]. Kelman (1990) acknowledges that social relationships are predictable relationships in social capital that can produce value. Unlike human capital and traditional assets, social capital is exclusively the result of significant social relationships that people invest on it over time [36]. One of the effects of social capital is increasing productivity of labor organizations. Social capital is an important source of productivity in business organizations. It is necessary for workers and specialist to do other services and recommendations beyond company’s hierarchical structure.

Although hierarchies are powerful tools for other employment, but two features potentially will render their operation ineffective: first, no matter how bosses are powerful and how organization is hierarchical, subordinates may affect on final outcome of the delay in orders and deal with some decisions with opportunistic behavior somewhat. Second, as the nature of the jobs is completed during time, teamwork is essential. Exclusive reliance on command and control structure or standard operating procedures doesn’t guarantee success [27].

IV. INITIAL APPROACHES TO SOCIAL CAPITAL

We can bring four basic arguments about whether social capital is a form of capital.

First, social capital like other forms of capital is a resource with investment possibility and associated return and uncertainty. Investment in building networks of extra relation enables actors to achieve data and power, and development of internal networks by actors provides possibilities of strengthening collective identity and collaborative work. In other words, we can’t always mention the social capital as an uncontrorollable and exogenous asset.

Second, social capital is versatile and converted like other forms of capital. Actor’s friendship networks can be applied for various goals and it can help to production like physical capital.

Also, benefits that individuals get in their position are convertible to other types of capital especially, to economic capital. Therefore, trust and reputation are sometimes considered as a substitute for economic capital [11]. Boride argues that turning capital to other strategies is influenced by changes in the structure of the profit opportunities that each offers. The third reason refers to replacing or supplementing social capital to other forms of capital. Economic factors can sometimes compensate lack of economic or human capital with strong social ties [3]. Fourth, social capital also needs protection and maintenance cost like physical and human capital and it should be periodically rebuilt and strengthened. Although this capital hasn’t got predictable depreciation rate such as human capital. In other words, social capital also may be the depreciation with failure in using it such as knowledge, skill or some public goods [11].

According to the World Bank (Klykzbris, 2000), we can separate the different types of intellectual capital:

- Natural capital: This type of capital is composed of the natural resources that a country is responsible for its property.
- Physical capital: The kind of capital that is created by human and consists of Venture capital, financial capital, technology capital, equipment and what is related to the ultrastructure.
- Human capital: This type of investment is defined by health and knowledge level of population of a country.
- Social capital: This form of capital is a new concept that comes from the relationships between multiple factors in economy.

From an economic perspective, we can consider social capital as one of the assets of each organization or community. Types of capital and the interactions between them are depicted in Figure 1. In particular, social capital is a cross-disciplinary concept that has recently attracted the attention of many humanities. This concept is indeed an important bridge between economics, sociology and political science that study social values, especially outreach to achieve common goals at the macro level [15]. Social capital in the sense of solidarity among people is a concept that has emerged from early 1922, and because it isn’t any longevity concept, essentially have numerous definitions that have been defined by various thinkers and writers. We can refer to some scientists like Jacob (1961), Coleman (1998), Boride (1986), Putnam (1995) and Cox (1995), Porter (1998), Fukuyama (1999).
Economist Glenn Lowry used social capital term in the 1970s to describe the problem of economic development within the city. In 1980, this term was welcomed by sociologist James Coleman in the widest sense. And Robert Putnam, political scientist, was the second person who used a strong and passionate debate about social capital and civil society in Italy also, in United States [14]. A common definition of social capital in progress of American sociology-in particular, in its objective function form is bilateral relation, interactions and networks that are emerging among human groups and the level of trust that is found among certain groups and communities, as a result of commitments and associated norms with social structure. In contrast, European Sociological use of this concept for research issue that how mobility links related to social networks, reinforce social hierarchies and differentiated power of finding [18].

V. THE IMPORTANCE OF SOCIAL ENTREPRENEURSHIP IN DEVELOPMENT

Attentions to role of social entrepreneurship in development grow increasingly after Mohammad Yones, founder of Griman Bank, was awarded the Nobel Prize in 2006. However, in current academic literature, there isn’t lot of connections between social entrepreneurship and economic development policies. There is a question that what is the importance of social entrepreneurship in economic development and what value is created through social entrepreneurship?

Lid Bitter researched some articles in OECD organizations and the World Bank to answer these questions during a study about the issue as well as checked similar activities of authors such as Bernstein, Schumpeter etc. Results indicate that social entrepreneurship has increasing importance in economic and social development because it creates social and economic value.

A. Economic Development

Employment is obvious and yet retains the main economic value that is created by social entrepreneur. Estimates suggest that only 1 to 7 percent of the people are employed in the sector of social entrepreneurship. Second, community organizations provide job opportunities and job training for those social groups who have no employment benefits, some groups such as the unemployed, the disabled, the homeless, at-risk youth and women who suffer from sexual discrimination can be cited as examples. For example, in Griman Bank, economic position of 6 million women entrepreneur’s improved significantly.

B. Innovation / New Products and Services

Community organizations create new goods and services by develop and implement innovation. For example, they deal with some of the biggest social problems such as AIDS, mental illness, crime and drug use by using innovative methods. Ms. Veronica Xhosa from Brazil is one example of using this creative approach at public and large level. She applied home care model for the treatment of AIDS patients that affect government health policies later.

C. Social Capital

Social capital is one of the most important values that are being created by social entrepreneurs, in addition to economic capital which is usually referred to resources that have reciprocal relationships and network based in connection with sustainable property network. Economic success of Germany and Japan that is rooted in long-term relationships and alliances nature is exemplary of two aspects of innovation and industrial development. However, the World Bank also emphasizes the importance of social capital in poverty reduction and human and economic sustainable development. Investment in social development can be illustrated by the following cycle 2:
D. Developing justice and equality

Social entrepreneurship in development of justice focuses on social issues and pursues their social missions instead of focusing solely on maximal profit. For example, Griman Bank supported destitute women or administration entrepreneurs in America helped thousands of low-income of high school students to continue their education. In general, social entrepreneurship and social organizations should be viewed as a positive force and an agent of change that are seeking answers to not satisfy social needs. Social entrepreneurs should not be considered a panacea since it is a major component of the economic and social structure. Theorists and policymakers’ serious attention need to this issue is more important, social entrepreneurship, especially in developing countries like Iran leads to social welfare or reduce financial pressure.

VI. SOCIAL CAPITALS AND ENTREPRENEURSHIP

Empirical studies show that social interaction plays an important role in facilitating innovation and creativity that is one of the indicators of entrepreneurial. Theorists have studied relationship between social networks and the development of new ideas and creativity. Rouf [24] examined the stress of social ties in generating innovative ideas. He concluded that can be expected individuals who are connected to social groups to provide valuable ideas and have enough creative ideas. Overall, trend toward innovation among employees is a function of the types of social relationships that entrepreneurs are placed in it. Also experimental and theoretical studies have been made on the relationship between social interaction and take risk that are other aspects of entrepreneurship. On the other hand, social communication through identification and discover opportunities and environmental threats and implement measures to neutralize environmental uncertainty for placing a trailblazer is other indicators of entrepreneurship [34]. Social connections also facilitate knowledge transfer in organizations. Incorporate social interactions in organizations not only benefits the participants in the Community, but also the organization also gain benefits by reducing the costs and time of response to environmental threats. Recent research also indicates a correlation between network size (number of interactions and links) with innovation, self-renewal and entrepreneurship. Networks role in fostering innovation and identify opportunities and develop new ideas have been recent studies’ topic [23] and research’ findings support this idea. Social capital can also be a useful source through improves trust within the organization by linking units or by connecting external networks [38]. Links that lead to social capital can be created at any individual and organizational level. Although these links are mainly attributed to individual agents in organization level, these links may be various directly or indirectly and severity of the relationships. Social capital is often applied through identification of networks and network relationships. Aldrich and Zimmer [25] found that social networks are necessary for identify opportunities, evaluate ideas and gain resources for those who wish to start a new investment. New businesses may have big prospects but if they develop their social capital in the beginning stages of their businesses, they will reach their goals and perspectives [17].

VII. SUSTAINABLE ENTREPRENEURSHIP, FACTOR OF SUSTAINABLE DEVELOPMENT

Besides the undeniable importance of sustainable agriculture the growing trend of globalization and develop close links of agriculture level with growing economic markets in international levels have caused this level play a decisive role in the economic relations between different parts. Successful attending of agriculture in the world economy is required to its stability, profitability, and high productivity. Food and Agriculture Organization know competitive agriculture as the only long-term solution for moving towards sustainable agriculture [12].

Policy makers, planners and agricultural experts believe that because of these developments, a structural change in the current agricultural production methods have been needed and market-based agriculture in the context of sustainable
development is a basic strategy for developing agriculture. In this type of agriculture, farmers must somehow be able to produce to sell their products in a competitive market based on customer desires. For this reason, farmer should be opportunity recognition identify the customer's needs properly then, design and implement the necessary strategy to meet these needs. In other words, today's farmer must be an entrepreneur [1].

Now, entrepreneurship is increasingly known as important driving economic growth, productivity, innovation and employment and widely it is accepted as a key aspect of economic dynamics. Therefore, governments increasingly have understood entrepreneurship and innovation as cornerstone of national competitive economy and take policy in its line. Many OECD Member States have been put entrepreneurship in their policy priorities and government policies are seeking to influence the rate and type of entrepreneur [2].

Ecological entrepreneurship, including Ideas of green technology green and fair marketing trade, organic and social agriculture, Businesses committed to the community (community based ) organizational management , social entrepreneurship or nonprofit purposes and governmental activities in an ecological perspective of social-action sustainability. Green entrepreneurs in other words, ecological entrepreneur is someone that put into consideration social and environmental issues besides profitability and profit. He intends to build a better world through improve environment [32].

Other new and related stream of research which obtained from conducted research is “social entrepreneurship” [29]. Achieve sustainability requisite in society is achieving social entrepreneurship beside ecological entrepreneurs [37]. Where profits from business activities are used for benefit disadvantaged groups [29]. Entrepreneurship is an effective strategy for economic and social development based on innovation and a kind of social problem solving and community capacity building and empowerment for holistic development and social entrepreneurs play as agents of social change. These entrepreneurs is focused on develop innovative programs or local initiatives with help to improve the livelihood of disadvantaged individuals or groups lack the financial strength of the business and access to social services [9]. Therefore, sustainable entrepreneurship is a concept derived from sustainable development and it refers to each type of entrepreneurial activity that considerations related to sustainable development, including of environmental, social and ethical consideration is compliance [6].

Enhance the ability of organizations to pursue entrepreneurial activities, attention the role of social networks and the interaction between them and also attention the role of social capital as connector and role of businesses networks in identifying opportunities for entrepreneurial and providing resources and facilities in this area is essential.

VIII. CONCLUSIONS

One of the factors influencing entrepreneurship is social capital that has an important role in spreading the entrepreneurial activities and in fact strengthening the social capital can lead to an increase in creativity and innovation in people and causes of entrepreneurial development provides. Therefore this article afforded to review the role of social capital in the development of entrepreneurship in organizations. It can be stated that the economic backwardness in developing countries is the lack of individual creativity that we can strengthen spirit to work in communities with a proper education, so that it can provide the necessary conditions for the industrial societies. Social capital understanding in various parts and how to take advantage of them is a task that needs to pay it more effort with community officials and executives, and find strand reason of some social capital and try to keep and develop it, because first social capital is infrastructure of cultural, political, economic and social development of any community and second, it is major formation source of social groups, groups that development of any society depends on them.

Figure 3-Sustainable Entrepreneurship

Due to the reasons offered, it can be concluded that in addition to accumulation social capital, developing family businesses which will cause economic and social development, valuing productive entrepreneurship and creating new is demand of today's complex market. Social capital is one of important organizational capabilities that can enable organizations to assist in the creation of human capital.
Today social capital is as an essential competency for organizations and it is an asset that creates value for the organization and for members. Since, social capital is crystallization of organizational culture based on people trust and participation, so any action taken by the directors to organizational culture finally can enhance social capital and enhance achieve efficient and capable human resources. Entrepreneurship development in the country besides providing the context of sustainable development will solve current issues such as poverty, social and cultural stigma, unemployed graduates and other unemployment massive problem. Entrepreneurship is not only an emerging scientific field, but a way of life.

Social entrepreneurs have characteristics and behaviors similar to the economic entrepreneurs (such as good leadership and management skills), but they are connected more with compassionate and supportive activities and tasks than gain money. They have ideal thought and vision for solving social problems, encourage and stimulate others and have the capacity to overcome obstacles and dangers in the process. These entrepreneurs are closer to the community; hence, they can recognize the real needs and answer them with purposeful and meaningful ways. These individuals need to have a vision for social change and aren’t stimulated with profit motive and if they want to have major impact on their surrounding communities and be supported, must benefit from others encourage ability and good communication in the best way. To identify the real needs and gain a favorable impression and vision, others stimulate and encourage, overcome obstacles and risks in this process and overall success, given the critical success factors: (Honesty, devotion, clear goals, commitment, courage, fundamental and important values, planning, flexibility and action) will be inevitable.

Also, studies show that entrepreneurial has a competent and relevant role in Economic development and growth, active participation in global markets, competition, Sustainable job creation, justice development, poverty reduction, national income and solve the problems of government and public sector. Empowering entrepreneurs is required to develop entrepreneurship in the country. Develop entrepreneurship means creating a culture of entrepreneurship, strengthening the general positive attitude to entrepreneurship and next, increase rates of entrepreneurial activity.

REFERENCES

[1]. Eskandari, F., 2006. Explore and explain the entrepreneurial development strategies in agricultural higher education system in Iran. PhD thesis in the field of Agricultural Extension and Education, Faculty of Agricultural Economics and Development, College of Agricultural Sciences and Natural Resources, Tehran University (Karaj)

[2].Amirkhani T., Pourrezaat, AA (2008), estimate the social capital of Iran, number one, 19-72


[18].Baron. I and Michel’s (2006), the impact of economic on contemporary sociology, journal of economic literature


[33] Nafukho and Brooks, J. (2007), Online interaction and social capital, Distinguishing between new and existing ties in http://ssc.sagepub.com/cgi/content


[36] Sabatini’s (2005) consuming geografies: We are where we act, London, Routledge


[39] Westerlund, Mika, svahn, senja, (2008), a relationship value perspective of social capital in net works of software SME, s, and 37,492-501

[40] http://go.worldbank.org/K4LUMW43B0
More Need of Professional Ethics in Accounting and Auditing

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Abstract
Changing of the environmental, social and cultural conditions in a society has led to the changes in the needs of the human population and this change itself has resulted in developments and more need of higher technology and capitals which can’t be afforded by one individual. So for business and technology development we need more people to invest, and people will invest in such companies only if they are sufficiently assured about their investment. Thus the number of ownerships in the company will increase and this has led to a gap between ownership and management. In such circumstances, and given the diversity of investment, most of the individuals are attempting to invest and buy shares of companies that do not have any working or financial knowledge. In such conditions, the potential and actual investors rely more on the data prepared by accountants and auditors to make such decisions. Thus, accounting and auditing have become an increasingly important field in societies with developing economics. One of the distinguishing features of the accounting and auditing profession compared to most of the fields is the acceptance of responsibility for the public. Hence, the society (both government and people) have some expectations of this profession and to assess the stewardship of management task, one should be able to trust the data prepared by the accountants and reports from auditors. Therefore, accountants and auditors in order to maintain their position in society not only must have professional qualifications but must have genuine integrity, honesty and integrity. So, maintenance of confidence in the community is one of the most valuable assets of this profession. The present review aims to address the subject theoretically.

Materials and methods
In this research, using library methods and review of electronic databases, regulations of professional ethics of accounting and auditing, most important development problems of accounting and auditing profession and their prevention have been discussed.

Keywords: Accounting Ethics, Auditing Ethics, Ethics Ruling, Professional Ethics

Introduction
Recent corporate scandals and crisis development, has gathered the focus on considering the cultural and moral values in corporations. Accountants have faced a lot of criticism about their failure in warning unethical behavior of the managers and that of themselves through incomplete records and putting obstacles to investigate and research.

Accounting is a valuable knowledge and the main component of market economy. No economic activity is possible without relying on accounting. Accounting deals with providing information regarding the financial status and the profit rate. This knowledge is the base of monetary financial systems of countries and has a key role in monitoring accountability and transparency in the field of economics. However, the high level of fraud in which accountants and auditors and managers and executive have been involved has led to confusion and questions regarding the honesty and integrity of professional accountants and auditors. The profession through its superior features including the ability to reflect accountability and reflection of stewardship function of management and other features such as independence, integrity and safeguarding of the public interest, protects this exclusive privilege. The relationship between these features and professional ethics is the main axis of the
most of the criticism against this profession in past 30 years.

Hence, through the recent years the accounting has progressed towards more restrictive regulations such as regulations or rules of professional ethics of formal accountants or Sarbanes-Oxley Act and besides ethics courses are added to the set of educational materials in most of the universities and institutions of higher education it is hoped that this matter be dealt with in our country as well.

**Definition of ethics**

Ethics is a set of principles or moral values. Each of us has a set of values that sometimes we notice them properly and sometimes we just ignore them [6]. In other words, ethics is a set of moral standards to judge the integrity [7].

**The necessity of ethics in professional accountants**

1. The professional accountants are responsible for considering the public interests of the society and maintaining the credibility of the accounting and auditing. Personal interests must not be proffered to public interests [8].
2. Accountants on behalf of their clients are faced with an array of issues. They often have access to confidential and sensitive information of their clients. Auditors claim that their comments are independent [7].
3. Professional accountants feel responsible towards their employer. Their mission is to solve the problems of their employer and to create value for them. If no value is created, and if no problem has been solved, the professional accountant has not done his duty. Only after obtaining the desired result for the employer – by taking all the action resulting in the desired success—the accountant has done his duty properly [6].
4. Technically, the professional accountant should comply with professional technical standards and appropriate professional ethics. Professional accountants have a duty to carry out what their clients want until they results are consistent with integrity and neutrality requirements and if professional accountants are the CPAs, the independency factor must also be considered [6].

**Ethical Issues in Professional Accounting and Auditing**

The scandals resulted from financial frauds and the collapse of large firms such as Enron, World Com and Parmalat showed that fulfilling the responsibilities of professional standards and technical regulations is not enough. In addition to professional accounting standards and technical regulations, accountants must also commit to professional ethics.

**Causes of ethical issues in accounting**

1. Fraud
2. Ignoring the internal groups
3. Collude
4. Incorrect application of accounting policies
5. Misappropriation of assets
6. Failure to provide information
7. Giving false information
8. Failure to provide adequate storage

**Causes of ethical issues in auditing**

1. failure to comply with professional competence
2. capitulation of the auditor against unusual internal or external pressure
3. Participation of the auditor in activities contrary to the professional laws and regulations
4. financial affiliation or employment with a single employer or business unit being audited
5. deliberate selection of the sample in a way that it is not representative of the community
6. deliberate false generalization in detected errors (from sample to the total population)
7. wrong conclusions in order to conceal errors or recreational significance
8. The auditor’s statement prior to obtaining evidence before testing internal controls and content test).
9. Failure to disclose related-party examination by dependant individuals (board members and the CEO)

**Ethical problems of accounting in today's economy**

Focus of the business units to maximize the profits, competitive challenges, emphasis on short-term results, and providing various accounting services has put the accountants in an environment full of contradictions and pressures which has let to unethical circumstances.

**Preventing threats**
International Federation of Accountants has developed behavioral regulation to prevent these threats. The prevention is discussed in two parts:

1. Prevention methods which are created by the profession, legislation and regulations.
2. Prevention methods existing in workplace

Prevention methods, created by the profession, legislation and regulations are as follows:

- Education through academic qualifications and required experience to enter the profession,
- The need for continuing professional development,
- Regulations on corporate aristocracy,
- Professional standards
- Professional or legal and disciplinary procedures
- Independent review on auditor-prepared reports, statements, written correspondence or information by a third-party who has jurisdiction.

Prevention methods existing in workplace are as follows:

- Using a professional accountant to review the work done or using counseling services in case of emergency,
- Consulting with independent third parties such as non-mandated committee of directors, a professional legislative body or another professional auditor,
- The displacement of the senior professional members,
- Interviews with managers of client companies on issues related to ethics,
- Using another company to perform all or part of the contract.

Guidelines of the International Federation of Accountants to avoid ethical threats prohibit the following non-audit services for the audit clients:

1. Bookkeeping services
2. Evaluation services
3. Management decision making task
4. Brokerage on securities transactions
5. Supporting the lawsuits.

The steps for acceptance of the audit contract for avoiding threats:

- Identify threats against independence;
- Assessment of the significance level of the threats, and
- If the threats are insignificant, the prevention methods must be identified and to remove risk or to reduce it to a satisfying level, the identified methods must be applied.

Also a situation may arise that no method of contraception is available. In such conditions, the only appropriate way is as follows:

1. Elimination of profits or activities causing the threats;
2. Contract refusal or its withdrawal

Enforcement Procedures Professional Ethics

Guarantee for the enforcement of the Ethic Code, shall be considered in the statute of a profession association. Ethical issues should be resolved peacefully. If the issue cannot be solved, the following punitive sentences are issued depending on the level of violation:

- Warning (oral or written)
- Reprimand
- Education
- Fines, compensation costs and restitution fees
- Stopping professional career
- Suspension of membership
- Dismissal from profession constitution

Conclusion

Given that the survival and progress of any business and any discipline depend on honesty, integrity and honor, so the accountants and auditors as a member of this profession must take some action to develop and survive and because our profession needs people’s trust in order to survive and thrive, we must not only have the required knowledge and experience but also integrity, honesty, and honor in our profession as an accountant or auditor to assure strength in profession. So when we, as accountants, take all these together (science, experience, honesty, integrity) in our considerations, then our Islamic country will become a community with increasingly improving economic, social and fairness conditions. Only in this way our careers will contribute to the realization of social policies.
Reference
4. Gharamaleki, AhadFaramarz, Professional Ethics, Tehran, 2002
5. Sarlak, NArges, Auditing Ethics, Ethical Issues in Science and Technology, third year, issues 1 and 2, 2008
8. www.icaew.com