

مدیریت شهری

نشریه علمی - پژوهشی مدیریت شهری و روستایی،
مرکز مطالعات برنامه ریزی شهری و روستایی
سال چهاردهم، تابستان ۱۳۹۴
شماره استاندارد بین‌المللی: ۲۲۲۷-۱۶۰۷

سال چهاردهم، تابستان ۱۳۹۴

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- مقاله باید نتیجه تحقیقات شخصی نویسنده (ها) بوده و قبلاً در نشریات داخلی و یا خارجی منتشر نشده باشد. در مورد مقالات ارائه شده در مجامع علمی، مشخصات کامل مجمع باید با مقاله همراه گردد و مقاله‌های تحقیقی که به تأیید هیات تحریریه رسیده و از کیفیت خوبی برخوردار باشند نیز پذیرفته می‌شود.
- مقاله باید سلیس، روان و از نظر دستور زبان صحیح باشد و در انتخاب واژه‌ها دقت لازم می‌پذیرد. مقاله می‌تواند به زبان فارسی یا انگلیسی باشد.
- در متن فارسی باید تا حد امکان از معادل فارسی کلمات لاتین استفاده شود و چنانچه معادل فارسی به اندازه کافی رسا نباشد، می‌توان با ذکر شماره در بالای معادل، عین کلمه لاتین در زیرنویس آورده شود.
- مقاله باید فقط بر یک روی صفحه کاغذ استاندارد (۳۰-۲۱ سانتیمتر) با دو فاصله ماشین تحریر و از هر طرف سه سانتیمتر حاشیه، در سه نسخه خوانا تهیه و ارسال شود.
- صفحه اول باید شامل نام و نشانی کامل و شماره تلفن نویسنده (ها) و منابع مالی تحقیق (در صورت لزوم) باشد.
- متن مقاله باید به ترتیب شامل عنوان (بدون نام نویسنده)، سه تا پنج کلمه کلیدی در مورد زمینه تحقیق، خلاصه، مقدمه، روش بررسی، نتایج بحث و نتیجه‌گیری، تشکر، خلاصه انگلیسی و فهرست منابع باشد.
- خلاصه انگلیسی باید بر روی یک صفحه جداگانه، به ترتیب شامل عنوان مقاله، نام نویسنده (ها)، کلمات کلیدی، متن، نشانی کامل (به صورت زیرنویس) باشد. مقالات خارجی باید همراه با یک خلاصه فارسی و یک خلاصه انگلیسی باشند.
- جدولها به تعداد محدود با شماره و عنوان ماشین شده در بالا و توضیحات و منبع جدول در زیر آن تمیز و بدون خط خوردگی، هر کدام بر روی یک صفحه جداگانه آورده شود.
- شکل‌ها و نمودارها فقط در موارد بسیار ضروری و به تعداد محدود با کیفیت خوب، بر روی کاغذ براق کشیده و یا چاپ شده با شماره عنوان، توضیح و منبع در زیر آن هر کدام بر روی یک صفحه جداگانه آورده شود.
- محل قرار دادن جدولها، نمودارها و شکل‌ها در متن باید با علامتی در حاشیه مقاله تعیین شود.
- تنها منابعی باید در پایان مقاله ذکر شود که در متن نیز مورد استفاده قرار گرفته باشد و از ذکر منابع مشابه و کم اهمیت خودداری شود.
- منابع مورد استفاده باید بر روی صفحه (ها) جداگانه، با شماره ردیف، به ترتیب الفبایی حروف اول نام خانوادگی نویسنده (ها)، سال انتشار داخل دو نقطه، عنوان کامل مقاله، نام انحصاری مجله، شماره دوره و یا جلد، شماره صفحات (اول تا آخر مقاله) آورده شود و در متن مقاله فقط به نام نویسنده و سال انتشار (داخل پرانتز و شماره صفحه) اشاره شود.
- در صورت استفاده از منابع فارسی و خارجی، باید ابتدا کلیه منابع فارسی و سپس کلیه منابع خارجی به ترتیب یاد شده در بالا با شماره ردیف مسلسل آورده شود.
- در مورد کتاب، مشخصات کامل کتاب، ناشر و محل نشر ذکر شود.
- هیات تحریریه در رد و قبول مقالات رسیده مجاز است.
- نویسندگان مسئول محتوی و پاسخگوی نظریات ارائه شده در مقالات و نوشته‌های خود می‌باشند.
- جهت تهیه مقالات به زبانهای خارجی، به راهنمای انگلیسی مندرج در صفحه داخل جلد طرف دیگر مجله مراجعه شود.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



صاحب امتیاز: سازمان شهرداری ها و دهیاری های کشور

مدیر مسئول: مهندس هوشنگ خندان دل

سر دبیر: محمدرضا بمانیان

مدیریت شهری

فصلنامه مدیریت شهری
Urban management

شماره ۳۹ تابستان ۱۳۹۴
No.39 Summer 2015



مرکز مطالعات و برنامه ریزی شهری و روستایی

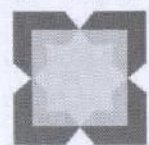
قیمت: ۱۵۰۰۰ تومان

آدرس: تهران، بلوار کشاورز، ابتدای خیابان نادری، پلاک ۱۷، مرکز مطالعات و برنامه ریزی شهری و روستایی، فصلنامه مدیریت شهری، تلفن: ۰۲۱-۶۳۹۰۲۰۸۳، دورنگار: ۸۸۹۷۷۹۱۲، کد پستی: ۱۴۱۶۶۳۳۶۶۱

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کمیته اجرایی: ابوذر دلفارادی، نیما متین فر، فاطمه عباسی صفت

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درجه علمی - پژوهشی نشریه «مدیریت شهری» طی شماره ۳/۱۱/۳۷۷۸ مورخ ۱۳۸۹/۳/۱۷ دبیرخانه «کمیسیون بررسی نشریات علمی کشور» وزارت علوم، تحقیقات و فناوری ابلاغ گردیده است.

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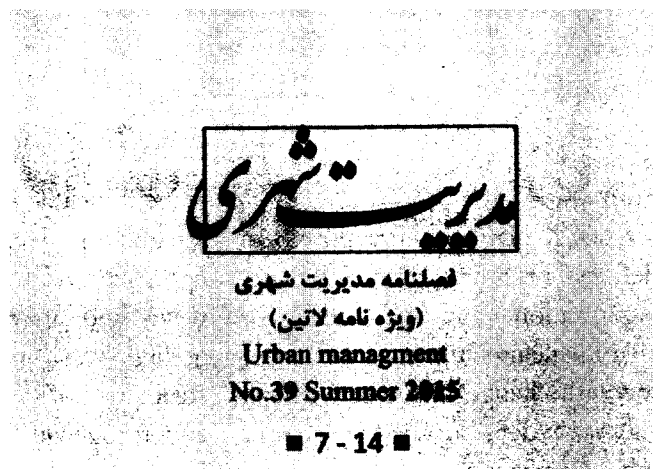
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منصور یگانه، محمدرضا بمانیان ■ ۴۰۷-۴۲۸ ■



Received 28 Sep 2014; Accepted 28 Dec 2014

Organizational Structure Design of Medium-Sized Municipalities in Iran Performance

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Abstract

Nowadays communications, decision-making, reporting manner and hierarchy are controlled by organizational structure; getting an inside into such structure means getting an insight over the whole organization. It serves as a platform for operation of plans and strategies and also determines links among personnel or executive body of the organization. In line with developments in other elements, organizations must keep thinking of developing their organizational structures. As public, non-governmental entities, municipalities pursue the goal of urban welfare and paving the way for establishment of a mechanism that helps cities achieve sustainable development and growth. These entities constantly need a structure that is tailored to their missions, goals, duties and central activities. Having a review on the concept of 'structure' and 'thematic dimensions' in former structure of municipalities and having introduced medium-sized municipalities as developmental entities, this paper conducts a comparative study on executive body of municipalities in order to gain a picture of central activities that municipalities are involved. In sum, this research finds that major characteristics of this structure include incorporation of new parts through vertical and horizontal differentiations, change of view to municipalities as organizations with social responsibilities, incorporation of new parts with the intention to remove parallel tasks as well as reduced expending and financial independence of municipalities.

Keywords: *municipality, structure, organization, horizontal differentiation, vertical differentiation*

1. Introduction

TAs an operational platform, organizational structure defines programs and strategies between organization and personnel or the factors influencing implementation of works. In line with changes in other element, organizations must develop their structures too. Although organizational structure can be seen in organizational diagram, what which can be seen is the practical side of the structure. Direction of organizations within their organizational structure is more important than their structure. Sometimes managers may think that it is possible to prepare organization for launching new strategies by making modifications in organizational structure on the basis of their findings. Richard Hall (2005) believes that some management scientists look at organizational structure as an instrument that helps division of labor within organization; an instrument that can tell what person to hold what position. Ranson, Hingings and Greenwood thought that organizational structure provides better circumstances by which an organization can be well-controlled. They argued that structure can not only shape organizational activities, it can, by itself, be an outcome for organizational activities. Organizational diagram and its effect on organizational activities are so important that structuralisms describe it as a crucial factor in organizational performance. A look into development program of administrative system, in particular the disadvantages, indicates the necessity of developing this system.

To this end, municipalities, as the biggest non-governmental entities, seek to improve urban welfare and pave the way for establishment of mechanism to promote growth and sustainable development through urban development. There is no doubt that organizational structure can influence arrangements and organizational strategies designed for urban development and also mobilizing resources and making large-scale strategies. The disadvantages that expose whole administrative system subject

to peril include increasing weaknesses, lack of integration, neglecting the client-orientation approach, lack of inclination to meet citizens' needs and no clarity of actions. Therefore, getting an insight into organizational structure of medium-sized municipalities and recognizing their past disadvantages and introducing their advantages are the objectives this research is going to fulfill.

Body of this paper is comprised of five sections. Second section contains theoretical background. Third section deals with methodology, fourth section discusses how to define organizational structure of municipalities and how to recognize their disadvantage from professionals' perspective and fifth section concludes the paper. It is noteworthy that municipalities and governorships are divided into three categories: small-size, medium-size and large-size in accordance with instruction laid down for municipalities and governorships.

2-Background of Research

Organizational structure has a variety of definitions each one dealing with particular aspect of organizational structure function. Mintzberg (1980) argues that performance of missions of organizations lies in fulfillment of two basic requirements: division of duties among different functions within organization and ensuring they are well-coordinated. So he introduces organizational structure as collection of methods and solutions by which organizational activities are divided into different well-coordinated functions. Structure of every organization has two sides: structural and thematic. Combination of these two sides forms organizational structure which needs modifications over time. Structural side of organizational structure reflects internal characteristics of the organization. 'Complexity', 'finality' and 'concentration' are three crucial dimensions of organizational structure in every organization. It is evident that these three dimensions are by no means casual. Complexity refers to the degree of differentiations inside organization. Horizontal

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differentiation shows the extent of horizontal differentiation among different units. Vertical differentiation refers to the depth or height of hierarchy of the organization. Geographical differentiation stands for the spread of units, facilities and manpower geographically. Finality shows how much different parts and functions are standardized. A function with higher degree of finality provides least free hand to its holder in terms of how and when to handle jobs. Conversely, a function with lower degree of finality gives more free hands to its holder. Concentration shows how much decision-making is concentrated in a particular unit. Accumulation of power shows this concentration. Wherever there is a high accumulation, there is a high concentration there and vice-versa. Concentration reflects the dispersion of decision-making power not geographical differentiation of the organization.

Thematic sides of the organizations are some features that mirror the position of the organization and leave effect on organizational structure. These features include size, environment, technology, culture, strategy and objectives. Size shows how big the organization is. Bigness of an organization is shown by the number of personnel for which they work. Berely includes physical capacity, number of personnel, amount of existing data and resources in 'size' category (Kerdnaej et al. 2008, p. 6).

Some authors believe that bigness has a crucial role in determining organizational structure. From one hand, it has a direct link with units and sections working within the organization and from other hand frequency of such units and sections necessitates coordination among them. Although some researches stress on this point that a relationship is there between bigness and structure of organization, some authors cast doubt on it. Hall (1980) suggested that this relationship is by no means stable and sustainable in all situations.

Benrz and Stalker argue that organizational

structure must be in a stable and reliable environment. Such a structure fits the activities and duties that must be repeated on and on. It, too much extent, relies on planned behaviors and works improperly slow in response to unexpected events. But if the environment is turbulent, organizational structure must be organic because organic structures are flexible and are capable of becoming compatible with situation. Such structures stress on parallel relations than vertical ones, and penetration in them needs skill and knowledge, and responsibilities are assigned flexibly and based on exchange of information not on the basis of framed job definitions.

Technology is the nature of production system. It is made of 'operation' and 'methods of production'. Culture of an organization is an indicative of values, believes, norms and mutual understanding inside the organization among those who work for it. It reflects how much personnel have in common. Organizational culture has a crucial effect on internal atmosphere of the organization and organizational structure. Culture-organization link is by no means a one-way road. Strong organizations have strong potential to change their culture and values. The way organizations are influenced by technology is similar to the way they are influenced by culture.

Organizations are distinguished by their goals and objectives. They are usually written and are recorded in order to tell all the time what the organization seeks to achieve. Plan, as being the outcome of planning stage, is a set of activities that are organized to attain certain achievements. That is to say that it is a finalized and official record that serves as a basis for performing tasks and evaluations of performance over time.

Mission, objectives and plan are the most crucial factors for designing organizational structure in order to ensure central achievements are attained by organization. For this purpose, we looked deep into municipalities' objectives and plans. Their extracts are given below:

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Objectives	Plans
Improvement of urban environment	Residuals management
	Preserving green space
	Landscape
	Public sanitation
	Development and maintenance of public cemeteries
	Organizing special urban zones
	Handling trade union guilds
	Firefighting organization
Improvement of Urban Safety	Protective installation and surface water guidance
	Traffic affairs
	Public transportation facilities (bus etc.)
	Railroad transportation facilities
	Public parking facilities
	Traffic infrastructures
	Traffic safety
Improvement of Cultural Affairs	Cultural, social and sport affair
	Education and research
Improvement of Management and Urban Planning	Urbanization and architecture
	Policy-making and management
	Information technology
	Sustainable incomes

▲ Table 1. Municipalities' objectives and plans

Before analyzing medium-sized municipalities' organizational structure we need to have a look into organizational structure in both levels of inside and outside of organization. Kerndaeij et al (2004) studied organizational structure design for entrepreneur centers and institutes. Their study recommended establishment of a consultative council for linking with industry, formation of a committee for handling educational affairs to ensure learners are knowledgeable enough and holding general and specialized courses on entrepreneurship and formation of a deputy department for research, promotion and administrative affairs. Shadan et al (2013) conducted a comparative study on executive body of 12 technological

parks in advanced countries and focused on the professional comments and remarks made by technological parks experts. This research defines conceptual model of organizational structure for industrial parks on the basis of comparative study on organizational structure literature and with a view on the challenges facing organizational structure of technological parks. In conclusion, a proper structure is being introduced based on views of experts who were interviewed and that of a number of directors of industrial parks. This paper recommends, at the end, formation of a board of directors for technological parks. Mirsepasi and Chegini (2003) studied the relationship between environment and

organizational efficiency in municipalities. They introduced proper structure for municipalities in three levels by making evaluations on organizational structure (concentration, complexity and finality) and determining its relationship with municipalities' organizational efficiency in view of environmental features (size and broadness of urban services). They concluded that small-sized municipalities should use simple structure, medium-sized ones must have sectional structure and large-sized ones must use matrix structure.

3. Methodology

Scientific researchers are, based on their objectives, divided into three categories: fundamental, developmental and practical. This research is practical, in terms of the objective it seeks. A research falls into two categories in terms of manner of data collection: descriptive (non-pilot) and pilot. A pilot research is designed to make a causation relation between two or more variables. Descriptive research comprises of some methods that aim to describe a certain event or circumstance. This form of research can simply be conducted for getting an insight into existing situation or helping decision-making process. A descriptive research is divided into survey research, correlational research, case study research and ex-post factor research. This research usually makes use of library studies as the main source of data gathering which includes studying on fundamental principles of organizational structure and designing organizational structure as well as a comparative study on structure of municipalities, interviews and polls. Content analysis is a typical method that this research uses to analyze data gathered.

Its statistical population, in early stage of testing process, is comprised of professionals of organizational structure design and in field study stage its statistical population is comprised of technical-managerial centers and authorities that make policies for municipalities. In the early stage of testing process, samples included ten experts of organizational

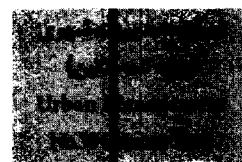
structure management and design in the level of municipalities. The statistical unit of this part was made of deputies and directors of top municipalities as well as those working for Municipalities Organization. Since statistical population of this research is composed of policy-makers and key policy-making authorities in relation to organizational structure design and since such persons cannot be selected randomly, selection was made on the basis of preference and judgement of our research team. Such a method of selection is known as judgment-based selection (Khaki 2010, p. 84); a method that our research uses too.

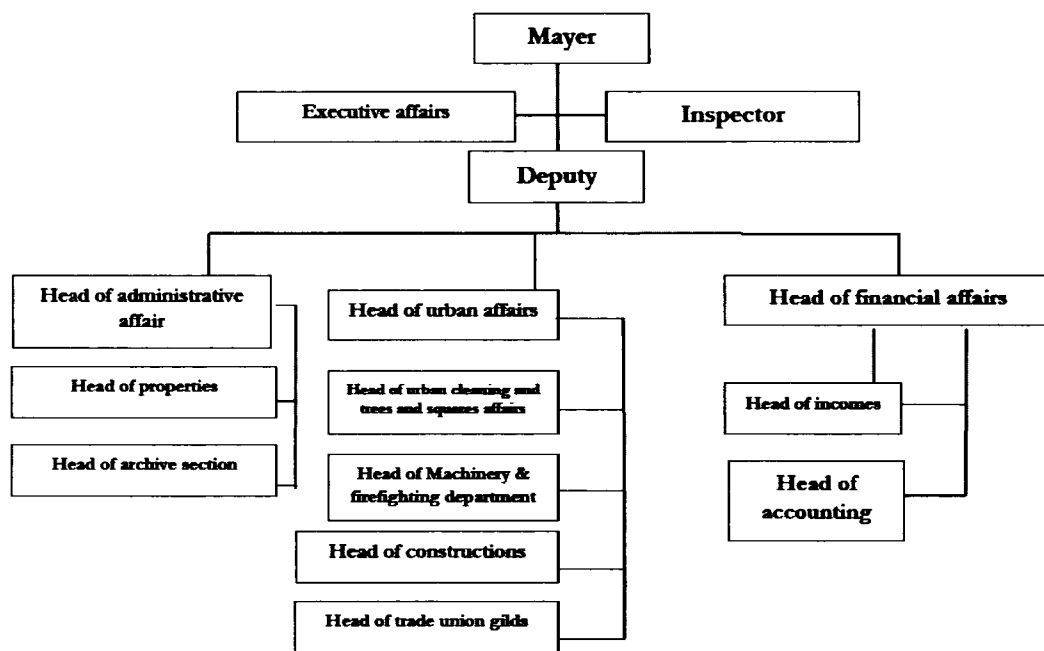
4. Experimental Results

Interviews with experts and professionals indicated that they think existing structure is more flexible than the former one in terms of performance of key missions and duties that medium-sized municipalities typically pursue. Diagrams 1 and 2 shows the both structures (former and existing). In sum, our results suggest that former structure of municipalities lacked some crucial units such as legal affairs unit or real estate unit; while this disadvantage has been removed by the new structure. Another characteristic of the new structure is that it is update and goes in line with technological developments because it incorporates certain matters such as information technology and public investments too. This can pave the way for establishment of a proper managerial system that enables information exchange and promotes best decision-making. Specializing the duties is another characteristic of the new structure that helps improve manpower and investment productivity in medium-sized municipalities. Reduced concentrations are another characteristic that is addressed in new structure. This can pave the way for distribution of decisions to personnel and thereby distribution of powers within the whole organization.

However the most notable characteristic of the new structure is its innovative look

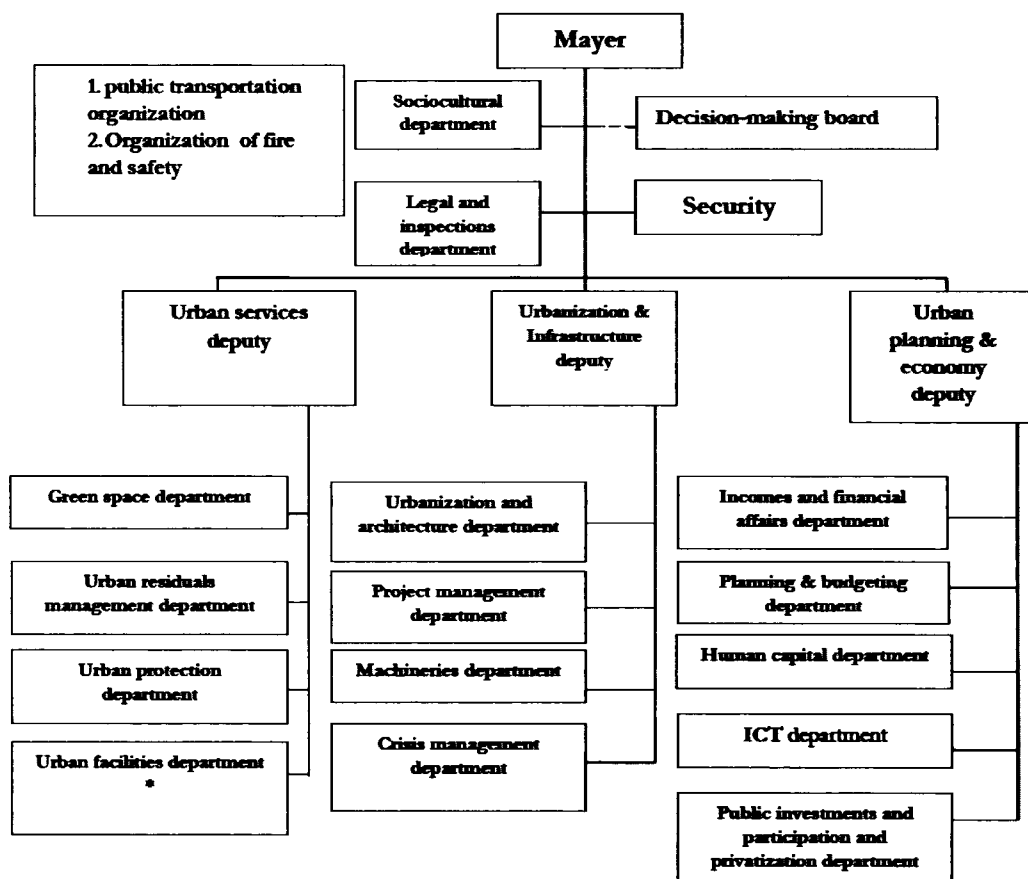
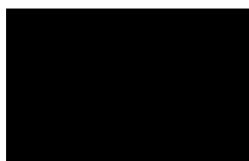
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▲ Diagram 1. Former structure of medium-sized municipalities

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▲ Diagram 2. New structure of medium-sized municipalities; (*) Fruits and vegetable centers, public cemeteries and stock slaughter centers

to municipalities from service-construction organization into a social organization. This can be evidenced by establishment of Sociocultural Department that has been newly added to municipalities' structure. Parallel tasks and duties are removed by the new structure and some related units such as transportation unit is incorporated.

5. Discussion and Conclusion

Proper design and structure arrangements are a crucial task of every manager. It needs constant, regular efforts and also attention to all aspects concerned. In view of this research's objective, experts comments indicate that the former structure of municipalities in Iran had been arranged so that every manager held himself responsible to only his own boundary and his own section, not beyond than that; while the new structure turns municipalities' duties from mechanical process into social and motivational process. Such structure ensued quicker addressing and responding to changes of environment through new innovative parts that are innovatively incorporated into the structure. These newly added parts are designed to reflect data and information to top managers. Other characteristics of this structure include incorporation of new parts through vertical and horizontal differentiations, change of view to municipalities as organizations with social responsibilities, incorporation of new parts with the intention to remove parallel tasks as well as reduced expending and financial independence of municipalities.

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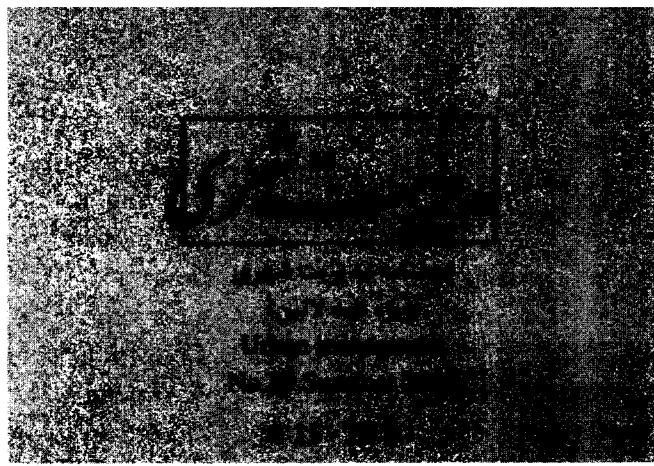
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Received 6 Oct 2014; Accepted 6 Jan 2015

Cultural changes in urban management and nongovernmental organizations (NGOs)

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Abstract

Problem and objective: Analysis of cultural challenges and presenting appropriate strategies for coping therewith, as much as is necessary will be a hard work and access thereto is difficult. Investigation of cultural changes and its relationship with NGOs and presenting an appropriate strategy for coping therewith is the topic of this study. Nowadays, the greatest threat against us is cultural threat and within this period of time, main questions that may solve this problem, is that why the topic of NGOs and its relationship with culture is important? And why culture in our country is taken into consideration sensitively? And what is the philosophy of propounding such topics in the conferences? **Methodology:** this study was applied based on analytical-descriptive method. In this study, content analysis was used that in fact is a method therein the content of study object is described and perceived exactly and deeply. The objective of this study is recognizing the text or written work's characteristics realistically and obtaining conclusions thereof. **Results:** In this paper, the grounds of cultural changes and relationship between cultural changes and NGOs were analyzed. In continue, vulnerability of cultures was discussed and analyzed.

Keywords: *Culture, NGOs, Cultural Security*

Introduction

Key concepts

Culture: Overall material and nonmaterial achievements of man during his social life (Goldo Kolb, Trans: By Parham, 2005: 629-630). The culture includes complex collections containing knowledge, beliefs, arts, morality, rules, customs and wills, capabilities and habits acquired by a man as member of a community (Mansouri, 1991:9). Presenting a unit definition of culture is impossible and it is due to complexity of the concept of culture. Raymond Williams stated in this regard: the culture is one of two or three very complex words that exist in English language, because this word must be used in several intellectual distinct fields and various and distinguished intellectual systems for expression of important concepts (Smith, 2008:13).

Ethnicity: It is mostly an applied word and man may have various perceptions thereof. In the meanwhile, definition of Antony Smith is widely applied: The ethnicity is comprised of a specified human population with a common ancestor' legendary, common memories, cultural elements, bond with a historical territory or motherland and a measure of benefits and responsibility sense" that includes pivotal elements of common identity, belief, consciousness and culture (Ayubi, 1998:67).

Non-governmental Organizations (NGOs)

It is referred to all institutes that established by a group of legal and natural entities spontaneously and involuntarily and follows nonprofit and nonpolitical goals according to its charter (David Angel, trans. by Taj Mazinani, 2001:22).

The concept of culture from different viewpoints

The culture was analyzed and different from different viewpoints. The sociologists assume of culture of every society as basis for its civilization and culturologists called the society as an organized group that has a common culture. In a simple definition, the culture was mentioned as "national heritage". The first integrated definition of culture is that "the culture

is a complex collection of knowledge, beliefs, arts, morality, rules, customs and wills, capabilities and habits acquired by a man as member of a community (Mansouri, 1991:9).

Concept of culture from viewpoint of Imam Khomeini

According to viewpoint of Imam Khomeini, the culture is something that individual or society has been trained based on, thinks and behaves. Therefore, as viewpoint of Imam Khomeini, culture makes identify, produces training, moral-oriented and thought-training. For instance, he bided: "They intend we get dependent to them and give us something that brings dependence. They don't want we have any independence, intellectual independence, cultural independence. The agents they trained among themselves and exported for us, they also helped them. They changed the attitude of our society so that if a text is not Western; our society doesn't accept it ..." (Imam Scriptures, Vol. 12:6).

In addition, he bided: "...but, for building a country that regardless of 2500 years until now, during a few years that I own observed it, they tried to destroy this country with full force. For destroying the culture, advertisements and advertising means such as newspapers, magazines, radio and TV and everything that you imagine, something serves this country must be instructive and train the country ..." (Ibid, vol. 10:21)

In the ideology of Imam, the culture has no specified borders. In this regard, he stated propositions such as "material progress is not culture" and "The industry is not culture". He bided: "We have no need to abroad by our culture and most sciences and if we are not like as them in the industry, we have not lose our self-reliance and say that they are developed and our everything must be foreign, not it is not true..." (Ibid, vol. 18:219).

Concept of culture form view point of Imam Khamenehi

The supreme leader of Iran bided: I assume the state culture in three important and general

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contexts:

It includes state major decisions; the culture as state major decisions orientating factor is even effective on economic, political, management or production decisions... the culture is like as a soul existing and running in the body of various state major activities... The culture orientates major state decisions. In fact, it shows the importance and founding a cultural basis here to us.

Second context: It forms the public mind and behavior. Society's movement is formed based on the culture of that society... which elements are weak in our public culture or lack of them is felt, or need higher dose? One of them is order. Our society needs extremely the order. The other one is national self-reliance and national esteem. It means feeling esteem due to being an Iranian. As Sohrab Sepehri, "I am native of Kashan, My life is not bad" is proud of us. Or in other poem, he says "I am Muslim". Esteeming to being an Iranian, we need it. But it should not be assumed as incomplete nationalism "the same negative obsolete nationalism that we always rejected". This nationalism is positive. It means nationalism in its good meaning. We need it.

The other factor is acceptance of law, not shoving each other, not overtaking each other, not violating the others' rights, not stealing from each other. These are law and we need them in the society. The other subject is national honor. If we see that someone is somehow violates our cultural, religious, geographical or national borders or intends to violate, our honor must be stimulated.

The next topic is religiousness and religion believing with its general meaning. I told the students this point that everybody puts Koran on his head on 21st day of Ramadan and told "Ya Allah", as my viewpoint, he is the same student that I assume as a righteous, spiritual, Muslim and binding on Hezbollah, regardless of its party and organization and movement.

We have to lead all to this movement that they feel on 21st day of Ramadan that their heart invites them to the mosque and Koran. This state is very necessary for our country.

The other items include culture of marriage, driving, family, bureau and clothing. I agree to the fashion and included in people who tend to the fashion, but a fashion that is designed by local resources, because fashion means innovation and initiative not something from other cultures. Our fashion, hairdressing, makeup, clothing and talking mode all come from abroad.

Consumption pattern of life means is important, how must be our carpet, curtain and light? These may not be ignored. If someone scrutinizes these cases can understand that how much capital, thought, diligence and art is vested in them and sometimes plenty of them is ineffective. Finally, we have to determine our position about the, even if designers say that I have no time now and my priority is not designing the national clothing, ok, it must be determined that we have not this priority for 5 or 10 years and want to put it away, but ultimately this cultural complex warehouse must have a owner. This is the culture in second context.

Third context: It includes major training and academic policies of governmental organizations such as education dept., higher education, and health and treatment sector. Ultimately, governmental organizations must obtain the major training and academic policies from central organization. Although education dept. has an advising meeting, but performs another process and carry out the enforcement, but this context is distinct from enforcement and has a more major and extensive view.¹

Concept of culture from western thinkers' viewpoint

According to the viewpoint of Hegel, German philosopher, the soul has two aspects: "mental" and "objective". When we talk about culture that the man soul criticizes his activities,

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1. Statements of supreme leader of Iran in the meeting with Cultural Revolution Supreme Council, 17.12.2002

methods, acquisitions and behaviors, and tries to improve them to release from restrictions and remove anything that avoids his prosperity from inside. On the other hand, we talk about culture when the man soul criticizes his external manifestations to release himself from what from outside obstacles realization of his real situation (Pahlavan, 2006:15).

As perspective of Orving Goffman, the culture is a process that is place inside the self as a deep and stimulator force and an internalizing matter (Smith, trans: By Pooyan, 2008: 103).

As perspective of Marcuse, the culture is a higher limit for independence and prosperity of man and assumed the genuine culture as realization of will and indolence of man (Moeini, 2003: 65).

According to the viewpoint of Antony Giddens, the culture includes values that members of a specified group have them, norms that they follow and material goods that they produce. The values are abstract ideals, but norms include specified principles and rules that people are expected to observe them. The norms show the does and don'ts in the social life (Giddens, 2006:36).

The culture from perspective of Parsons means "modeled or organized systems of symbols that are controlled by action orientations and internalized elements of people personality and institutionalized models of social system (Moeini, 2003:111).

Samuel Hantington (1945) stated that our definition of culture is every thing, habit, thought, institution, and intellectual or practical style that man processes or creates and later transfers to the others particularly the upcoming generation (Ashuri, 2007:68).

The culture is defined as knowledge, experiences, beliefs, values, movements, attitudes and meanings, hierarchy, religion, time theories, roles, spatial relationships, concepts of world and artifacts that acquired by a group of people through individual and group efforts during generations. Therefore, the culture can include everything from important ceremony

to the soul concepts. Just for a moment think of all cultural beliefs you have, the beliefs that affect quality of your perception from world and interactions doing therein. Your belief on work, immigration, freedom, age, scoring from your teacher, cleaning, science of health, science of morality, clothing, property rights, customs, cure and health, death and mourning, drama, law, magic and superstitions, humility, sexual relationships, social situation difference, expression of love, official and nonofficial being, body odor and similar items form a part of your cultural dependence (Samovar, Porter & Stephaney, trans. by Kiani & Mirhassani, 2004:78).

NGOs

Nowadays, in our country, nongovernmental organizations are establishing and working under title of nonprofit-nonpolitical and voluntary activities for providing welfare and public services. These organizations include populations, associations, societies and institutes that considering their intellectual structure and existential goals work in the different fields such as aiding, welfare, social, legal, cultural, sport and support matters, and are supposed as a part of society and in conjunction with government and communication canal between people and government. The turning point of nongovernmental organizations assertiveness in the world was UN Conference on Environment and Development, in Rio de Janeiro, Brazil, in 1992. In this conference, a contract was designed under pressure of environment follower groups to take measure about destruction of greenhouse gases. For the first time, these organizations were persuaded from inspection and supervision scene to the decision making. Since that time onward, they also have obtained a lot of successes (David Angel, trans. by Taj Mazinani, 2001:24).

History of NGOs in Iran

Iranian-Islamic culture of our country is full of proud effects, altruism, philanthropy and contribution to society's vulnerable class that was running throughout the history of this

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country. Such culture is the origin of participation-seeking culture that currently is applied on different social classes deeply with a great influence. After promotion of Islamic rites in this ancient and enduring land, always civil and rooted and powerful institutes have been founded and claimed that as traditional organizations originated from Islamic and Shiite culture such as religious populations, charities and similar institutions that currently are working and provide services to the Islamic society upon respecting provisions and according to state laws and regulations. Along with these traditional institutions, nongovernmental organizations under title of modern nongovernmental organizations claimed and are seriously expanding. The background of NGOs incorporation in Iran as traditional institutional is referred to Sofia age and as modern and organized institutions of youths' activity therein is referred to incorporation of cultural center in 1994. In fact, after long years planning and research studies and field surveys, almost since 1995, based on country needs, the policies, goals and orientations about youths' matters were clarified and considering arguments, a national executive and powerful organization seemed to be needful for youths' job. In April 1999, National Youths Center was established that was developed form of Youths Supreme Council Secretary.

Currently, NGOs in Iran work in two individual and group frameworks as NGO networks and existing and active networks in Iran are as follows:

1. NGO Youths Network;
2. Environmental NGO Network;
3. Women NGO;
4. Addiction Prevention NGO.

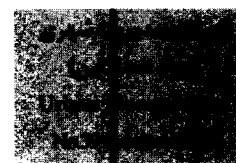
Various NGOs are member in each one of mentioned networks, and are working. It is remarkable that majority of NGOs are working with the same charitable purposes of traditional institutions and believing in Islamic provisions and constitutional law and applicable laws in different fields with various social, cultural,

training, protective and religious attitudes.

NGO characteristics

- 1-They are spontaneous.
- 2-Having articles of association, specified organizations and structure and registered with public authorities.
- 3-They are nonprofit, means that no profit or income is allocated to its volunteers.
- 4-They are not a party with political incorporation and not affiliated to any political organizations or parties.
- 5-Volunteers form its members.
- 6-They accept member and there is no specific conditions for membership of relative people excluding acceptance of contents of articles of association and interesting in voluntarily working therein.
- 7-They have a clear performance, and all of their actions and activities are carried out clearly and publicly.
- 8-Financial status of these organizations that includes incomes and costs, must be clear, specified and accessible for the members and others.
- 9-The purpose of these organizations is improving the status, removal or reducing the society problems.
- 10-They are dependent to none of governmental organizations or institutes; no credit, financial, organizational and human resource dependence to the government.
- 11-They have high speed and decision-making power.
- 12-They have a limited, adaptive and flexible bureaucracy.
- 13-Despite of independence to the government, the main and common purpose of all of them is reserving national benefits and public interests of country.
- 14-Obtaining license from competent authorities, a recommendation by all national and international communities to nongovernmental organizations for clarity and legitimacy of activities.
- 15-They response the society need; in other word, nonprofit, nonpolitical, noncommer-

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cial, spontaneous, purposeful, voluntary, public, nongovernmental, direct and lawful participation and membership (David Angel, trans. by Taj Mazinani, 2001:28).

Cultural changes

Cultural change means reformations; revisions and new methods resulted from interaction between cultures. Considering permanent and inevitable interaction between cultures, cultural change is always expected, whether purposeful and planned or non-purposeful and as a result of common inter-cultural interaction and without preplanned will for changing the others' culture in the favor of self or conforming to the other culture. The planned cultural change may be construed as cultural change management that is an effort for orientation of cultural changes and achievement to the respective goals (chart 1). And this process needs perception of cultural change perception. The studies indicate that throughout social life periods, there was no nation and tribe that their culture has been remained fixed and stable, but their culture has been changed, notwithstanding change process among tribes and groups was not equal and experienced strength and weakness. In the basic and simple life of human, cultural change process has been very slow, because of lacking quick change grounds (Zandvakili, 2004:65).

In the definition of cultural majority and minority, attention to two major criteria is pro-

posed as below:

1. Sociopolitical power;
2. Population and growth rate, cultural promotion and diffusion (chart 2).

Cultural change factors

Cultural change may be dependent to various factors including as follows:

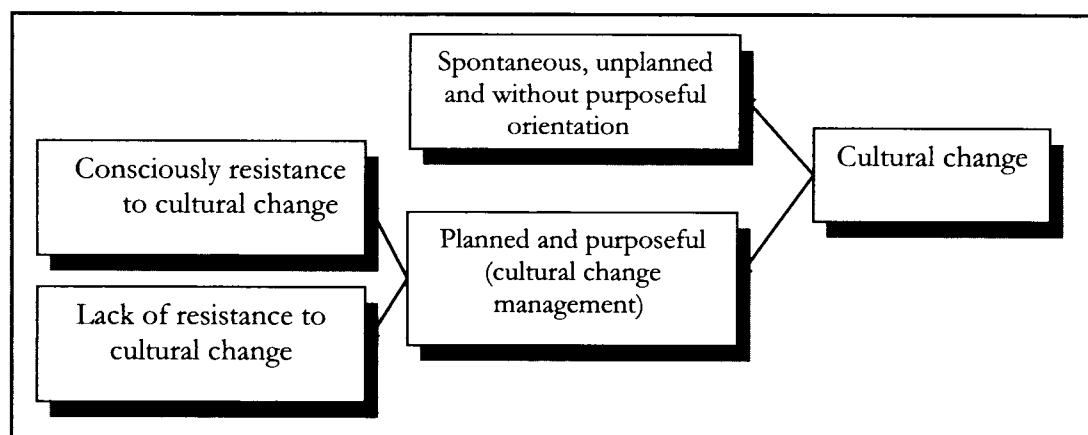
1-Diffusion: It is a factor that is transferred from a culture to another based on input of a factor. In the past, changes process was very slow, but nowadays, it is otherwise and changes trend is very rapid. Averagely, changes are made in the science and knowledge every 5 years. Therefore, conformity to the processes is not possible (Rivier, trans. by Fokouhi, 2005: 256-257).

2-Population: Quick increase or decrease of population of a society led to cultural development in that society under impact of events such as storm, earthquake, flood, war etc. that is observed simply.

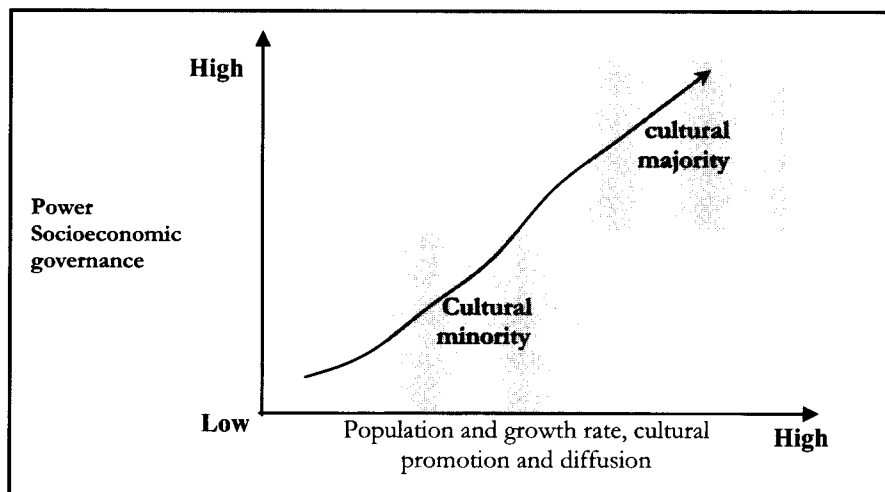
3-Immigration: Group immigrations to new places and geographical environment change etc. causes they to be less controlled socially, thus offense among this group is occurred highly. Whereas social pressure in county was higher thereon, but public control in destination city has lower effect, they don't fear from public control. The crime talent in immigrant is higher and because they dear from police only, hence cause cultural change.

4-Political regimes: Change of political regimes

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▲ Chart1.Cultural change; Reference: (Robins, trans. by Arabi, 2007:90)



▲ Chart 2. Definition of cultural minority and majority criteria; Reference: (Robins, Trans: by Arabi, 2007:91)

Minority group	Majority group	
Absent	Present	Worthful behaviors
Absent	Present	Worthless behaviors

▲ Table 1. Formulation based on deficiency theory; Reference: (Robins, trans. by Arabi, 2007:91)

or their coming on power may be very effective on cultural alterations, because political leaders commonly have specific ideologies that intend to institutionalize it in the society and accordingly achieve their goals.

5-Cultural shock: This phenomenon is occurred somewhere that people feel that inconsistency is occurred in their living environment that is called cultural impact or shock. Whatever distance between a culture that man lives therein and a culture that entered therein newly, the shock is less and vice versa.

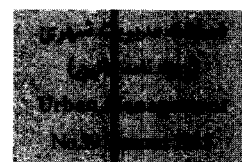
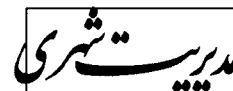
6-Acculturation: The culture is product of social life. There is a kind of collective temper in creation of culture. If a phenomenon is not accepted by a group, no culture is incorporated. The process of cultural transfer from a society to another is referred to as “sociability or acculturation”. The cultures are usually connected to each other and attraction and repulsion state. If there is a balance between two cultures, then cultural interaction exists therein, but sometimes a culture is dominant and due to having mass media at their disposal, surrounds the other microcultures (Sharon, trans. by Sab-

ouri, 2005:153) and (Rivier, trans. by Fokouhi, 2005:252).

Major theories of cultural change

1- Deficiency theory

Major part of theorizing and research on ethnic and racial minorities included reflection of values, criteria and ideology of majority culture and not social and cultural reality of studied population, because the observers own were majorly included in dominant culture. So, minority cultures are systematically prejudiced. Formulation of these observations is commonly as below: A series of valuable cultures for majority culture is not seen among the minority and a series of tangible behaviors exist in the minority culture that is worthless as perspective of basis culture (majority) (table 1). The most important problem of such formulation is that so social reality is made by consensus of majority society and is measured by criteria that may have no basis and validity in the observed society. It is because historical ground and mentalities of two societies and plenty of local factors of each one is different.



2- The dual perspective

In order to understand the ground of minority people's life precisely, Norton (1978) proposed to observe the man in two distinct systems:

Nurturing system and sustaining system: nurturing system includes the man, main family, great family and close society. Sustaining system includes greater ground (larger society) and consists of educational system, political system and economic and goods and services providing system. The children at first are grown in the family and learn the values, beliefs and orientations of family (chart 3). When the people are exposed to sustaining system, the values and behaviors included in requirements of majority society may be conflicted to primary context (nurturing system) learning and its result may be covert and overt humiliation. Worthful behaviors in a system get worthless in another system and self-reliance is diminished. In this viewpoint, human growth under combination of cultural effects arising out of both systems is seen (Robins, trans. by Arabi, 2007:91).

3- Bicultural sociability

This theory was an extension of Norton's theory that assumed the family culture as a system distinct from culture of a larger society. The primary theories of cultural conflict demonstrated that conflicted cultural norms cause deficiency in the minorities' sociability and the minorities are trained in both cultural deficiently. New theories explain that a bicultural sociability process may occur that can come over

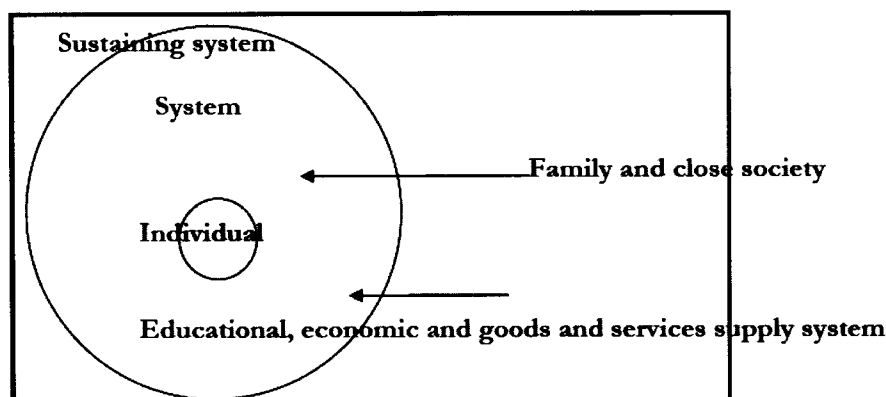
both cultures. A man with minority culture is accordingly dominant on both cultures and is able to talk in two languages and perceive two distinct value contexts.

4- Multidimensional Transactional Model of Bicultural Identity

Ethnic identity means feeling of attachment to an ethnic group and an extent of perceptions, thoughts and emotions of man that are arising out of sense of membership in an ethnic group. Bicultural sociability that was propounded by Galen (1978) presents a multidimensional transactional model of bicultural identity therein bicultural sociability is assumed as a process that intermixes personal factors at a time situation. According to this model, man can be bound intensively to both majority and minority cultures or vice versa belongs to none of them. If attention to each one of cultures is shown by two axes X and Y, following model (chart 4) is obtained:

1. **Traditional compatibles:** Ethnic minorities are first generation that are involved in traditional and familial cultures and continue these customs in an inflexible manner and don't pay attention to the majority and skills learnt in family are used everywhere (nurturing and sustaining system).

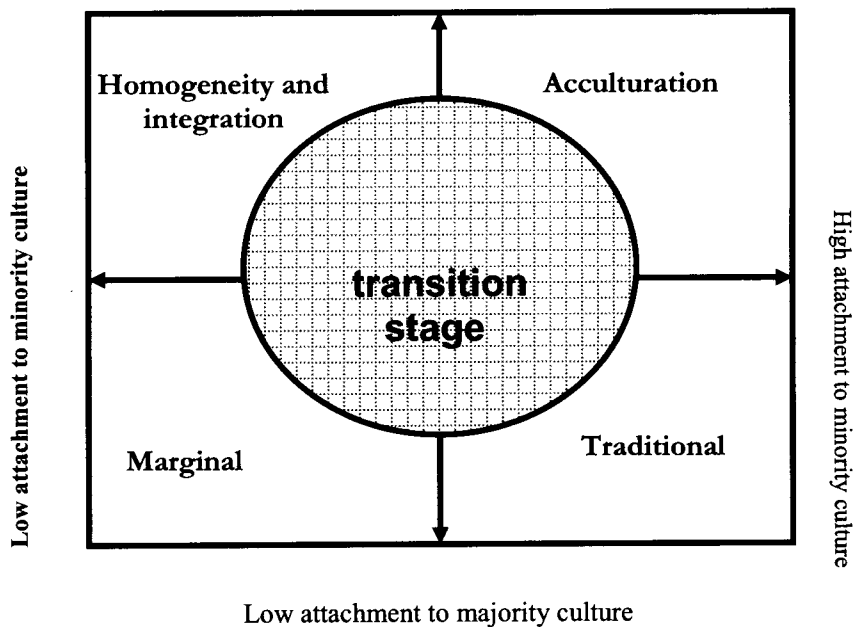
2. **Marginal compatibles:** Who are exposed to cultural conflict (inconsistency of majority and minority culture values) and due to stress and not affording with inconsistent requirements of two systems, are bound to values of



▲ Chart 3. Interaction between nurturing system and sustaining system; Reference: (Robins, Trans: by Arabi, 2007:92)

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▲ Chart 4. Multidimensional Transactional Model; Reference: (Robins, trans. by Arabi, 2007:92)

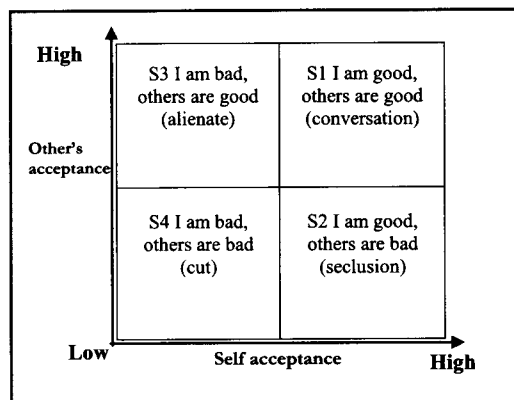
both systems lowly.

3. Homogenous compatibles: Minorities which are nurtured in educational system of dominant culture and due to school norms, accept the culture, language, customs and skills of majority culture. These people are highly bound to majority social values and lowly bound to minority social values and are blamed by minority.

4. Acculturated compatibles: People who know the skills of both cultures and are dominant thereon. A real two-cultured person easily unified to both cultures and has a complete series of adaptive skills for both nurturing and sustaining systems (Robins, trans. Arabi, 2007:93).

5. Cultural change strategies: Each one of cultural theories focus on specified strategic orientation that may be classified based on self acceptance level and others' acceptance level in 4 categories (chart 5).

These basic strategies may be used for analyzing quality of cultural change orientation from micro level (individual) to middle level (in a country) and to macro level (international relations). In addition, four strategy formulation models are identified concerning culture based



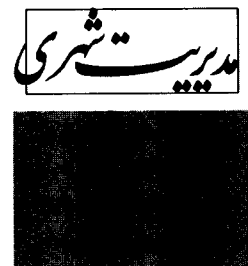
▲ Chart 5. Orientation strategies of cultural change; Reference: (Robins, trans. by Arabi, 2007:92)

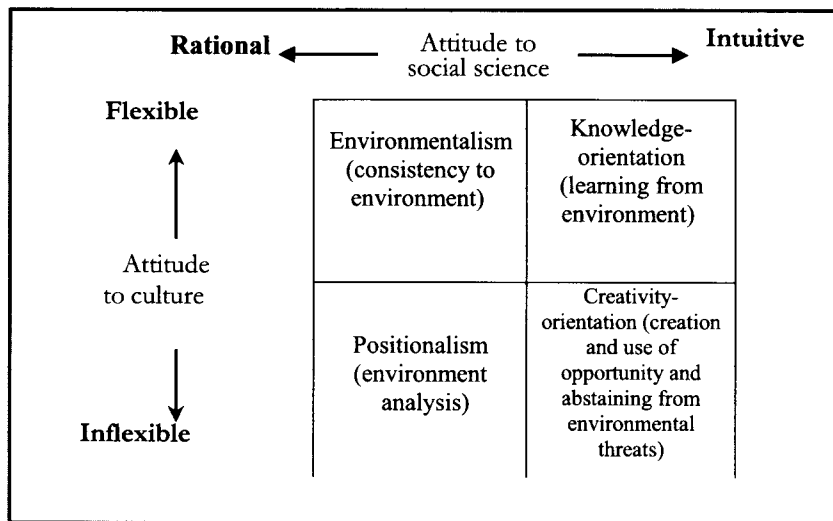
on two general approaches including as below:

1. Approach to social science;
2. Approach to organizational culture

Upon dividing philosophical viewpoints about approach to social science (Barso perspective), two major attitudes including intuitive attitude and rational attitude are inferred and based on four cultural factors (Hofstede), two main cultural types are obtained including flexible culture and inflexible culture (Arabi, 2006: 92).

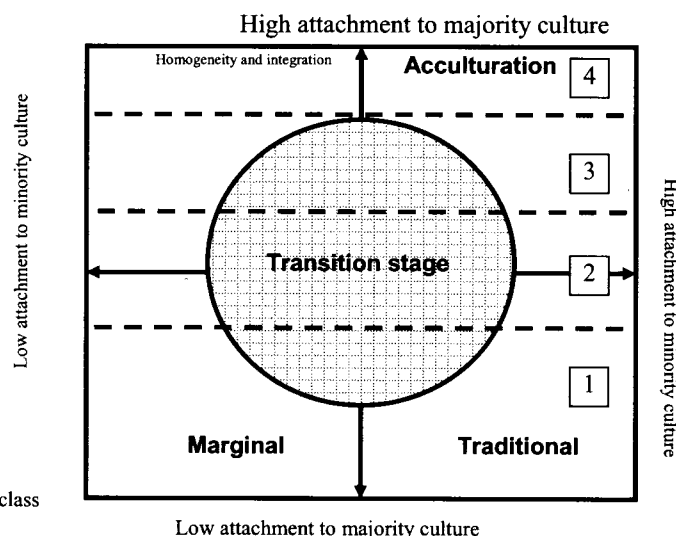
Analysis of attitude to social science matches to the analysis of quality of decision-making for utilization in environment conditions and in taken into consideration in a rational to intuitive spectrum (chart 6).





▲ Chart 6. Strategies for adaption to varied cultural conditions; Reference: (Robins, trans. Arabi, 2007:94)

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- 1- Low class
- 2- Working class
- 3- Middle class
- 4- Middle to upper class

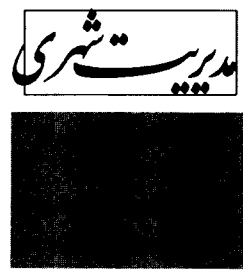
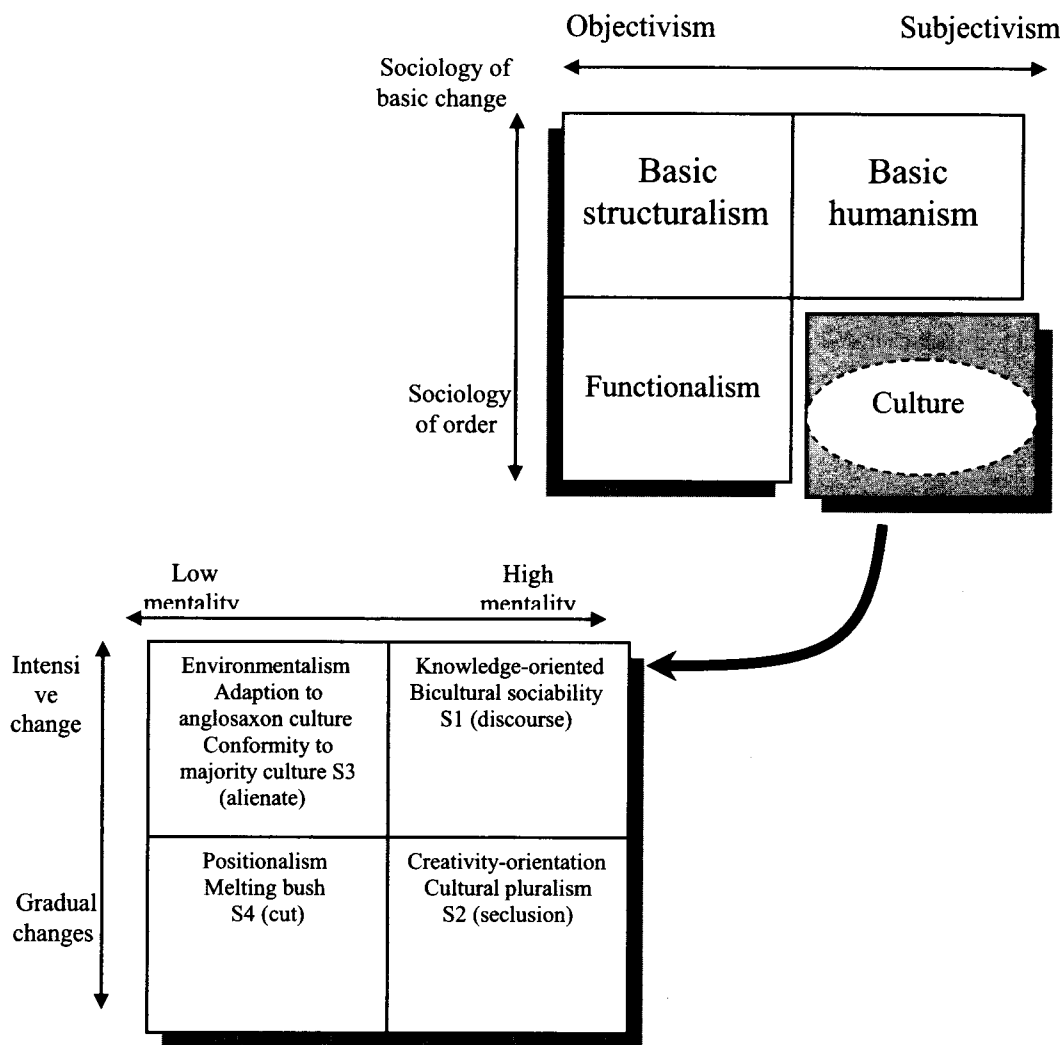
▲ Chart 7. Bicultural identity model and economical class; Reference: (Robins, trans. Arabi, 2007:95)

1. Positionalism: In this model, strategy is defined as analytical processes structured by environment for selection of suitable situation for superiority over rival. Attitude type in this model in terms of classification of attitude to social science is rational. Cultural flexibility of man in this state is lowly.

2. Creativity-orientation: In this model, strategies mostly tend to establishment and creative use of environment with the purpose of more operation. Attitude to social science is related to long-term and extensive perspectives and necessarily precise policies and plans and clear

positioning are not under consideration. Cultural flexibility of man is lowly.

3. Environmentalism: In this model, consistency to environment is analyzed with a flexible attitude to culture and a rational approach. In this state, survival is the most important goal and rational recognition of environment and high flexibility is necessary for conforming thereto. In other word, minimization of human artifacts and adaption to environment rules. The hidden default in this strategy is that natural environment has been organized to its best state and it is better the man to make the



▲ Chart 8. Placement of different cultures on Morgan matrix

least manipulation therein and not disorder the rules.

4. Knowledge-orientation: In this model, with the purpose of learning from environment, a flexible attitude to the culture is adopted. Approach to social science in this state is more close to intuitive attitudes.

Academic theories mention that behavior is neither fixed nor simplistic. Here, for better understanding of bicultural sociability complexity, three important concepts are investigated including ethnic class, marginality and temporary transition and time continuum.

Social class and ethnicity: According to studies, members of different ethnic groups enter into middle social classes with a background of

poverty and discrimination. Although a lot variables affect social motivation but racial characteristics (color of skin and ethnicity) as primary barrier keep their position. (chart 7) shows the relationship between adaption of ethnic minority to economical class in a dawning. Bounding upon majority culture (axis Y) has a great effect on economical class of people.

Marginality and temporary transition

As mentioned above, bicultural identity is evolved in a dual sociability process (firstly to primary cultural context and later to dominant cultural context). Age is an important and key variable that affects acculturation trend. Problems related to acculturation that include age and race of men may result in non-integration

between family members. Commonly, youths become acculturated quicker, whilst adults keep the traditional cultural behaviors, values and roles. Accordingly, various problems are occurred. Firstly, cultural transfer and acceptance of Anglo norms may be difficult during critical growth periods and is emerged particularly within maturity period that child is conflicting for collection of both cultures under a new identity. Anglo norm of individual identity may be in conflict to norms of plenty of cultures that emphasize on group identity and responsibility to family members and not the individual. Matured people that are experiencing bicultural conflict continuously may not be able at this stage to diagnose quality of dual skills controlling and get involved in transitional state or transition. Here, transitional means transiting through marginality that is the product of instability in values and norms. Transient marginality means (a) focus on acculturation created due to interests, values and behavioral options competing in a social situation and (b) accompanying emotional discomfort and cognitive inconsistency that man sustains. Supposing that in the western society, maturity naturally means transitional period, thus in this stage marginality is not unexpected for plenty of matured people (Robins, trans. Arabi, 2007:94).

Time continuum

To understand the complexity of specific bicultural sociability activities, it is necessary to move beyond presented inductive model of adaptive options, in two-dimensional models. Galan at first presents the time continuum by axis Z in a 3D transitional model of bicultural identity, and later increases social situations context on the time continuum. True biculturalism has been defined as below: cultural adjustment and an acquired ability for individualism and possession or use of all values and behaviors that increases accessibility of man to conformance to a specific social situation. A more precise analysis is provided when two following factors are taken into consideration:

1. Variety of social situations over time that bicultural people face it.
2. A manner that keeps and reserves their behavioral-value options in the exchange to cultural specifications.

Discussion and conclusion

Our cultural security system is poor. It means essentially our efforts in relation to security are in general referred to political and military layer and reach to economic layer in next rank, and NGOs are not included in this prioritization. However, threats and impacts that are applied in cultural layer to NGOs and the people, have long-term effects and although its effects are not appeared soon, but within long-term are applied to the roots and create mortal dangers. The scholar leader of revolution, Ayatollah Khamenehi explained about appropriate strategies as below: The topic of culture is not similar to the military force topic. Culture differs from battlefield. Every field requires its tool and weapon. We don't worry if even opponents of Islamic Republic of Iran claim against Islamic Republic of Iran by subtle ways and cultural procedures and using cultural tools, and propagate the opponent thoughts. I don't worry and in addition sometimes feel satisfaction, because due to raising this opponent thought, the mobility thereof in our society is pleasurable and something good. Thus, we don't hesitate it, but welcome it. However, it is necessary to incorporate a public mobilization among literati, intellectuals, authors, poets, artists, filmmakers, scientists and professors for coping with cultural invasion that the enemy led. In another speech, he bided: "cultural combat may be responded by reprisals. Cultural work and cultural invasion may not be responded by gun, here the gun is pen" (Imam Khamenehi, 2005:15).

Appropriate strategies for social solidarity and prevention of cultural attitudes activity

1. Presenting citizenship concept plan instead of us, others, culture, ethnicity etc.;
2. Development of participatory institutions and NGOs and negotiations;
3. Efficient political sociability and leading

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NGOs and family and school institutions for training new generation and filling the gap;
4. Non-humiliation in the art and literature context etc.

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فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 29 - 44 ■

Received 19 Oct 2014; Accepted 13 Jan 2015

Privacy of House in Islamic Culture with Emphasis on Iranian Citizens Perception

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Abstract

The house is a microcosm of culture and civilization because the primary elements of society, individuals organized along with the family lines, are born, raised and educated in them. The strength of the institutions of the family and house denotes the strength of a society and the verve of its cultural and civilizational agenda. Similarly, frailties in the institutions of the family and house denote frailties in a society and in its cultural and civilizational agenda. The house dominion is where people rise and fall, that is to say, where people either succeed or fail in managing and conducting the most crucial aspects of their lives. Housing is where the epicenter of the rise and fall of cultures and civilizations lies. Thus, some of the chief causes of the decline of Islamic culture and civilization, if properly examined, could be related, one way or another, to the complex subject of housing and its own decline and its causes. Likewise, some of the main cures and catalysts for the revival of Islamic culture and civilization could be found right in the subject of reviving genuine Islamic housing. Indeed, Islamizing housing today could be a turning point, as well as an engine of growth, insofar as a total recovery and revival of Muslim cultural and civilizational consciousness and involvement at a world stage is concerned. According to Islamic teachings, human being moves towards perfection if conditions conducive to His/her calmness are realized at home. According to this view, 'house' represents 'family' and a Muslim's home is regarded as Sacred and private. There is an inherent tendency in human being towards privacy, the most important of which is realized at home. Therefore, if privacy is trespassed at home, it may no longer serve as a home. As traditional houses have assumed a more architectural manifestation due to religious principles, identifying these principles and converting them into housing rules and regulations are among the major concerns of urban planners. In this paper also we are going to speak about Islamic idea of privacy of housing, has tried to pay attention to Modern Architecture ideas which is the dominant style in Muslims land.

Key Words: *Islamic architecture, house and family: privacy; Iranian house.*

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(*) This article has been prepared on thesis; that has presented by Shahin Ilka in faculty of architecture in central Islamic Azad University.

Introduction

Circulation pattern is defined differently in different cultures showing the social relationships among residents. The analysis of homes in seventy-three cultures showed that “the degree of space division in homes depends on the social and political complexity of a given culture”. Meanwhile, the

Islamic culture, with its strong emphasis on human’s inherent needs, has sought to create an environment in which both physical and mental well-beings could be catered for. There is an appropriate behavioral pattern in Quran teachings, prophet’s life and other holy apostles. Islamic teachings describe Muslim’s a Muslim’s acceptable behavior, so home communication system must reflect these patterns and facilitate meeting of the religious duties. Considering the intrinsic need for privacy, and the fact that civil the residents have not taken care of it, this study highlights the role of privacy and its effect on the behavioral patterns of the residents. This paper also examines the influence that attitudes toward privacy and hospitality has had on the layout and use of traditional dwellings in Persia. The dwellings take many different forms, from a simple tent to a multi-courtyard house. Internally, activities may be differentiated spatially within a single room or may be allocated to a separate and distinct area of a building complex. Following the discussion of social and cultural background, the paper first addresses the temporary dwellings of nomadic people, and then permanent dwellings. Art moves human beings and satisfies their emotional dimensions. Artistic emotional response inspires a man to shed light on the profundities of human existence as well as facial appearance of the universe. One universal explanation on the subject of art that has been acknowledged by all thinkers and aestheticians of all the times is „that “art, a creative course of action is the expression of frame of mind, feeling or spirit.¹ In the entire expansion of art the space-time aspect plays an crucial character. In every

epoch and at every phase of human rational advance art becomes a crucial and successful standard to give details of man’s inner potentialities. In every religion it has its exceptional place and a crucial character to engage in recreation importance of the true spirit of that religion. Religion and art have their close correlation. The development of the correlation of religion to life has been analogous to the advance of art. The idiosyncratic rationale of art, according to various philosophers and aestheticians, is on the whole advance of human character and the improvement of his mind’s eye. Both religion and art contribute to their widespread endeavor to reshape or recreate, the world with a view to communicate an integrated vision to man’s personality or give him a holistic point of view upon human existence as well as the encountering celestial circumstances. From Descartes until Kant the rationalist, thinking and attention to phenomenon’s found their strength. Thought which became scientific in specified economic formats with support of socialism was created kind of architecture in West that does not let another previous artistic ideas to show their principals (Diba, 1374, p 46). Therefore, in this paper also we are going to speak about Islamic idea of privacy of housing, has tried to pay attention to Modern Architecture ideas which is the dominant style in Muslims land.

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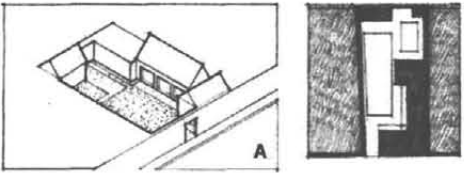
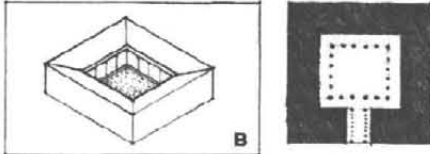
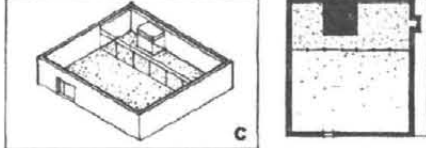
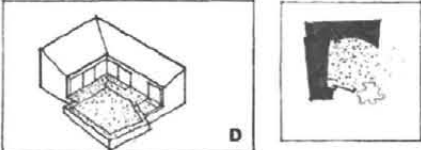
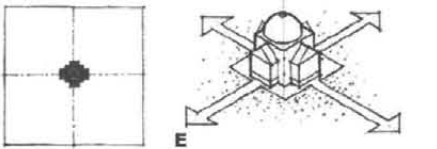
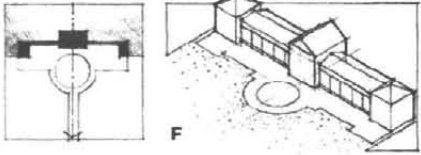


▲ Fig 1: Main research components; source: authors.

Lecturer Review

The analysis of words synonymous with home shows that home is a place within certain borders. It is a place where one seeks quiet and peace after daily activities. Human being needs internal peace and social security. According to the Holy Quran, spouse, night, sleep, and at higher levels and stages, belief in God and holy discretion are the factors which

bring about peace and quiet, it can be inferred that some of these factors could be found at home while the conditions for understanding others are also realized at home. In response to the necessity of privacy at home and its relation to human calmness, we analyze the word "Harim". Harim, its plural forms being "Horom" and "Aharim", has the same roots as "Hormat", "Ehram", and Haram, all being

<p>A. Form a wall along an edge of its site and begin to define a positive outdoor space.</p>	
<p>B. Surround and enclose a courtyard or atrium space within its volume.</p>	
<p>C. Merge its interior space with the private outdoor space of a walled site.</p>	
<p>D. Enclose portion of its site as an outdoor room.</p>	
<p>E. Stand as a distinct form in space and dominate its site.</p>	
<p>F. Stretch out and present a broad face to a feature of its site.</p>	

▲ Table 1: Relationship of building form with its surrounding and privacy; Source: Ching, 1996, p. 96.

derived from “H, R, and M”. As for the word harim, the following definitions made by leading Arab etymologists could be brought here:

1. What has been forbidden and therefore, should not be touched or entered.

2. Whatever that must be respected and protected.

Therefore, human’s privacy is one of those things, family being one of them that he wants to protect. Furthermore, privacy refers to a set of special conditions for people or anything else that is enclosed by four walls and a roof called a house and is not and should not be accessible for anyone except those who are the residents or the owners of the house. Words like “harem, harim and haram” have been used many times in the holy Quran. For example, with regard to place and time, we can see those things coming with “haram” as “haram city”, “haram home”, or “haram month”.

Housing in Islam View

Sometimes in verses and traditions we can see two words which are related to human spiritual affairs (bliss and misery) their meaning is human beings who can reach to heaven or to hereafter that both of them would have been

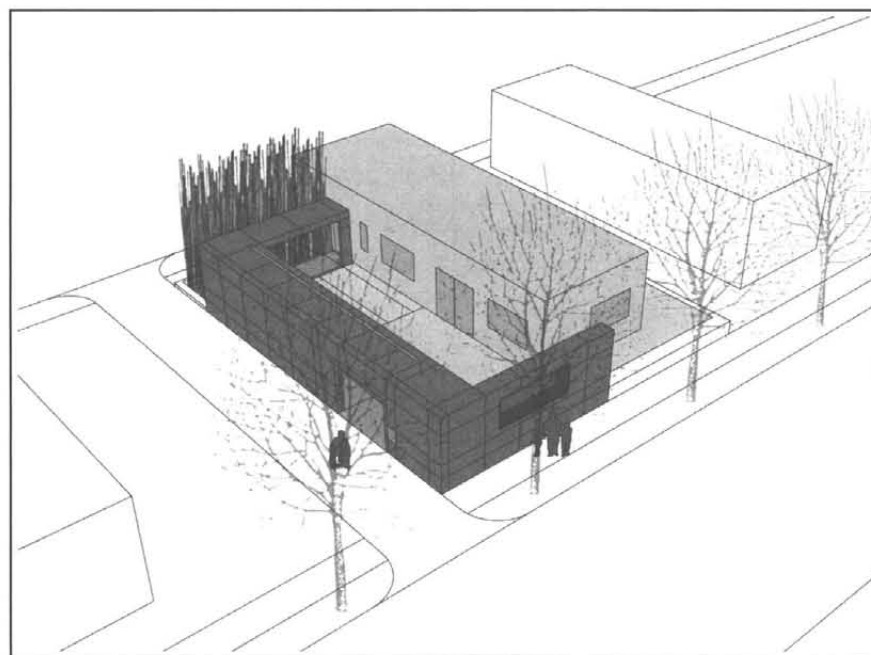
by faith and piety or by blasphemy, idolatry and sin (Hood, verse 105-108). And sometimes this two words use with how using material pleasures like good spouse, big house, good vehicle and good neighbor. Prophet says, “From Muslim prosperity is big house and good neighbor and good car” (Sheikh Sadoogh, 1403 Hejri, p183). So, Islam supplies both two types of blisses, spiritual and material that involve big and good house. But which type of house is in Islam idea can be important and noteworthy. In spite of many who evaluate a good house with Western principals, Islam has unique characteristics for home which attention to anyone can prepare worldly and hereafter bliss.

Suitable land and Islam

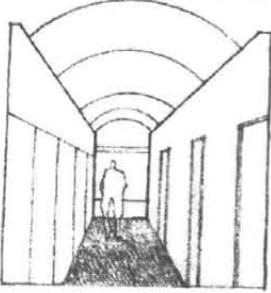
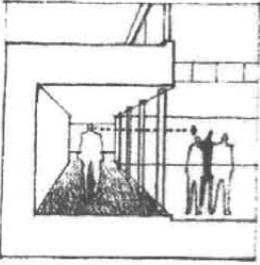
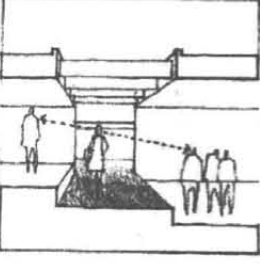
The first important feature for suitable housing is its land. In addition to location and future economic growth which is considered by buyers of lands today, Islam explains another three elements to build lands, like: good air ,much and sweet water and flat and smooth land. Ali (AS) stated, “Housing is not desirable, but with three things: good air, plenty of water and fertile ground”(Hassanebn- Shoebeh Harani, 1404 Hejri.p320).

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▲ Fig 2: modern architecture with no privacy concept; source: authors.

<p>Enclosed, establishing a corridor which has relationship to the space and links by the entrance into the wall.</p>	
<p>Exposed in one side, creating a balcony which delivers the graphical and three-dimensional connection with the spaces which it links.</p>	
<p>Exposed in both edges, forming the row of pillars walkway that turn into physical addition of the space it passes from side to side.</p>	

▲ Table 2. Circulation of space and privacy; source: Ching, 1996.

1. Location: The location of life and those who have direct relationships in their social interactions have significant influence on human manners. In other words, cities and buildings are important characteristic of displaying the identity of civilizations, cultures and human societies. One of characteristics of cities is their appearance that can be used as one of the characteristics of cities identity and also the identity of their residences. Surely there are differences between living among Muslims or various religions. According to Islam order the most suitable place for Muslim living is among Muslims, and mixing with non-Muslims and having spiritual relationships with them will create negative effects on individual

and family, because of the effects of environment on man and his family. Certainly, areas with more complete Islamic culture aren't like areas with no Islamic relationships and culture, for example daily pleasant voice of Azan and Muslim interactions, even if man tries to keep himself and his family in their Islamic thought healthy, but he cannot deny the negative effects of environment. In a saintly Hadith (holy sentence), God reveals to one of his messengers, "Say to believers: don't wear my enemies clothes, do not eat their food and don't use their way in different matters, in this case you are my enemy too" (Sheikh Sadoogh, volume 2, p 348). In other words above Hadith tries to vocalize that relationships to any group will

guide man toward it unconsciously. Another important point about selecting land or home is peace, for living in noisy and crowded places will decrease peace and will have individual and family problems. God knows home too as a place of peace and relaxation and states, "God puts your home, a place of your calm" (Nahl sura, verse 80). From this verse can use that man must not buy or build his house in a place which puts he and his family in to danger. Imam Ali (AS) also emphasizes on suitable home and states, "The blessing of a house is its good location and large yard and its good neighbors" (Tabarsi, 1393.p 126).

2. Building: Construction is developing rapidly today, and everyone tries to provide the newest plan and design for the most suitable home. Unfortunately, the only issue which is not considered in constructions is attention to Islamic –Iranian culture and following from alien culture. Iranian architecture going far from Islamic culture towards Western culture is the most important problem of culture lives. One of the important places to absorb tourists in our country is Islamic architectural wonders which were built by Islamic principles, for example locations of drinking water wells, sewage and locations of WCs in building are considered in Islamic architecture (Al-kafi, 3 volume, p7). Imam Sadegh (AS) stated,

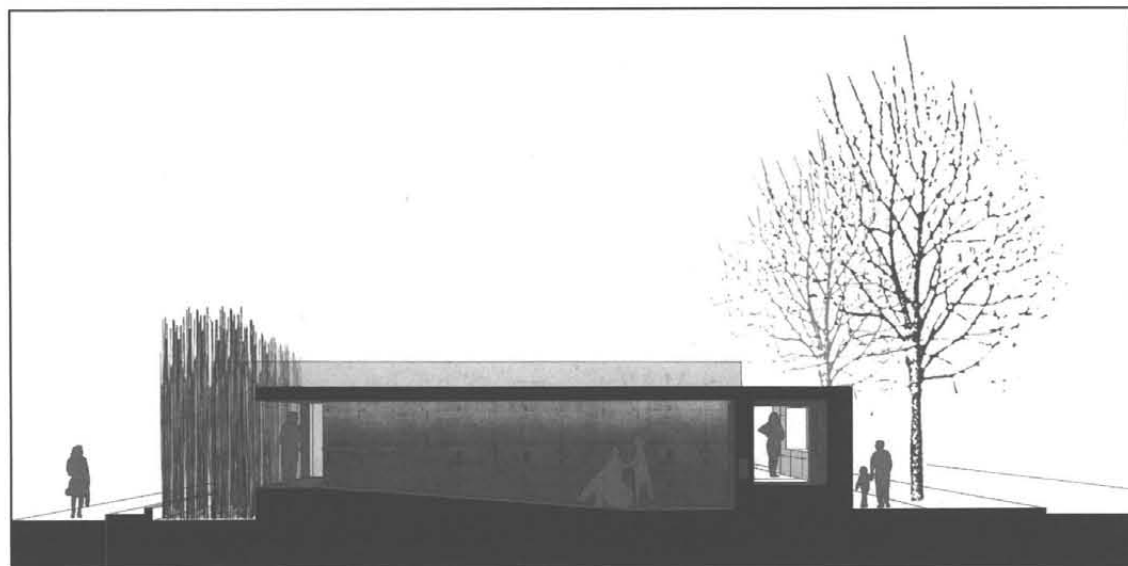
"Do you see that WC which was built in the most hidden location of home is from the goodness appreciation of home."

3. Architecture: History, culture and our daily lives have mixed into house and home, whereas home is not just for survival and survive, but it has imposed its requirements to all way of human life and existence integrity and even all details and element of culture which mean religion cosmology, arts, knowledge, technology, economy, politic myths and aesthetic all are mixed into house (Fazeli, 1386 solar, p 32). Indeed, type of housing architecture guides most of our behaviors. House is in captivity of man before man builds it, but man is its captive after he builds it, because he forms it prior to construction but it will form his behavior after construction. If we design buildings maps according to native culture in the designing stage, there will not be any contradiction between our culture and culture which building imposes to us. But, if architecture be according to alien and non- native culture, there will be contradiction between Muslim culture and building culture. This contradiction may be problematic firstly, but the culture of building can be overcome by passing of the time. These changes are so calm which no one will pay attention to them, but with comparison of these two eras it can be touched

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▲ Fig 2: modern house have not privacy Privacy and Avesta

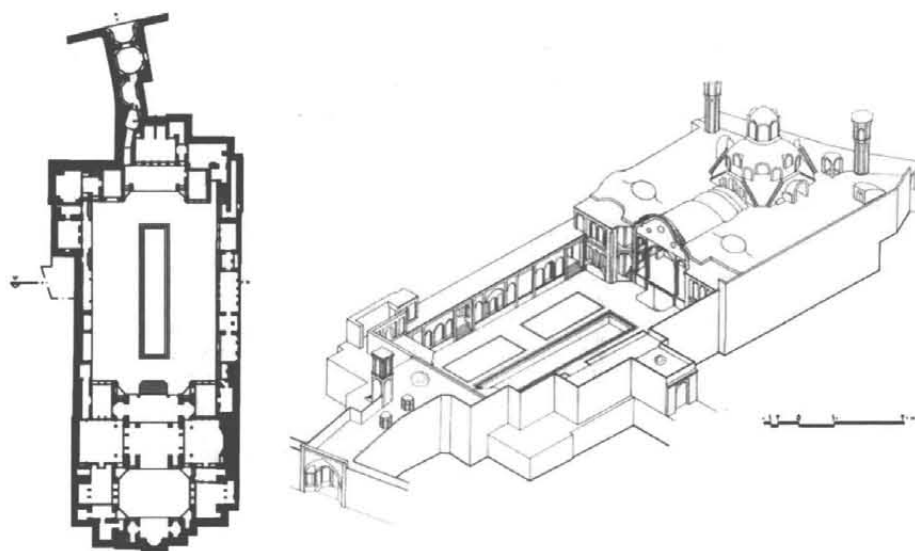
after times. First, this change will happen in behavior issue, and then changes of behavior will cause changes of culture. For example modesty is one of the clearest characteristics of Islamic culture, and Islamic architecture has complete harmony with this characteristic. So, in Islamic architecture not only inside of house is not visible from the outside, but a lot of houses entrances are built so that the door is open, yard and inside of home is not visible under any circumstances.

Zoroastrianism is one of those religions which have influenced Iranian culture considerably of course, prior to Islam. Researchers believe that "other than Zoroastrianism, very few religions have put such an emphasis on purifying the soul and the body 1 and body"[30]. Although many parts of Avesta, Zoroastrians' book, are not available now, those parts which are currently available, stress the need for thinking in quiet as when it says: "O creator, I learned you well when my good nature came to me and taught me the best way to acquire knowledge, which is in fact, thinking in quiet". It is clear that this is possible if the right conditions are present at home. It must be a home compatible with the climate and not subject to trespassing by others. It must be mentioned that the current Avesta is not

exactly the same as the first Avesta. It includes parts of Gatha's old Avesta and the new Avesta. Some researchers refer to "Vandidad" as a concluding part of the new Avesta. This part which is quite different from other parts and somehow incompatible with the first part represents the creeds and customs of the western Mad and includes most of the religious rules and details. For example, there are some orders according to which women's rooms should be separated during their periods. It says "there should be nothing on her way and the land must be dry wherever she stays so that the land would not be contaminated and they should construct a building for her one half to one fifth above the house so that she cannot look at the fire or she may pollute it". There is an instance of this compatibility of the house with Avesta orders. Although, there is not any direct information available on privacy and hospitality in the Avesta, the following results are understood from our field studies in the quarter:

1. Entrance proceedings: A vestibule space and blocking visibility from outside. In some houses one and in some others there are two door bells.

2. Public and private courtyards: They usually have three yards that one of them is lead-



▲ Fig 3: Brojerdiha home ground floor plan & perspective (Kashan-Iran)

ing to the kitchen and the other one is leading to the restroom, which likes Zoroastrian homes in Yazd, does not have a well so that the soil would not be contaminated. Instead they use a kind of store house whose content can be carried away [36]. Beside the bird houses and the bam birds' house and barn, there is also a place for dogs.

3. Appearance and the entrance to the alley: Some of them have separated roofs. There are no windows facing the public ways except some opaque ones located at a high position.

4. The private and public parts: The dining room and children's room separated form parent 'rooms. The number of rooms and the joint between the spaces separates women in certain times.

Justice and Proportion in Islamic Architecture

Justice in housing means putting everything or any spaces in its right place, and in its opposite is oppression which means putting anything or space out of its place. One of justice meanings is being harmonious and balanced, that Guran says, (Rahman sura, 7 verses). We have balance in building the world (Motahari, 1349 solar, p 8). Here, justice means proportion and in its opposite is in concinnity which has been used in architecture.

Traditional Architecture in Housing Plan

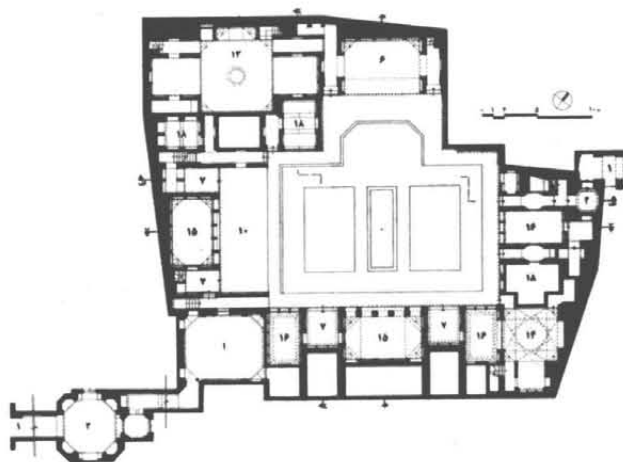
Islamic teachings have been used in housing plan by traditional architectures; he uses his

love of God and his understanding of divine truth to plan his designs from world plan and its geometry and the creation complex. He tries to use something which has been caused his love of God to show them in his buildings designs exactly. Housing in architecture based on Islamic teachings is the essence of tranquilly, so it is the matter of love and worship. Holiness of mosque is used as the pattern of housing by traditional architecture. As mosque pattern which yard is in center and on the main axes, original places have been located according to orientation toward that sacred place (KABEH), this order uses in house pattern but in smaller scale. Thus, mosque pattern is repeated in house and sanctity, love of God and worship is in home too (Masaeli, 1388 solar, p 36).

Privacy and Islam

In Islamic teachings, privacy has been given a holy value and caring for privacy starts with believers themselves. Based on this, a Muslim man must avoid looking another women and a Muslim woman must keep from looking at strange men (any man who is not her father, brother, son or husband and so forth). This way, there is always a good level of privacy present, regardless of whether whether Muslim man or woman is at home, mosque, school or street. Knowing this, God talks about this kind of privacy in the Holy Quran:

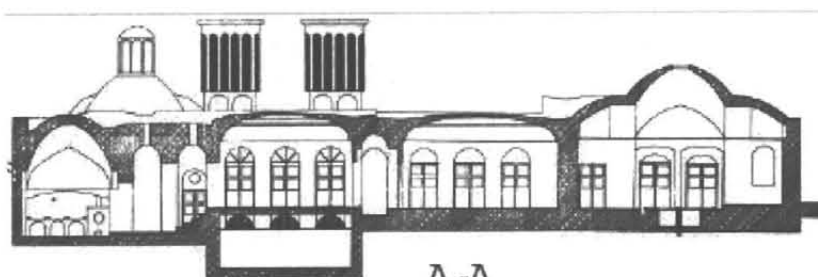
Say [O, Messenger!]: to the believing Men not



▲ Fig 4: Abbasian home ground floor plan (Kashan-Iran)

to stare in the women's eyes and that they should have control over their carnal desires; and this is more appropriate and purer for them; and Allah is the absolute knower of what people do (30) and say to the believing women that they should not stare in the men's eyes and they should subdue their carnal desires; and they should not display their ornaments except what is customary to be uncovered] such as bracelets and rings [and let them bring their head coverings and scarves over

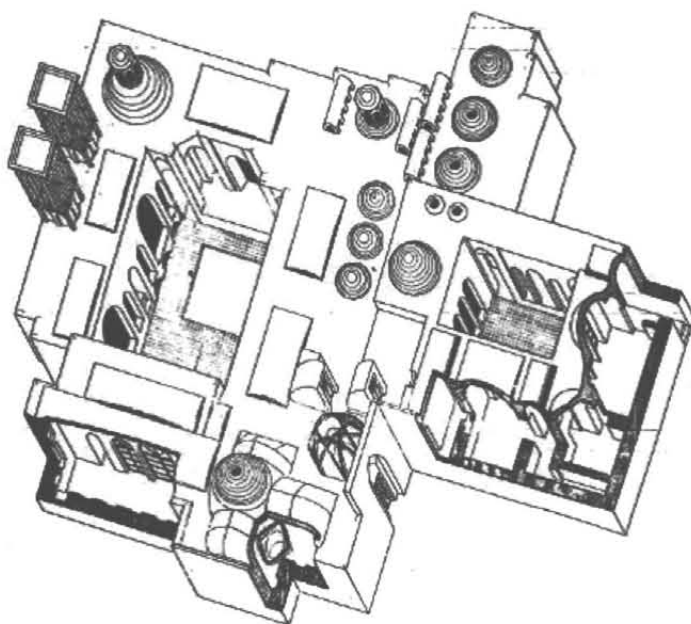
their bosoms] if they do not wear veils [and they should not display their adornments save to their husband or their father or the father of their husband, their sons or their husbands' sons, their brothers or their brothers' sons or their sisters' sons or their female slaves or their male servants who are eunuch or who are unaware about women's Sexual organ; and they] the kids believing women [should not strike their feet in order to show the ornaments of their ankles to draw attention to themselves.



A - A



B - B



▲ Fig 3: Joint spaces, proceedings for entering the pond room near the central pond, the light source in the center and the light movement during different hours showing the time and the direction of the space providing a quiet and attractive place & Isometric view (The first case in shahr quarter).

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And O, you who believe! Turn you all to Allah with repentance and obedience so that you may receive salvation. (31)

So, it is incumbent upon believers to not only avoid looking at unpleasant things but also to cover their sex organs so that they take care of other people's privacies as well the social milieu. This is not just limited to covering; it includes home and other spaces regarded as being private, where people may uncover themselves or show their beauties. In other words, all such places are private and have the same rules as those related to the Islamic covering. It must be said that Islam offers specific rules with regard to the internal structure of such places. Such places, for example, are supposed to hide secrets and shortcomings as Imam Sadegh holds: It's good for a believer to have a home wherein he can hide his secret life against others.

Therefore, it can be concluded that the structure of home, as far as the Islamic culture is concerned, should cater for family and home privacy. As said before, the word "harim" is similar in meaning to the word "horimat" and any violation of such privacy has been forbidden. Thus, home privacy entails family privacy too. This privacy is specified through certain limits. Of course, this assumes different forms and structures depending on the conditions. It is undeniable that privacy has been a major concern in Islam and its trespassing needs the

provision of certain conditions.

Privacy in Islamic culture

God has put 'salam' meaning "hello" as a nice and beautiful salute among Muslims to utter it whenever they see each other. The truth behind it is the development of safety and health.

Islam has emphasized on asking for "permission" before entering someone's home. This permission covers social relations among Muslims, entrance of others to neighbors' homes, and children's entrance into their parents' room. The holy Quran stresses this observance of privacy as follows:

"O, you who believe! Do not enter the houses other than yours without asking permission; and salute the house holders; this is more appropriate for you, and you should be mindful about this advice (27) And if you did not find anybody therein and your request for permission was not responded, do not enter the house until permission is given to you; and if it is said to you: "Go back", then go back; this is more appropriate for you; and Allah is the absolute aware of what you do (28)".

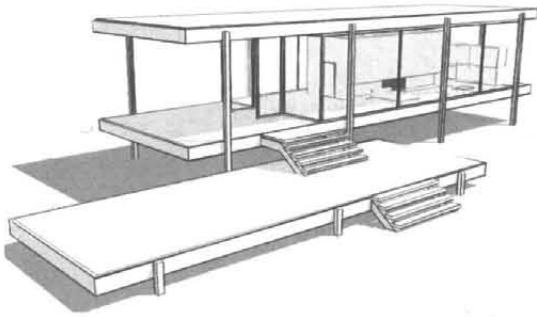
Although getting permission was not so common among Arabs at the time of the prophet Mohammad, the above verse asks them to take care of privacy of course the best way to learn is by looking at prophet's own behavior, especially, when he wanted to enter his daughter's, holy Fatima's home. When he got behind



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The system of entering others' houses	1- Announcing the entrance and uttering a kind saying by which the home owner could be notified.	
	2- Saying hello to home members whose reply could be a sign of an initial agreement and safety.	
Entering parents' rooms	Before puberty	Permission three times
	After puberty	Permission every time
Architectural patterns	Home entrance, division of spaces, variety of rooms, separation of children's rooms from those of parents, separation of children's rooms after certain ages	

▲ Table 1: The system of entering others' privacy according to the holy Quran and Alimzan Exegesis



▲ Fig 4: Farnsworth house, USA, designer: Ludwig Mies van der Rohe with no privacy categories (1945-1950)

his daughter's house entrance, he said "hello members of the home". If he was given permission, he entered, and if he did not hear response after asking permission three times, he would leave, because he would assume that they were not at home or they did not like him to enter. Islam brought friendship and intimacy among Arabs and wiped out their ignorance in a way that was compatible with human nature. Arabs were people who would fight each other over minor misunderstandings. The custom of saying hello, while regulating the relationship among Bedouin Arabs, organized their system of settlement. Getting for permission was not only for neighbors but also for kids when they wanted to enter their parent's room. The holy Quran says:

"O, you who believe! Your slaves and those members of your family who have not yet attained the age of puberty, are not allowed to enter your room] i. e., your bed-room [before asking your permission; these are three times of privacy for you: before the morning Prayer, and when you put off your Clothes, in the heat of noon, and after the prayer of Isha; apart

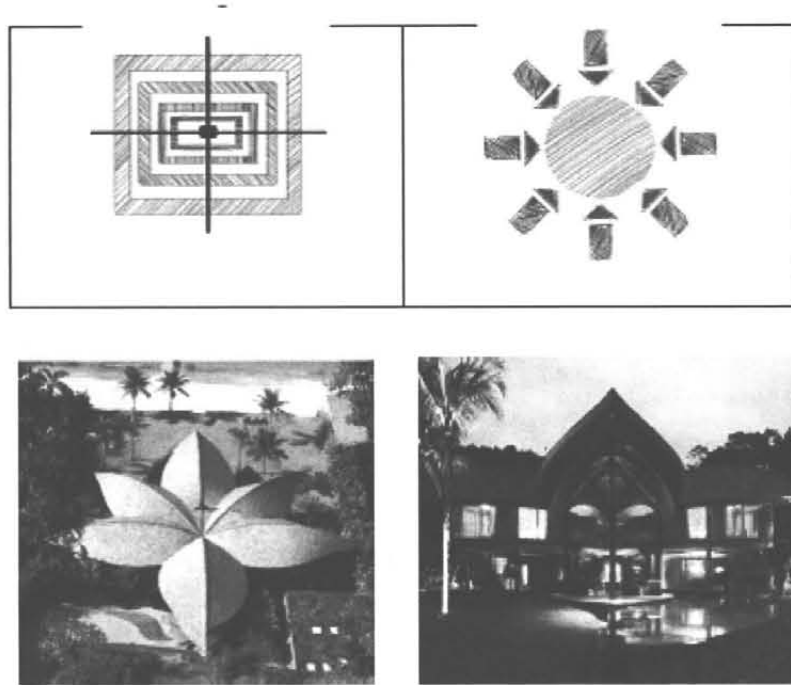
from these, it is no sin on you or on them that when you have your clothes on, associate with each other and work together".

Thus, does Allah explain to you the words of revelation? Clearly; and Allah is The Knowing Decree [his decrees are based on the knowledge about human Nature](58) And when children of yours attain the age of puberty, they should also ask Permission like others] i.

e., slaves and Kids who have not reached the age of Puberty. [Thus does Allah explain His Words of Decrees; and Allah is The Knowing Decree. (59)". Therefore, in a Muslim's home and after certain age, parents and kids' rooms should be separated. This has been done in more traditional homes because of the change in seasons which is rooted in religious beliefs. However, some believe that separating Children's rooms from parents is acceptable in almost all cultures. But, it is noteworthy that none of the available books of the Bible, the Torah and the Avesta have mentioned asking for permission when children want to enter their parent's room the way Quran has done. In this way, Behavioral models offered by Islam have affected the living of Muslims for centuries and can be seen in temporary and permanent houses.

For example various people in Iran still pursue a life which is based on the seasonal movement from one location to another to feed their animals. The Ashayer or nomads extend from north to south and west to east of the country. They have a variety of house forms: tents, hemispherical tents or Alacixm, and temporary huts. Although all are composed of the simplest spatial elements, they reflect ideas that also apply in more permanent houses. Four different spatial arrangements or patterns could be distinguished here:

- 1.The dwellings with a shared living and reception space.
- 2.The dwellings with a distinctive place for guests, but without any physical separation.



▲ Fig 3: privacy and centralization in other civilization; source; authors.

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3.The dwellings where private and reception area are separated by interior partitions.

4.The dwellings where the two spaces are completely separate.

The first category includes the smaller kind of nomads' tent and the Alacix. Many tents are too small to have a reception area. However, a distinct guest-space can be temporarily defined. Thus, the Bakhtiari people, who live in the west and south-west of Iran, welcome the guest by arranging a part of the tent, called Dawar, at his arrival.

Conclusion

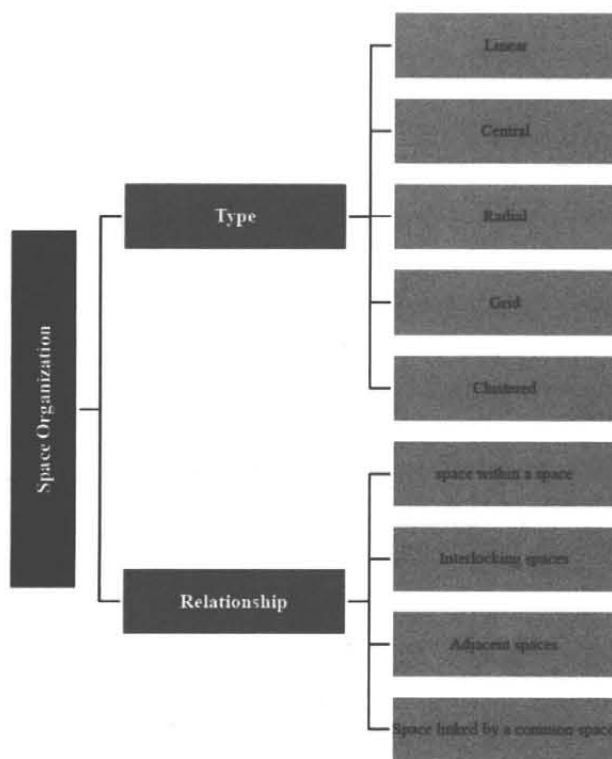
Islamic culture has shown its impact on social and religious architecture and has had significant influence in shaping the environment and residential home; the space of historic home while keeping the architectural knowledge of pre-Islamic architecture also tacking the evolution of the knowledge of space after Islam periods. In documentary sources that were derived from Quran and tradition and also intimate presence of the prophet of Islam are many contents about how to live and about the situation of housing and residence .This paper tries to use that valuable sentences in special Muslim home designing and building

. The first period of confrontation of Western artistic ideas to Islamic countries and Iran is related to Modernism and Modern Architecture. Stabilized social culture can be seen easily in societies which have old social and urban life, because of their antiquity. Human housing architecture depends on their way of living, perception and understanding and geographical features too .Generally architecture is the growth of human perception and belief which was manifested in building of his place of residence. New buildings because of development of tools, equipment's and new materials have been more applied today. All above are impacts of Modernity and as well as Modern architecture, but the product of this designing is dependence to energy, non-imitate lack of affordable. The development of technology has affected Humanism in all aspects of life ,irregular mixing of culture has destroyed most of useful social values .Modern architecture and Western construction technology will affect our future architecture specially Iran architecture, because separation of architecture from tradition and previous experience has deleted Humanism and attention to native human spirit from architec-

ture. In this situation, Islam has no impact on housing architecture, for conscious desire to west architecture will increase day by day. The dominant form on Muslims contemporary planning is western pattern that has lost his utility even in industrial nations. These western patterns are in serious confrontation with Islam as a philosophy of life.

“Haram things” or the rest of the holy values, God-set limits, and what must be respected as God-given rights are among other “Harims” brought the holy Quran. Of course, what matters the most the holy Quran is that such privacies should be conducive to human’s fulfillment. The other point to remember is that such privacies should be regarded as “purities”, i.e., what is in accordance with human’s holy nature as well as “impurities” or “evils” which have been forbidden and are in contrary to human’s holy and God seeking nature and not compatible with his physical nature. Therefore, human is encouraged to follow purities (e.g, caring for privacy) as they are conducive to growth and warned against impuri-

ties that take him away from the path which leads to perfection. House reflects cultural trends and it is built according to man’s understanding of the world. Therefore, it’s quantitative and qualitative properties as well as its special geometry are reflections of one’s ideology. Permanent dwellings in Iran have been formed according to the behavioral patterns of shariah, which is harmonious with man’s nature. Traditional houses in Kerman have been built according to Shariah. These patterns were also seen in other religions. There are lots of commonalities between the Islamic and the Zoroastrian architectures. This study shows that in addition to what is commonly called Kerman Ron and has an east-west direction, there are many other houses having a north-south direction, toward kiblah. Therefore, climate and religious beliefs are effective on these two kinds of districts. This study also shows that mankind naturally wants to have privacy. This instinctive need is perceived from temporary nomadic tents to permanent urban houses in Iranian dwellings and reveals



▲ Fig 3: space, privacy and type and relationship in Islam architecture; source: authors.

conceptual or physical appearances according to shariah and the sense of hospitality. But privacy limitation is variable based on the following conditions:

1. Mankind naturally is interested in having privacy and habitation of the family would intensify this privacy. Also privacy of home is directly related to the range of the family. It means that less separation between reception space and private space is needed. Family members come together in sitting rooms; therefore, sitting room is the interaction center among different zones.

2. The separation of space between private and public zones in nomads' dwellings, who have limited relation with strangers, is often merely conceptual. Since the nomads have a vast connection with others, this separation is clearly sensible by physical appearance. On the other hand, financial issues are effective on the extent of the separation, because some families cannot afford complete separation. In this case, a communal tent is used as the reception room for all of inhabitants.

3. Recommendations of shariah about veil and categorization of people into intimate and non-intimate have impacts the extension of separation between private and public zones. For example, Zoroastrians consider coreligionists as their intimates. Therefore, in houses with two reception rooms, coreligionists are received in one of these rooms and the other room is for guests that have other religions.

4. In Muslims' permanent houses, reception zone basically is separated from private zone by joint spaces. In contemporary architecture, the elimination of joint spaces leads to interference of different residential zones and reduction of residents' comfort. So, further studies are intended to renovate the role of joint spaces in houses.

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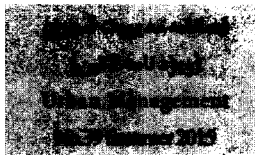
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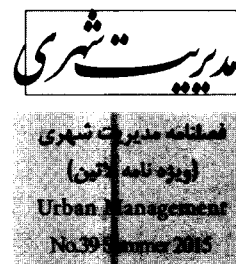
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فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 45 - 60 ■

Received 28 Oct 2014; Accepted 17 Jan 2015

Investigation of Urban Renewal and Regeneration Management Policy Changes in City of Tehran (Between 1990-2014)

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Abstract

Urban regeneration and renewal is one of the urban development subjects that have undergone substantial changes in last decades in its approaches and also management process. Despite these global changes, policy making in this field of urban development have been delayed in Iran. In the last three decades, the spread of distressed urban areas in Tehran and their vulnerability against earthquake caused them to be among urban management's superior priorities. From 1990s, simultaneously with changes caused by socio-economic changes occurred after war and start of "Construction Era" in political contexts, the first urban renewal project was implemented in form of a highway construction plan by municipality with a concentrated and top-down approach. After that urban renewal policies have undergone great changes. The role of actors and power relations among them had also changes in this process. In this article, reviewing urban policy documents of these periods, we also reviewed distinctive experiences of each period in this 25-year duration (from 1990 to 2014) with content analysis and documentary studies and also case study approach. We also used qualitative methods for the analysis, particularly deep interview with experts and stakeholders of each project, analyzing distinctive indicators of studied cases, and finally revealed power relations among stakeholders of each project. These studies show that four periods are recognizable in this period in which changes in urban regeneration and renewal policy, in actors of each period and their role and power relations are clear and explain new paradigms created in urban regeneration and renewal management in Tehran.

Key Words: *Urban Regeneration, Urban Renewal, Urban Policy, Local Organization, Power of Influence, Tehran.*

1. Introduction

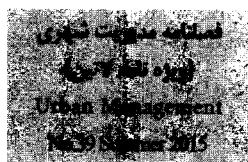
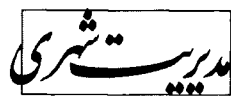
Policies facing with deteriorated urban areas have undergone substantial changes in recent decades. The management process of urban regeneration and renewal has also changed simultaneously with changing from urban renewal physical approaches to integrative approaches of urban regeneration. New global demands and changing approaches to states made other actors emerging and activating along with central governments and public sectors, which were once the only actors in these processes. In addition to the role of private sector in this process, civil society including local community, CBOs and NGOs have also important roles in urban renewal and regeneration management. Alongside these global changes, Iran has also undergone multiple changes particularly in last three decades. Though first approaches in Iran were based on Urban Conservation of historical areas, emerging challenges in other urban areas also demanded policy-making from government and municipality (See Madanipour, 2010). However, from 1990s, urban renewal policies in Iran and particularly in city of Tehran had undergone significant changes which also brought about different spatial effects to implement urban renewal plans and projects. Reviewing policies of this 25-year period (from 1990 to 2014) showed that there were four periods of change in approaches as follows. An eight-year period (between 1990 to 1997) in which the main approach was authoritative, concentrated, and top-down managing seeking economic profits in form of gentrification; implementation of Navab project by the municipality was one significant project of this period; policies of the government known as "Construction Period" affected many activities of that period. Dominant approach in next period, i.e. 1997 to 2004, was historical context and cultural heritage conservation. One of the most distinctive experience of residents' participation is the

participation plan of Sirus Mahalla (neighborhood), one of the historical neighborhoods of central districts of Tehran (Region 12), which was greatly affected by "Reformation Government" and Civil Participation extended by hegemonic discourse of that period; however, it should be noted that this plan was not implemented due to lack of necessary contexts to establish local renewal office. The main change of next period, i.e. 2005 to 2014, was in policy-making in facing with distressed urban areas; this period can be divided into two parts due to change of actors' roles: changing the approach to urban renewal and regeneration and emerging the concept of neighborhood and community approach in defining urban renewal areas (2005 to 2009); and its next period is making necessary contexts to implement local renewal plans and establishing local renewal offices (2009 to 2014). We reviewed and analyzed each case study of different periods, the role of its different actors based on their role in the management process and the rate of their power of influence on other actors.

2- Research Methodology

Reviewing policy and legal documents, this study tried to review changes in urban renewal and regeneration policies in last decades in Tehran along with the most distinctive urban renewal projects in these periods which showed the policy and the process of the their implementation also. The role of actors and stakeholders in each project affected by dominant paradigm of urban policy of that period and changes in power relations among them were considerable in analysis of each period. So, to identify main actors in every approach, we reviewed policy documents and project documents and also deeply interviewed with key experts and stakeholders (around 50 persons)¹, and a two scale comparison matrix was made to analyze the power relation among them, and pure power of every actor was mapped in relation with other actors in the

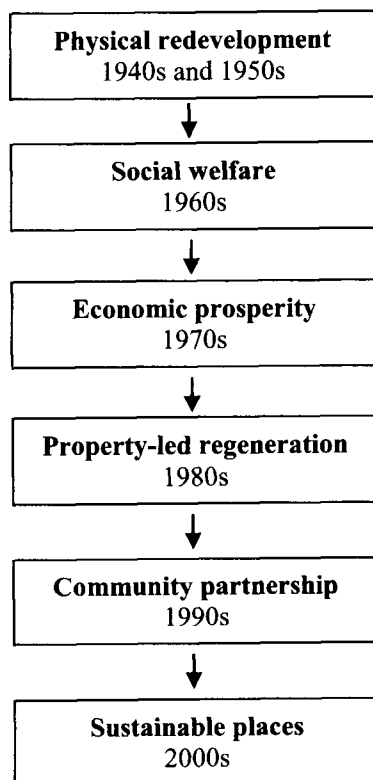
1. These interviews with key stakeholders were continued to reach the saturation point in each project.



distinctive project of each period.

3-International perspective: From physical redevelopment to Sustainable Urban Regeneration

In the late twentieth century and after merely physical approaches, many of theorists stated that urban regeneration is a comprehensive concept which is linked with economic and social vitalities, when there are interruptions within functions of an area, and search for retrieving the social values in these areas. This procedure is accompanied by formation of social and functional integrity and establishes environmental and economic viability (Imrie et al., 2009). Other authors defined urban regeneration as “comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change (Robers & Sykes, 2000: 17)”. The noticeable point is that urban regeneration is one of most important strategies for solving



▲ Figure 1. Evolution of Urban Regeneration Policy (Colantonio & Dixon, 2011: 58)

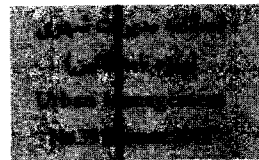
the challenge of urban decay, distressed and deteriorating urban areas. Local agencies are one of the major factors of urban governance along with non-governmental organizations (NGOs) and private sector to guide urban development (Jessop, 1998; Rhodes, 1997). Participation of citizens, especially in its modern concept, becomes meaningful in local and tangible scales. Consequently, for attraction of citizens' participation in broad scales, it is essential to establish and reinforce non-governmental organizations in various scales and in different kinds like associations, voluntary organizations that provide public services, local councils, and so on (Davies, 2004). Strengthening of private sector, as a complementary sector for local governments and civil organizations, in order to invest on, and manage the capital in different manufacturing, construction and other activities is necessary for developing urban regeneration.

Urban regeneration management through wider shifts in planning paradigms (Healey, 1997; Innes, 1996) have changed and is characterized by collaboration between organization with different qualities, motivations and resources (Jones & Evans, 2005).

Urban regeneration policy has been changed from 1940s to recent decades. Many studies indicate different approaches in different decades. As figure 1 show the 1940s-1950s was with emphasis on physical redevelopment, and 1960s with social welfare. The 1970s was with a shift away from a welfare emphasis towards economic prosperity (Colantonio & Dixon, 2011). By the 1980s, a great shift was happened toward a bigger role by the private sector and a period of property-led regeneration (Turok, 1992) which was mainly based on US policy in redevelopment and flagship project (Blackman, 1995).

After that and with again a great concentration on local communities in 1990s, urban regeneration management approach has been changed to community-based regeneration (Imrie & Raco, 2003). This new approach was

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mainly based on innovative action with participation of local communities with a bottom-up strategy to create social capital based on local resources (Tiesdell & Allmendinger, 2001).

In 2000s, sustainability has become a key factor in public policy with emphasis on social, economic and environmental wellbeing, or what, in academic literature, is often referred to as the 'Triple Bottom Line' approach to sustainable development (Elkington, 1997). This approach attempts to achieve development that promotes economic growth, but maintains social inclusion and minimizes environmental impact (Dixon, 2007; Dixon & Adams, 2008). In 2010s Sustainable Urban Regeneration becomes the dominant approach to Urban Regeneration processes (LUDA, 2003; Urban Task Force, 1999).

These approaches can be summarized in three main urban regeneration management policy changes (Table 1). In these changes we can recognize three main eras with different actors in this process.

Tehran Experience: From Authoritative Urban Renewal toward Neighborhood – based Regeneration

4-1- Urban Renewal Policy Changes between 1990- 1997: Navab Project as a Mega-project Approach

The 1990s was a period with new approaches to urban areas in Iran and particularly in Tehran. Physical disorder phenomenon made social challenges emergence in vast area of central urban districts. In this period, "Urban Development and Revitalization Organization" (UDRO) was established in late 1990s under supervision of Ministry of Housing and Urban Development (MHUD)¹ to implement organizational rules of provision No. 33 in Second Development Plan² (Azizi, 2000). After Islamic Revolution, and despite the need for urban renewal and regeneration of historic and problematic areas of the cities, the horizontal urban development (urban sprawl) and decreasing the urbanization supervision and control, deteriorated urban areas in cities were neglected. This period, along with par-

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Decades	Urban Regeneration Approaches	Urban Regeneration Management Models	Main Actors in the Urban Regeneration Management
1950	Physical redevelopment	Centralized Management (Atkinson & Moon, 1994)	Public Sector
1960	Social welfare		
1970	Economic prosperity	Public-Private Partnership (Mackintosh, 1992; Mayo, 1997)	Public Sector/ Private Sector
1980	Property-led regeneration		
1990	Community partnership	Participatory Urban Regeneration (Couch et al., 2003; Healey, 1991; Healey and Hillier, 1996; Innes, 1995)	Public Sector/ Private Sector/ Civil Society
2000	Sustainable places		
2010	Sustainable Urban Regeneration		

▲ Table 1. Changes in Urban Regeneration Management

1. Former Name, Now its title is Ministry of Roads and Urban Development- MRUD

2. Economic, Social, and Cultural Development Plan which summarizes to "Development Plan"

ticular policies of “Construction Era” made a new construction and development opportunity in the country for government. Enacting the rule of Second Development Plan, some activities made the necessary institutional contexts and mechanisms to focus on urban deteriorated and historic areas, but these plans did not make any considerable changes in Tehran. UDRO was established in this period and National Document of “Informal Settlements Empowerment” was prepared in this period also.

However, authoritative urban management approach and attempts to implement some parts of Comprehensive Plan of Tehran caused some interventions (and destructions) in urban areas. Physical interventions in urban areas in this period, in contrast with cross streets of previous periods, were accompanied with constructing highways and expansion and widening of streets. The most important project that was implemented in this period was constructing Navab highway, which originally was a construction plan in street network, but was greatly interfered with deteriorated urban areas around its route and formed a mega project.

• Navab Highway Plan as a Megaproject Navab with Gentrification Approach

The idea and aim of Navab Highway Plan was to make a quick connection between North and South of Tehran based on suggested network of urban freeways, enacted in 1968 Tehran Comprehensive Plan (Farmanfarmaian & Gruen, 1968) and it was proved in Tehran Comprehensive Transportation Plan of 1974; however it became a renewal project in action due to dominant approaches of that period. The path of Navab Highway has 5529 meters length from Tohid Square, Chamran Highway and continues to Ghale Morghi.

It was planned to implement this project with urban renewal of deteriorated areas around its

routes, but its implementation process made many challenges for current residents of this area like traffic congestion, air pollution, sound pollution and secure accessibility. Navab project separated new marginal neighborhoods of this highway and residents of previous Navab neighborhoods could connect with each other only through bridges in two-sides of it (Figure 2) (Etemad et al., 2013). To implement this megaproject, Tehran City Renovation Organization (TCRO) faced serious changes and focused on implementing this plan.

Two main aims of Navab project include: make a quick connection between north and south of Tehran, and demolition of deteriorated urban neighborhoods around Navab (Bahrainy & Aminzadeh, 2007: 120-127). Despite these aims, the main approach of the plan was economic profits and it affects FAR and creating spaces. FAR of this plan, based on physical planning of it was affected by employer's economic policies (Tehran Municipality), was to provide the costs of constructing this road from selling of buildings and meet plans' needs to provide necessary housing of residents which were destroyed due to the plan of the highway¹.

In Navab project, renewal of margin areas of highway is the by-product of this megaproject and a method to provide financial resources. In fact, the renewal project of neighborhoods around Navab Highway was perhaps the first megaproject that was based on using added value and increasing values caused by implementing other urban construction projects; but the defects of the project made it to fail and despite several reasonable justifications to implement this plan, its defects and problems doubted administrators and executors many times (Bahrainy & Aminzades, 2007).

Reviewing Navab plan from different aspects showed that though implementing this plan was based on upward plans (like Comprehen-

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1. Claimed policies of this plan is connected with the architecture of buildings like building types, wall surface form, the FAR and number of floors, the activity of every floor, providing parking space and so on. Policies like creating green frontage with 10 meters width in every side of highway, a special line for buses, decreasing floors in sections adjacent to old neighborhoods of Navab were all under economy rules and were not implemented.



▲ Figure 2. different Implementation Phases in Navab Project (Etemad et al. 2013)

sive Plan of 1968), but due to special policies of the urban management in this period, economic and profit-making approach to this project, the integration of a construction project with a urban renewal plan of its adjacent neighborhoods and limited participation of people to investment and buying bonds generally caused failure of this plan. The process of “Decision making” and implementing Navab project showed that the municipality followed authoritative approach in urban management and profit-making approach in economic dimension without considering other actors’ interests including previous residents of this neighborhoods and many other experts’ professional comments. This method of intervention from urban (political or economic) authorities was made to increase economic efficiency and was a tool of profit making from deteriorated urban areas. Approaches within design and implementation

of this project were not based on its context and other actors’ interests, and civic organizations also had no role in determining the vision of this plan.

Although one of the main aims of this plan was to connect North and South of Tehran, but it made more distance and gap at local scale. Some consequences of this plan include: deporting main residents of the area with gentrification approach, the dissatisfaction of local residents from cessations occurring not only in the physical structure of the area, but also in social network structure of it, problems of the local residents in relation with public services at local level, non-conformity of new building’s residents with previous residents of adjacent houses. Urban management’s will which resulted in short-time implementing of this plan, along with inappropriate and separate aiming of a process in which make public participation possible made vari-

ous challenges like ownership and one-time and immediate destructions which decreased the quality of life of previous residents and insecurity for more than one decade; however, it should be noted that these challenges are currently continuing in this area.

4-2-Urban Renewal Changes between 1997- 2005: Renewal of Sirus Neighborhood as a Participatory Approach

Political Era called "Political Reformation"(1997-2005) in following of Third Development Plan policies (2000-2004) was greatly in form of informing people to conserve and protect historical areas. Although this issue resulted in no special action in Tehran in this period, various prediction of Fourth Development Plan (2001-2005) showed gradual provision of appropriate understanding in activities and interventions to renovate historic and deteriorated areas. However, there were no considerable plan for urban rehabilitation and renewal of historic and deteriorated urban areas in Tehran in this period. The most important plan of this period, influenced by public participation and political discourse of this period, was Participatory Urban Rehabilitation Plan of Sirus Neighborhood, which implementation did not get possible due to lack of necessary institutional contexts, but reviewing it as a sample of citizen participation and cooperation between involved organizations in this field was a considerable experience of this period.

• Participatory Urban Rehabilitation Plan of Sirus Neighborhood

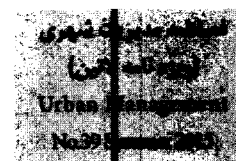
Sirus Neighborhood, is located in Region 12 of Tehran Municipality, and is one of the five neighborhoods belongs to Qajar Era. Due to the lack of urban public services and facilities in this neighborhood, in one hand, and commercial and trans-regional land uses on the other hand, most old residents left the neighborhood and many houses particularly in marginal areas of the neighborhood changed to commercial and industrial land uses and many workers chose them as their residence.

Some residential areas within this neighborhood were destroyed and left abandoned and became a place for addicts, drug sellers and buyers and many social criminals happened there, increased social insecurity and as a result more populations left this neighborhood. Therefore, many old residents left this neighborhood due to above mentioned reasons and now most important reasons of new residents is low prices of houses or adjacency to their workplace (Habibi, 2007: 233).

Remaining residents of this historical context due to having sense of belonging to this neighborhood and emerging various problems in recent years, became agents of change in this neighborhood. In 2000, Sirus residents wrote two separate letters to Tehran Region 12 Municipality and UDRO, expressing their problems, and wanted from authorities to solve their problems, and in order to gain their goal in short time they formed a group of confidants from local community to quicken and facilitate the executive activities and emphasized that they are ready to cooperate with formal authorities like the Municipality. After receiving these letters by authorities, reviews and visits, and meeting with local people, it was seen that Sirus Neighborhood has an active local committee which renewed its Mosque and built a clinic and a kindergarten, and could provide some services by persuading charity among more wealthy people and got their trust (Jostarhay-e-Sahrsazi, 2007: 105).

Based on such a trust, they tried to provide necessary local plans and establishing local offices. Special plan of Sirus Neighborhood with participatory approach had two stages: 1- Strategic planning and structural plan, and 2- Designing and providing urban plans for rehabilitation and renewal of Sirus Neighborhood and its regulations and design code were enacted formally (Azizi et al., 2008). In the plan it was mentioned that one of the main goal of this plan is public participation of residents and users, public sector, private sector,

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and government in planning, designing, implementation and building activities, governing the neighborhood and also some activities toward urban renovation and regeneration of historic and inefficient areas of the neighborhood using persuasive methods for attracting residents' and investors' participation.

However, in practice, detailed plan and its mechanisms were enacted for Sirius Neighborhood but establishing Sirius Local Office to facilitate the plan implementation and attracting public participation (despite emphasizing of the professional adviser of plan supplier -Bavand Consulting Engineering- and also residents' pursuit) was forgotten; though local cooperatives were established in Sirius Neighborhood by support of UDRO.

Investigations showed that despite there were appropriate setting for local participation, non-coordination between the Region 12 Municipality and UDRO and other public organizations exacerbated the situation. Authorities of plan making believed that organizational problems and lack of legal settings for implementing the plan and establishing the local renewal office ultimately hindered the implementation of the plan.

4-3-Urban Renewal Changes between 2005-2009:Neighborhood-based Renewal in Khub-Bakht Neighborhood, in Region 15 of Tehran Municipality

Policies of Third Development Plan (2005 - 2009) are in form of informing and persuading people to conserve and protect historical areas. Providing and implementing rehabilitation and renewal plans of urban historic areas via persuading people to conserve and protect them, elimination of renewal taxes with the aid of Cultural Heritage Organization and municipalities are among the most important strategies for urban rehabilitation and renewal in Iran through this plan's period. There are some points to rehabilitation and renewal of historic and deteriorated urban areas in Article 30 of Fourth Development Plan (2005-2009).

Supporting legal rules like Fourth Development Plan and Urban Development and Revitalization Organization (UDRO) projects in national scale made necessary setting to make various plans for rehabilitation and renewal of deterioration areas in Ninth Government of Iran. Serious changes in this period happened in Tehran Municipality and particularly in Tehran City Renovation Organization (TCRO). These changes caused re-organizations and in fact re-establishing in TCRO. Before these changes, main activities of this organization were focused on construction and completion of Navab project. While urban renewal of Tehran deteriorated areas was followed by this organization since then (Andalib, 2013). Many experiences by this organization were used in other cities in next years.

Providing a comprehensive plan for City of Tehran from 2003, and doing widespread studies particularly about physical characteristics of Tehran, simultaneously with Bam Earthquake (in 2004), many urban areas in Tehran were identified as vulnerable areas against earthquake. Based on Comprehensive Plan of Tehran enacted by Supreme Council of Urbanization and Architecture in 2006, three indicators of Structural Non-sustainability, Small-grained (Plots) and (Road) Impermeability were regarded as identifying factors of distressed urban areas that based on these indicators 3200 hectares of Tehran which have had these three indicators (Boum-Sazegan Consultants, 2007).

Simultaneously with these changes, Tehran Municipality decided to execute ImamAli Highway project which was located in the easternmost Tehran neighborhoods, and starts from Region 1 and connects with Southernmost Areas of Tehran.

North Regions of Tehran had fewer problems in implementation step, but Region 15 and Atabak residential neighborhood had lots of challenges for Tehran Municipality. Tehran Municipality again selected TCRO to implement this plan in 2005; using executive ex-

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perience of Navab Highway made executive settings possible to construct this highway. Having this approach, TCRO was reestablished in 2005. Its new management structure, learnt from Navab experience and its aspects and effects on surrounding areas, decided to renew adjacent neighborhoods to Imam Ali highway in Region 15 of Tehran rather than renewal approach of highway itself.

•Urban Renewal Project of Khub-Bakht Neighborhood: Neighborhood-based Renewal

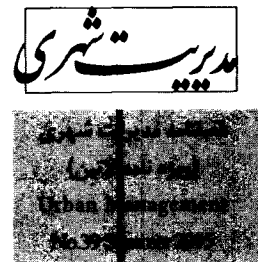
Region 15 of Tehran, located in Southeast Tehran, is one of the most important gateways of south Tehran. The approach of new TCRO's managerial team was resulted in composing an original executive model for special plan of renewal of distressed neighborhoods in ImamAli Area in Region 15 of Tehran (including neighborhoods adjacent to ImamAli highway) and making a special plan for Khub-Bakht neighborhood (one of the six neighborhoods in ImamAli Area), which was prepared by one of the professional department of TCRO. TCRO attempted to clarify a theoretical framework of interventions in Tehran. They tried to consider different dimensions like economic, social-cultural, executive, and managerial, but in practice they innovated the "Special Renovation Plan" and followed "Neighborhood-based Renewal" in contrast with "Project-based Renewal" (Andalib, 2013: 327). Tehran urban renewal plans were defined in three levels in this period: 1- Special detailed renewal Plan, 2- Urban Landscape Plan (ULP that was a local Urban Renewal Plan) and 3- Executive Management System Plan.

ULP of Khub-Bakht neighborhood was formed based on aggregate of current small-grained plots. Most residential plots in this area were less than 100 square meters and according to deterioration indicators, it is attempted to aggregate some plots in this plan and make more site buildings by increasing floors and also necessary space to ex-

pand roads and therefore making other open spaces would be possible. There are around 1500 residential and commercial plots in this neighborhood, while this number became 180 building blocks after plots aggregation. The most important aim of the renewal plan of Khub-Bakht neighborhood was renewing Khub-Bakht neighborhood and executing aggregation plan by its residents, under support and guidance of TCRO (TCRO, 2007).

Based on documents of this plan, the timeline of its execution was predicted in 3 years (from 2007). Establishing the Renewal Local Office as a linkage between TCRO, the Plan Management Office, and local people and citizens, and also consultants and contractors in the process of executing this plan is the other innovative aspect of it. There were also some plans for communication with residents and attracting their participation, and informing to facilitate renewal process. Based on documents of this plan and to persuade private owners and investors, there had been offered support facilities like subsidy and tax exemption were granted, providing temporary habitation location for residents and helping them with paying trust loans of habitation, paying rents of commercial units and so on (Andalib, 2013).

After preparing and enacting the plans, TCRO attempted to establish a Local Renewal Office in Khub-Bakht neighborhood. Implementing this urban renewal plan via Local Renewal Office was a pioneer attempt and made closer communication with local people possible; however, in practice, there were no considerable success in implementing this plan, since convincing people who are distrustful was more difficult. This neighborhood and implementation in it is currently one of the unsuccessful experiences of urban renewal plans in Tehran. Remaining abandoned lands after destruction of residential plots, and their changing to location of aggregating trashes and local addicts, and social exclusion among local people after the exit of many old residents



and entrance of new residents who were not homogeneous with its social and economic features caused dissatisfaction among local citizens of this neighborhood.

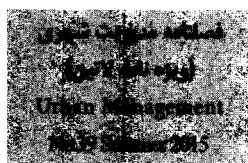
4-4-Urban Renewal Changes between 2009-2014: Neighborhood-based Renewal by Neighborhood Renewal Offices (NROs) approach in Tehran

Concurrent with preparing renewal plan of Khub-Bakht neighborhood and after that, for other distressed neighborhoods in Tehran (70 neighborhoods), the renewal plan from 2007-2010 were prepared. However, according to executive plan of Khub-Bakht neighborhood renovation, TCRO attempted to establish local renewal offices to execute these plans with facilitation approach. Although the first local renewal office was established in 2007 and in Khub-Bakht neighborhood, but it was operationalized in 2009 based on Clause 1 of Article 42 of Executive Bylaw of "Organization and Support of Production of Housing" dated in 2009. In addition "Mechanism of Instructions of Establishing, Services and Regulations Monitoring Local Renewal Offi-

es in deteriorated neighborhoods and informal settlements (No. 9970/1/3/33), Clause 6 of provision 3 enacted by "Organizing Social Participation in Revitalization of Deteriorated Urban Areas in Tehran" enacted by Tehran City Council in Article 129 Act of Fifth Development Plan of Tehran Municipality between 2009-2014 under the title of "Offices of Renewal Services" made legal settings to extend "Local Renewal Offices".

In year 2014, National Document of Revitalization, Renewal and Empowering of Distressed Urban Areas was enacted by two ministries of Ministry of Roads and Urban Development (MRUD and Ministry of Interior (MoI) of Iranian 11th Government to extend integrated management, making unity and participations among different actors in National and Local levels. It is the first time that we see in a formal document to state "Urban Regeneration" instead of urban renewal, revitalization and other approaches which tended to protect civil and citizen rights, increase the quality of life, restore the urban identity and execute local governance. This

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Period of activity	Number of offices	Name of offices	Location of offices	Aim
2006-2010	1	Local Renewal Office (Agency)	Khub-Bakht Neighborhood	Facilitating the implementation of Urban Renewal Plan in Khub-Bakht neighborhood
2009-2010	30	Local Consultancy Renewal Office	Local Offices of Third Steps Neighborhoods Urban Renewal Perspective Plans	Informing Local Residents and Participatory Plan Making
2009-2010	5	Facilitating Pioneer Renewal Offices	Nemat Abad, Baghe Azari, Khani Abad, Robat Karim and Abdallah Imamzade	Modeling of local activities in Distressed Neighborhoods ((Pilot
2011	43	Facilitating Renewal Offices	First Priorities of Deteriorated neighborhoods of Tehran	Expanding facilitating Renewal Offices in Tehran
2012-2014	155-65	Office of Local Renewal Services	All deteriorated neighborhoods in Regions 7 to 20, Tehran	Establishing Local Renewal Offices in all deteriorated neighborhoods

▲ Table 2. The Condition of Local Renewal Office in Tehran (Based on TCRO data)

1. This number has been changed in different years in this period.

document claimed that governmental organizations must prepare the necessary contexts for tool-making, institutionalization, capacity building, and empowering, and focuses on social and financial participation of people and private sector as a pivotal rule (Enacted by State Cabinet, 2014).

• **Neighborhood Renewal Offices (NROs): Facilitating Urban Renewal and Regeneration**

Changes in managerial methods and approaches, particularly in recent years, and executive experience of TCRO (like Khub-Bakht neighborhood renewal experience) as the main organization responsible in this field in Tehran, have moved toward social approaches to urban renewal and local management. After reviewing first experiences of TCRO in urban renewal of distressed areas, it was concluded that renovation of deteriorated urban areas demands public participation, constant and social communication with residents in all planning and implementation phases. So having a new approach, TCRO followed "facilitation" approach, and established Local Renewal Offices in this regard. At first, these offices were named "Facilitation Offices" and continued their activities as "Offices of Local Renewal Services". Table 2 shows changes happened in these offices and their goals during this period.

Starting establishment of these offices have occurred concurrent with implementation of Urban Renewal Plan of Khub-Bakht neighborhood (Andalib, 2013). The most important advantages of modeling approach include: "forming intervention experience in deterioration areas in Tehran neighborhoods", "identifying urban renewal dimensions and factors in Tehran" and "identifying obstacles and challenges of urban renewal in local level" which caused some changes in TCRO approach. After that, concurrent with contracting the Urban Renewal Plans in third step, Local Renewal Offices were established in 30 neighborhoods which aimed to increase

the accuracy of local studies, preparing necessary contexts for implementation plans and increasing realization of these plans (Andalib, 2013). Parallel with these activities, facilitating offices of 5 distressed neighborhoods were established to communicate with people based on provided plans and to inform them about the advantages of urban renewal of neighborhood, and plans' aims and expectations to attract public participation. After this period, due to positive performance of these offices, other facilitation offices were established in other neighborhoods to do the same activities and follow the same approaches and aims. Having done executive activities in facilitation offices, "Local Renewal Offices" were established in legal predictions to explain local services in distressed neighborhoods which are currently active in many areas and neighborhoods of Tehran.

4- Analysis and Findings

Reviewing the experiences of this 25-year period between 1990 to 2014 in urban renewal and regeneration policies are summarized in Table 3. Reviewing these experiences showed that this period can be categorized into 4 dominant approaches:

1- 1990-1997: Authoritative method seeking economic profit in form of megaprojects (Navab Megaproject).

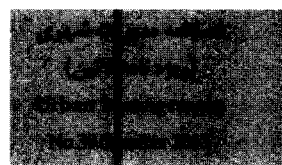
2- 1997-2004: Dominant approach was to protect and conserve historical areas and cultural heritages with public participation (Sirus Neighborhood renewal experience).

3- 2005-2009: Local community approach in neighborhoods' urban renewal (Khub-Bakht Neighborhood).

4- 2009-2014: Institutionalization approach and focusing on local renewal offices to achieve urban renewal and regeneration aims along with involving local community through establishing local facilitation and renewal offices. (Neighborhood Renewal Offices)

Reviewing actors and the power of influence in every period, after summarization and analyzing the comments of experts and actors of

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Period	Title of the Distinctive Project	Main approach in this period	Macro-managerial Approach	Main Actors of Plans			Local Organization	
				State and Municipality	Private Sector	Civil Society	Have/Not have	Local Or. Nature
1990-1997	Navab Project	Gentrification/ Mega-projects with economic approach	Authoritative Urban Management with Economic Profit-making	•	•	-	not Have	-
1997-2004	Sirus Neighborhood	Conservation of Historical area/focusing on Historical and Problematic areas	Citizen Participation Model from Local Residents	•	•	•	Have	Local-community-based
2005-2009	Khub-Bakht Neighborhood	Neighborhood Renewal/ focusing on local approach in urban renewal in neighborhoods	Centralized and Authoritative Management	•	•	-	Have	Public Sector-based
2009-2014	Neighborhood Renewal Offices	Considering Local Renewal Offices in Urban Renewal and Regeneration Process	Facilitating Urban Renewal and Regeneration	•	•	•	Have	Public Sector-based

▲ Table 3. A Summary of Dominant Approaches in every Period and Actors' Role in the Renovation Process

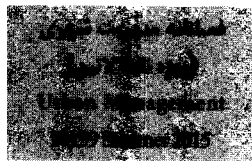
this process were done by deep interview and semi-organized questionnaire all shall be seen in form of power relations among actors of this process and their influence on each other and see the results in frame of below charts. Investigations on these quantitative data and scores (Table 4-7) show that in each experience the power relations between different actors at local level have been changed and gradually various actors has been involves in this process. However, in last experience despite of existence of Neighborhood Renewal Offices as one of the actors at local level in urban regeneration and renewal management, but because of their position and not enough authorities, the local municipality with has the highest score. Local communities and residents along with Neighborhood Renewal Offices have the lowest scores in power of influence on other stakeholders in this process at local level (Figure 3-6).

5- Conclusion

Reviewing the evolution of dominant approaches in this 25-year period urban regeneration and renewal policy in Iran especially in Tehran showed that we can point to paradigms changes both in policy making dimension and in implementation process. Reviewing experi-

ences of this period showed that one of the main effective factors on forming every one of dominant approaches in every four periods, and dominant experiences caused by them, in this 25-year period, is authoritative approach and top-down planning of urban management structure, particularly in last decades which did not seek actors' participation like residents of these areas, but economic participation by citizens (Navab experience) and using small and big financial resources was one of the main factor in this regard. In addition, dominance of physical approach, equivalency of urban renewal with destruction and building new apartments in first decades, while in following decades- other aspects of renewal especially community-based renovation approaches were focused. However before enacting of national document and its integrative strategies, other aspects like social and economic aspects did not have special role to execute urban regeneration in formal documents and rules. Another considerable point is the gradual character of urban renewal and regeneration plans that in all approaches of these recent decades and even before them in urban projects, urban management expected that after providing the plan by expert group,

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Actors	Public Sector		Private Sector	Civil Society
	Government	Municipality (TCRO)	Private Sector (Investors)	Residents & Local Community
Government		4	3	4
Municipality (TCRO)	2		4	5
Private Sector (Investors)	3	4		4
Residents & Local Community	1	2	1	

▲ Table 4. Two scale comparison matrix to analyze the power relation among actors in Navab Experience

Actors	Public Sector		Private Sector	Civil Society
	Government	Municipality (Region 12)	Private Sector Consulting (Engineering)	Residents & Local Community
Government		3	3	4
Municipality (Region 12)	1		5	5
Private Sector Consulting (Engineering)	1	2		4
Residents & Local Community	1	1	3	

▲ Table 5. Two scale comparison matrix to analyze the power relation among actors in Sirus Experience

Actors	Public Sector		Private Sector	Civil Society
	Government	Municipality (TCRO)	Local Renewal Agency	Residents & Local Community
Government		2	2	1
Municipality (TCRO)	2		5	1
Local Renewal Agency	1	3		5
Residents & Local Community	1	4	2	

▲ Table 6. Two scale comparison matrix to analyze the power relation among actors in Khub-Bakht Experience

Actors	Public Sector				Private Sector	Civil Society
	Central Government	TCRO	Local Municipality	NROs	Developers	Residents & Local Community
Central Government		4	1	3	3	3
TCRO	2		2	5	2	3
Local Municipality	-	4		4	4	5
NROs	1	2	1		3	3
Developers	1	2	3	3		4
Residents & Local Community	3	2	1	1	2	

▲ Table 7. Two scale comparison matrix to analyze the power relation among actors in NROs Plan Experience

these plans must be done in short term period which were in contrast with the gradual and procedural nature of urban renewal and regeneration plans. Reviewing the experiences of renewal and regeneration process of Sirus Neighborhood showed that while residents and stakeholders sought to increase the qual-

ity of life, there were no institutional contexts to have local public participation, so this plan couldn't be a sustainable process to satisfy the demands of residents. Although these two last experiences (renewal of Khub-Bakht neighborhood and establishing Local Renewal Offices) which may be categorized as effec-

tive elements in urban development structure of Tehran, serious paradigmatic changes occurred in project-based and authoritative approaches toward local renewal and community-based regeneration emphasizing on the role of local residents in urban renewal and regeneration process. Although this process is top-down and would not be formed based on local residents' needs. So that establishing NROs was based on the decision of public sector (like government and municipality) and establishing Local Renewal Offices were done without considering local residents' needs and roles. Although due to "legitimacy crisis", extensive attempts of public sector (urban managers and planners) to solve local problems of inefficient and distressed areas arises distrust of local citizens.

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فصلنامه علمی-پژوهشی مدیریت شهری
 مجله علمی-پژوهشی
 Urban Management
 No. 39 Summer 2015



فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 61 - 74 ■

Received 10 Nov 2014; Accepted 4 Feb 2015

The role of regionalism in improvement of Mashhad management with an emphasis on the efficiency of Mashhad municipality districts

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Abstract

Development of urbanization and rise of cities and urbanism during the last decade have added new dimensions to urban issues and have led to increasing importance of monitoring, conduction of urban development and organization of towns and their surrounding regions. In the meantime, the procedures of favorable life management play the most important role in improvement of human habitats and sustainable urban development, since the regulatory factors in urban plans and procedures of dealing with urban problems stem from the efficiency of urban management. One of the new ways of management is decentralized urban management which contributes to realization of desired goals of urban administration through division of tasks and responsibilities. Furthermore, unified and integrated management of big cities like Mashhad is not possible and requires its division into small units. Provision of better and more efficient services to the citizens requires urban divisions at different levels, so that these services may be presented and managed more evenly in all parts of the city, in accordance with their hierarchy. Meanwhile, the regionalism policy that has been implemented in Mashhad Municipality since 1386 has been an attempt to achieve this end by dividing the 13 municipality districts into 42 regions. This study is an attempt to evaluate the success of this policy and the extent of success in execution of the decentralized management. For this purpose, the efficiency and performance of different regions in Mashhad was evaluated using the DEA method and constant returns of scale and variable returns of scale methods. The results of this study suggest that so far, regionalism has failed to achieve decentralized management completely, and some Mashhad municipality districts could not fall within the efficiency frontiers, while the policy has led to increasing complexity (geographic and vertical) in the structural dimensions of the municipality.

Key Words: *regionalism, urban management, DEA model, efficiency, DEAFRONTIER software, Mashhad*

Introduction

Rapid development of urbanization and urbanism, especially in developing countries, has caused severe problems in urban administration. Increasing population in large cities, on the one hand, and insufficiency of urban management for meeting the needs of citizens, on the other hand, have led to decline of urban equality and justice (Zabihi 2:1387). Appropriate procedures of urban management, above from administration of cities, could gradually decrease their problems and provide better conditions for an urban life (Latifi, 1:1387). Meanwhile, lower levels and tangible aspects of urban life have been the subject of focus and attention more than ever before (friedmanm 1993:12). Some instances of this include shift of the traditional urban management paradigm (centralized and authoritarian) towards a new paradigm with greater importance and consolidation of "national levels", and The presence of associations and civil society organizations in decision-making domains with an emphasis on the role of citizens and their real cooperation in everyday actions (Hajipour, 1385:39).

Decentralized urban management is a new ways of management which contributes to realization of desired goals of urban management through apportion of duties and responsibilities. Urban division is one of the administrative tools in decentralized urban management. However, if this is not done in accordance with appropriate principles, not only does not help urban management but it will lead to unbalanced division of the city and detachment of urban texture. Therefore it is obvious that integrated management of large cities like Mashhad is impossible and requires disintegration of the city into smaller parts. If we compare the present responsibilities of Mashhad municipality with its former responsibilities, we will clearly see some new aspects of new responsibilities which include public transportation, social, cultural and firefighting services ... Provision of better and more

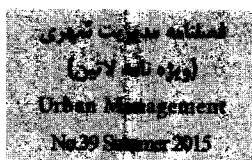
efficient services to the citizens requires urban divisions at different levels, so that these services may be presented and managed more evenly in all parts of the city, in accordance with their hierarchy.

Today (1390) Mashhad has 13 districts, 43 regions and 140 quarters (Rahnama, 1387: 122). In management terms, it can be said that this action is somehow a delegation of district citizens' authority to regional citizens. In this delegation of authority, the citizens deal with regions and the mayor (city manager) of the region contributes to administration of a smaller part of the city. This leads to better identification of problems and help the mayor take new measures for urban administration. Furthermore, proper execution of this plan can be an effective stride towards equitable development of cities, this means that development is a comprehensive process of economic, social, cultural and political activities which aims bring about a sustainable improvement in living standards of all people and activity, freedom, participation, appropriate and fair distribution of interests are the key elements of that (Rahnama, 65). Therefore this study is an attempt to investigate extent of regionalism success in execution of the decentralized management in Mashhad.

Methodology

This is a documentary-field survey study. The population of this study includes the regional managers of 13 municipal districts in Mashhad. This population contains 42 regional administrators (district 12 includes 2 regions and Samen district includes no regions). The statistical data available in the Department of planning and research in Mashhad municipality were used to investigate the efficiency of different regions of Mashhad municipality districts. SOSS, GIS, DEA method, constant returns of scale and variable returns of scale were used to analyze the collected data in order to investigate the impact of regionalism on improvement of urban management, its efficiency in decentralized management, and

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delegation of authority to other regions.

Theoretical foundations

With increasing growth and expansion of cities, and increasing urbanization challenges followed by that, urban management has become one of the most important issues of the day, to extent that some researchers believe that "there exist two approaches for dealing with rapid development of urbanization: declining the pressure of population attraction in cities and improvement of urban management". Urban management can only be effective when it functions within an appropriate framework of urban policies (Pieter Dijk, 2006:1). Establishment of local-level governments is one of the ways that can bring this to realization, so that authorities and resources related to municipalities and councils may be delegated in terms of all the activities that can be executed, administered and fulfilled in urban domains and so that transformations in the administrative trends and procedures may cause the inclusion of all the actors in great urban development's as well as shift of municipality trends towards sustainable development and citizen-orientation, and the integration of urban management military coordinator of the micro-level (Local communities, councils) up to middle level (regions, districts, municipalities and the City Council) create and apply the principle of responsibility and performance, the lowest practical scale (sarraf,1388:32-33). However, democratic ideas will only become operational in urban management and planning when decentralization and regionalism are included in them. Decentralization is the process of delegating minute and local affairs to micro units. This procedure, instead of developing long and widespread bureaucratic systems that perform some actions with great difficulty and considerable time and costs, tries to provide a more efficient management system by development of local units.

Today (1390) Mashhad has 13 districts, 43 regions and 140 quarters. In management terms,

it can be said that this action is somehow a delegation of district citizens' authority to regional citizens. In this delegation of authority, the citizens deal with regions and the mayor (city manager) of the region contributes to administration of a smaller part of the city. This leads to better identification of problems and help the mayor take new measures for urban administration. However, it seems that the execution of regionalism plan in Mashhad has led to Increased staffing structure of urban management and lack of complete delegation of authorities and responsibilities to the regions. Decentralized urban management is a new way of management which contributes to realization of desired goals of urban management through apportion of duties and responsibilities. Urban division is one of the administrative tools in decentralized urban management. However, if this is not done in accordance with appropriate principles, not only does not help urban management, but it will lead to unbalanced division of the city and detachment of urban texture.

Efficiency and different kinds of that

Oxford dictionary defines efficiency as: the quality of doing something well with no waste of time or money (Oxford 2007, 489). In the economics literature, the concept of efficiency is the maximum output with a certain amount of input and vice versa (pours kazemi, 1382:281). Data covering analysis is primarily used as a way to determine the relative efficiency of an organization unit (Thanassoulis, 2003: xvii). The main advantage of Data covering analysis compared to other methods for measuring efficiency is that this method can be used to evaluate the efficiency of the units with several (unconvertible) inputs and outputs (pour kazemi , 1382: 281-282). There are two main ways of measuring Technical efficiency and scale efficiency: Parametric methods such as stochastic frontier approach that are built on the basis of econometric methods and non-parametric methods such as data covering analysis that are based on linear plan-

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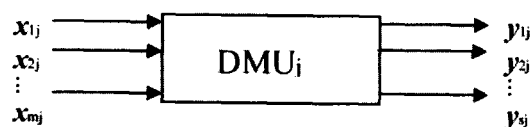
ning methods (Daskalopoulou, 2009, 487). Optimization of the model's inputs and outputs based on data covering analysis method can be carried out in 2 ways (Cooper, 2007: 115).

Measurement of efficiency through DEA

Data covering analysis which was developed by Charnes, Cooper, and Rhoads, was a non-parametric method intended to evaluate the efficiency of interrelated decision making units (Hassan, 2007:172), has some unique characteristics which distinguish it from other classic and parametric methods. The most important examples of these characteristics include:

- 1- Realistic assessment;
- 2- Simultaneous evaluation of all factors;
- 3- No need to pre-determined weights;
- 4- Compensatory nature;
- 5- frontier-oriented rather than center-oriented assessments;
- 6- Figuring the best functional position rather than the ideal position.

The decision-making units, who see efficiency is measured, and could be banks, hospitals or different wards them, are key factors in understanding the concept of efficiency and productivity (Ramesh, 2001: 310).

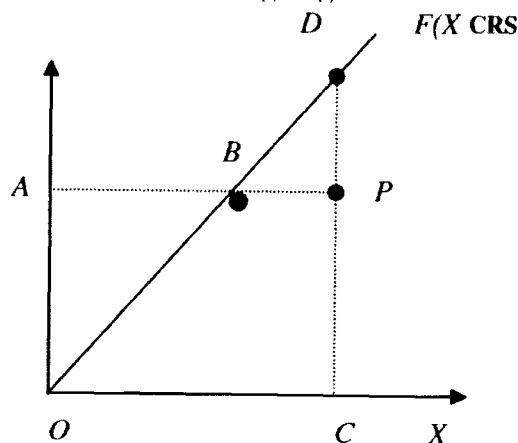


Constant return of scale model

$$\begin{aligned} \text{Maximize } f &= \sum_{i=1,2,3,4} u_{ip} + Y_{ip} \\ \text{Subject to : } & X_{1p} = 1 \\ & \sum_{j=1,2,\dots,13} u_{ij} Y_{ij} - X_{1j} \leq 0 \end{aligned}$$

In this model, U is the importance factor of each output and since this model has 4 outputs, the index I, adopt numbers 1 to 4. The operator calculates the additive weighting of group outputs. As can be seen, the objective function that should reach the maximum level is the total of outputs in the p-ary experimental group that is weighted with a set of factors that could maximize the efficiency of that giv-

en group and minimize the efficiency of other groups while taking the same factors into considerations. This action is attempted to calculate the highest efficiency value for the p-ary group. Yet, this maximization is a sort of bound maximization. First, the denominator in the equation of group P efficiency that is X_{1p} , is considered equal to one so that the objective function may turn to a linear function and it may become possible to use the linear programming technique. Second, the main requirement is that when the selected factors of group P are multiplied by the outputs generated by other units, the efficiency of each group should not exceed unity. The phrase is in fact the mathematical expression of this requirement: the additive weighting of each unit (which is weighted in accordance with the desired weights of p-ary unit) minus their consumer inputs (which is considered equal to one or unity) should not exceed zero. The outline of constant return of scale model is shown in the following diagram:



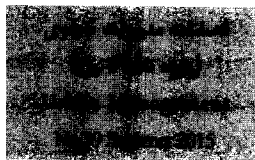
The points on the CRS efficiency frontier have two distinguished features (Hossein Zahreini, 1387: 29): they are technically effective and enjoy the best scale at the same time.

Variable Return of Scale

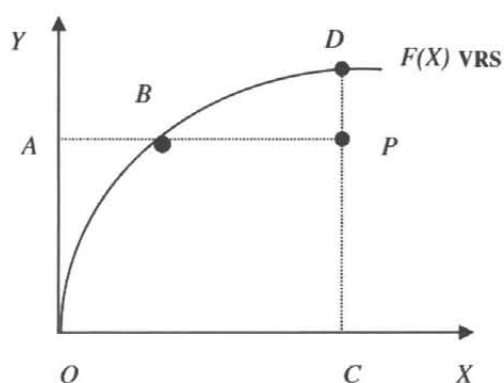
$$\begin{aligned} \text{Maximize } z &= \sum_{i=1,2,3,4} u_{ip} + Y_{ip} + W \\ \text{Subject to : } & X_{1p} = 1 \\ & \sum_{j=1,2,\dots,13} u_{ij} Y_{ij} - X_{1j} + W \leq 0 \\ & u_{ij} v_j \geq 0 \end{aligned}$$

This model is the same as the previous model

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except that a new variable (W) is added to the model in order to add the returns of scale concept to the model. If W is equal to zero, this means that the group is in the constant return of scale status. This is the same assumption that was applied in CRS model. Then, if $W=0$, we have practically returned to the CRS model. Positive or negative values of W refer to increasing or reducing value of returns of scale (ibid: 72). The following diagram is a schematic view of the efficiency verge and both efficient and inefficient units.

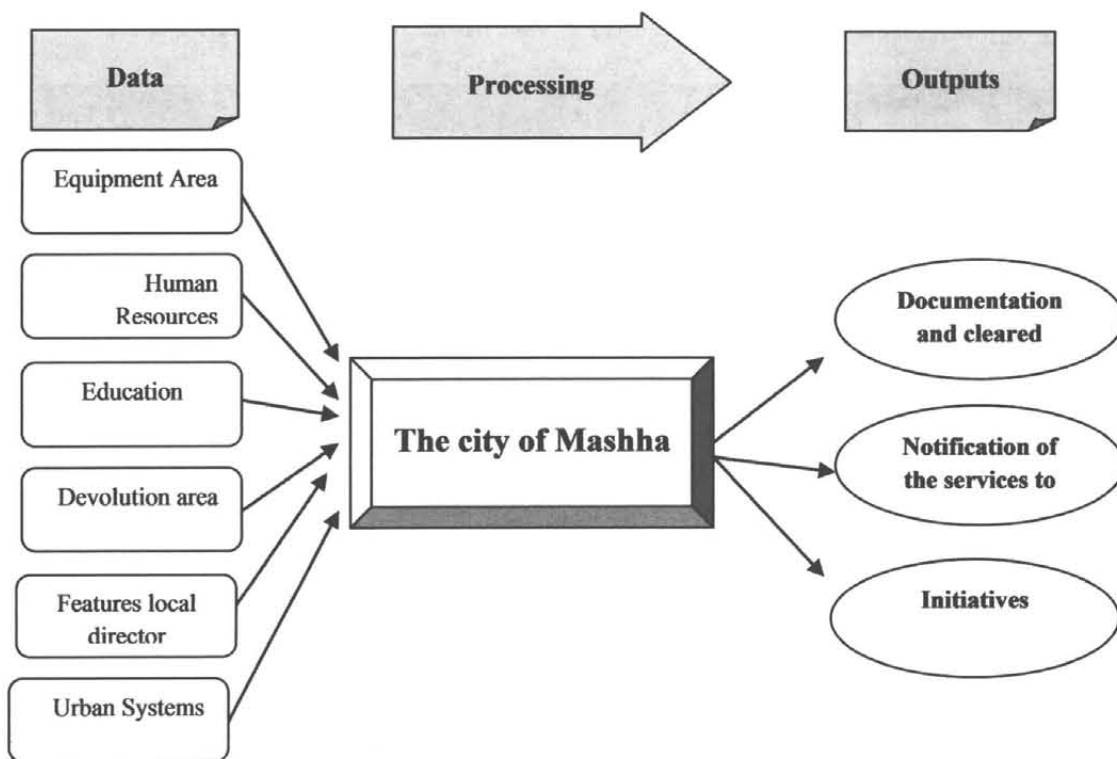


Findings

The efficiency of each region was measured by Variable Return of Scale, constant Return of Scale and DEA model, the results are as follow:

1.Evaluation of different municipality regions of Mashhad in terms of efficiency

The data gathered by the municipality of Mashhad in 1388 for evaluation of different regions in Mashhad, were used to answer the question. Obviously, these data are gathered based on the rankings of the indices by the municipality experts (according to the highest points that each index may achieve). The population of this study includes the entire area of Mashhad which is divided into 34 regions (in 1388). Thus, after selecting the indices and introducing the data into the DEA Frontier software in form of input and output, the efficiency and optimized values of different regions' data and outputs were calculated. According to the following diagram, the indices used to evaluate the efficiency of different



▲ Figure 1. Comparison of different municipality regions of Mashhad in terms of data-output

regions are divided into two categories: input indices and output indices.

According to the evaluations of different municipality regions in 1388; the average value of human resources evaluation was 7.3 and the highest value (10.8) and lowest value (4.5) were attributed to region 1 of the 7th district and region 2 of the 9th district respectively. The results obtained from evaluation of the urban regions' equipment fall within variant ranges, such that the lowest value (6) is attributed to region 1 of the 3rd district and the highest value (12) is attributed to region 3 of the 6th district. The results obtained from evaluation of education through these regions showed a significant difference between regions, such that region 2 in the 3rd district with a value of 3) and region 4 of the second district (with a value of 6.4) have the lowest and highest ranks in this regard.

Furthermore, the results obtained from evaluation of regional administrators' characteristics showed that region 1 of the first municipal district (with the score of 11.3) and region 1 of the seventh district (with 4.9 score) are at

the highest and lowest rankings respectively. In addition, the results of an evaluation of documentation and clarification of services provided to the public, region one and three of the first district (with score of 6.2) and region 3 of the 6th district are at the highest and lowest rankings respectively.

Furthermore, the results obtained from Evaluation of Mashhad Municipality regions according to the scores of all the tested indices showed that region 1 in the first district with a total score of 69.9 and region 4 of the seventh district with a total score of 52.2 had the highest and lowest rankings among all the regions respectively

2. Specification of the models used in the study

After the analysis of the input and output data in the DEA Frontier software, the performance of Mashhad municipality regions was calculated by CRS and VRS methods and the optimized values were extracted for each of them.

3. Evaluation of the performance of Mashhad Municipality regions by CRS



Points in Zone 5 areas	Points in Zone 4 areas			Points in Zone 3 areas			Points in Zone 2 areas					Points in Zone 1 areas			Title	
Area 1	Area 3	Area 2	Area 1	Area 3	Area 2	Area 1	Area 7	Area 6	Area 4	Area 3	Area 2	Area 1	Area 3	Area 2	Area 1	
8.1	7.2	8.1	7.6	7.7	7.5	7.3	5.2	6.7	8.4	6.7	7.5	6.2	7.3	6.9	7.3	Assessment of human resources
5.7	5.1	6.6	6.4	5.8	3.8	2.7	5.6	4.7	4.8	4.7	3.9	5.5	5.8	4.7	5.6	Building Assessment
5.6	4.2	4.2	5.8	5.2	5.4	6	3.8	1.2	5.6	4	6	6	5.4	3.6	5.6	Evaluation location
7.8	8.2	8.8	8.4	8	8.4	6	9.4	8.4	9.4	7.8	7.8	8.2	8.2	8.2	8.4	Evaluation of the equipment
3.9	3.8	4.1	4.1	3.7	3.1	1.7	3.4	3.9	4.2	3.5	4.1	3.6	3.6	3.5	3.9	Evaluation of urban systems and automation
4.6	5.3	5.9	5.4	4.5	3	4.6	3.2	5.8	6.4	4.3	3.8	5.2	6.1	5.6	5.8	Educational Assessment
7.3	7.9	7.9	7.7	6.5	6.5	7.7	6.4	8.2	7.9	7.5	6.8	6.1	9	8.5	8.9	Evaluation of the devolution of the region
9.4	7.8	9.5	9.1	9.1	8.1	9	8.7	8.6	8.7	9	8.6	8.6	9.7	7.3	11.3	Assessment of the President of the
4.4	4.8	4.8	4.4	4.2	4	3.4	3.6	4.4	4.6	4.8	3.2	3.4	6.2	5.6	6.2	Documentation and transparent evaluation of the delivery of services to clients
3.4	3.6	3.6	2.9	3.1	2.7	2.3	1.6	1.6	2.8	2.9	2.1	3.6	1.8	1.8	1.8	Information of how to select assessment services to people
3.8	4	4.2	3.5	3.9	3	3.4	3.9	4.4	4.2	2.8	3.4	3.6	4.7	4.5	5.1	Do innovations and services to people
64	61.9	67.7	65.3	61.7	55.5	54.1	54.8	57.9	67	58	57.2	60	67.8	60.2	69.9	

Table 6. Evaluation of Mashhad Municipality regions

Points in Zone 11 areas			Points in Zone 10 areas			Points in Zone 9 areas			Points in Zone 8 areas			Points in Zone 7 areas					Points in Zone 6 areas			Title
Area 3	Area 2	Area 1	Area 3	Area 2	Area 1	Area 2	Area 1	Area 2	Area 2	Area 1	Area 5	Area 4	Area 3	Area 2	Area 1	Area 3	Area 2	Area 1		
9.1	6.9	8.6	7.9	6.6	8.7	4.5	8	6.5	6.9	9.6	5.6	4.8	6.1	10.8	7.3	8	6.5	Assessment of human resources		
4.7	4.2	5.5	5	5.5	5.7	6.3	5.9	6.5	4.6	2.8	4.7	4.5	6.1	8	8	6.1	5.8	Building Assessment		
3.8	5	1.6	4.6	4.6	6	1.2	5.2	2.8	4.4	2	3.8	5.2	5	5.8	5.8	4.8	5.6	Evaluation location		
8	7.4	7.4	8	7.4	7.6	7.2	8.4	7.6	6.8	10	7.6	7.6	8	10	12	6.2	7.4	Evaluation of the equipment		
2.5	2.4	2.5	2.2	2.2	3.3	2.9	3	1.9	2.6	3.6	2	3.5	2.1	3.5	3.6	2.8	3.3	Evaluation of urban systems and automation		
5	4.8	5.9	5.8	5.1	5.2	4	5.5	4.7	3.7	5.3	4.5	5.6	4.3	5.4	5.3	4.5	4.5	Educational Assessment		
8.7	8.2	8.3	8	8.7	8	8.2	7.5	6.6	7.4	7.3	6.6	6.7	7.3	5.7	7.3	6.4	5.9	Evaluation of the devolution of the region		
9	9.2	9.1	8.9	9.2	9.2	9	10.4	8.4	9.4	7.2	7.4	8.1	8.2	4.9	7.9	8.7	9	Assessment of the President of the		
5.4	5.4	5.2	5	5.2	5.2	5.2	4.8	4.4	4.4	2	4	4.8	4.4	4	2	3.8	3.8	Documentation and transparent evaluation of the delivery of services to clients		
3.3	3.7	2.2	2	2.5	3.3	2.5	3.6	2.7	2.3	2.1	2.3	2.2	2.2	3.3	3.3	2.4	3.3	Information of how to select assessment services to people		
4.6	4.6	4.6	4.4	4.4	4.3	4.8	4.6	3.9	3.7	1.5	3.7	3.6	4	3.6	4.6	3.8	4.2	Do innovations and services to people		
64.1	61.8	60.9	61.8	61.5	66.5	55.8	66.9	56	56.2	53.4	52.2	56.6	57.7	65	67.1	57.5	59.3			

▲ The latter part of table 6: Evaluation of Mashhad Municipality regions



▲ Map1. Evaluation of Mashhad Municipality regions according to the scores of all the tested indices; Drawn by the authors.

In this model, if the value of efficiency is equal to one or unity, it means that the region is in the efficiency frontiers, otherwise it would be as inefficient as its distance from the value of one or unity. The results of efficiency evaluation in the constant returns of scale show that 18 regions of Mashhad (53%) were efficient and 16 regions (47%) out of the 34 regions

in Mashhad were inefficient, but as these regions have increasing returns or outputs, the results suggest that in the present conditions, the above-mentioned regions can have relatively higher outputs in the municipal regions, in case of increase in inputs, in order to come closer to efficiency of scale.

The values of efficiency differ from one re-

Template area	Type return	The performance Constant Return of Scale	area	Template area	Type return	The performance Constant Return of Scale	area
6 1	Increasing	0.9719	6 2		Constant	1	1 1
	Constant	1	6 3		Constant	1	1 2
	Constant	1	7 1		Constant	1	1 3
8 2	Increasing	0.9872	7 2		Constant	1	2 1
	Constant	1	7 3	3 2	Increasing	0.8171	2 2
8 2	Increasing	0.9907	7 4	1 1	Increasing	0.9730	2 3
3 2	Increasing	0.5804	7 5	1 1	Increasing	0.8734	2 4
3 2	Increasing	0.9351	8 1	1 2	Increasing	0.9086	2 5
	Constant	1	8 2		Constant	1	2 6
6 1	Increasing	0.9801	9 1		Constant	1	3 1
	Constant	1	9 2		Constant	1	3 2
1 1	Increasing	0.9695	10 1	1 1	Increasing	0.9753	3 3
	Constant	1	10 2	6 1	Increasing	0.8433	4 1
	Constant	1	10 3	1 2	Increasing	0.9219	4 2
9 2	Increasing	0.9956	11 1		Constant	1	4 3
	Constant	1	11 2	3 2	Increasing	0.9636	5 1
	Constant	1	11 3		Constant	1	6 1

▲ Table 7. The efficiency of Mashhad municipality regions according to CRS and the sort of returns and example regions; Source: the observations and calculations of the authors



▲ Map 2. The efficiency of Mashhad municipality regions according to CRS; Drawn by the authors

region to others in Mashhad. In other words, region 2 and 4 in the second district and region 1 in the 4th district have efficiencies below .09 and regions 3 and 5 in the second district, region 3 in the third district have efficiencies above .09. Yet, region 5 in the 7th district has

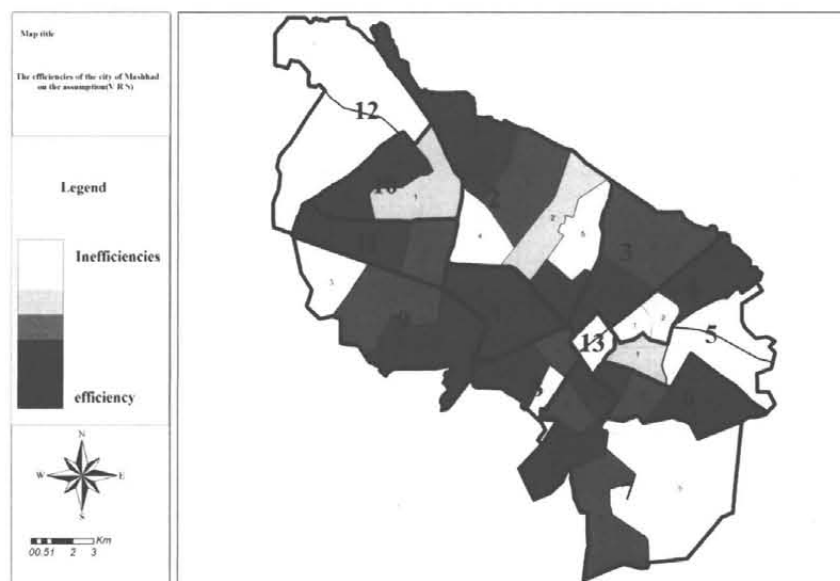
the lowest efficiency (.058).

Evaluation of Mashhad Municipality regions according to VRS

In the VRS, the region with the efficiency value of 1 or unity is considered an efficient region. In case this value is lower than 1, the region is

Type return	The performance variable returns to scale	area	Type return	The performance variable returns to scale	area
	1	6 2		1	1 1
	1	6 3		1	1 2
	1	7 1		1	1 3
	1	7 2		1	2 1
	1	7 3	1 7	0.9683	2 2
	1	7 4	3 2	0.9845	2 3
3 2	0.8830	7 5	1 1	0.8758	2 4
	1	8 1	1 2	0.9235	2 5
	1	8 2		1	2 6
	1	9 1		1	3 1
	1	9 2		1	3 2
6 2	0.9734	10 1	1 1	0.9880	3 3
	1	10 2	6 1	0.8936	4 1
	1	10 3	1 2	0.9315	4 2
7 4	0.9963	11 1		1	4 3
	1	11 2	3 2	0.9649	5 1
	1	11 3		1	6 1

▲ Table 8. The efficiency of Mashhad municipality regions according to VRS model and example regions; Source: observations and calculations of the authors



▲ Map 3. The efficiency of Mashhad municipality regions according to CRS model; Drawn by the authors

inefficient and its inefficiency value can be calculated by subtraction of the efficiency value from unity or one. The efficiency values obtained from this model and their evaluations show that, contrary to the CRS model, 23

regions (67.6 %) are efficient and 11 regions (32.4 %) are inefficient. Of course the efficiency and inefficiency of these regions differ from the previous model. These differences are as follows: In the evaluation of the CRS

model, it turned out that the regions in the district 6 and seven, region 4 in the seventh district and region 1 in the seventh and ninth districts are inefficient, whereas in the VRS model these regions are efficient. In addition, in the CRS model, region 2 of the second district had an efficiency value above .09 while this region had an efficiency value lower than .09 in the VRS model. In this model (VRS), as opposed to the previous model, region 4 in the second district had the lowest efficiency, and the reason of that will be investigated in the efficiency of scale analysis.

The evaluation of scale efficiency in different regions of Mashhad

As explained before, the VRS model shows the net technical efficiency and the difference between the efficiency in the VRS model and CRS model show the scale efficiency. The scale efficiency shows whether the region has the optimized value of efficiency it should have.

The DEA model was used to test the efficiency of different municipality regions in

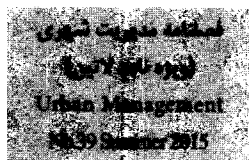
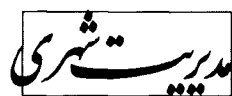
Mashhad. To do so, the indices that were to be investigated were introduced to the software in form of input and output, and then CRS and VRS models were used to calculate the efficiency of the regions. In case the scores obtained in both of these models are equal to one, the regions are efficient; otherwise the regions will be inefficient. The results of this test are reported in the following table after the required calculations.

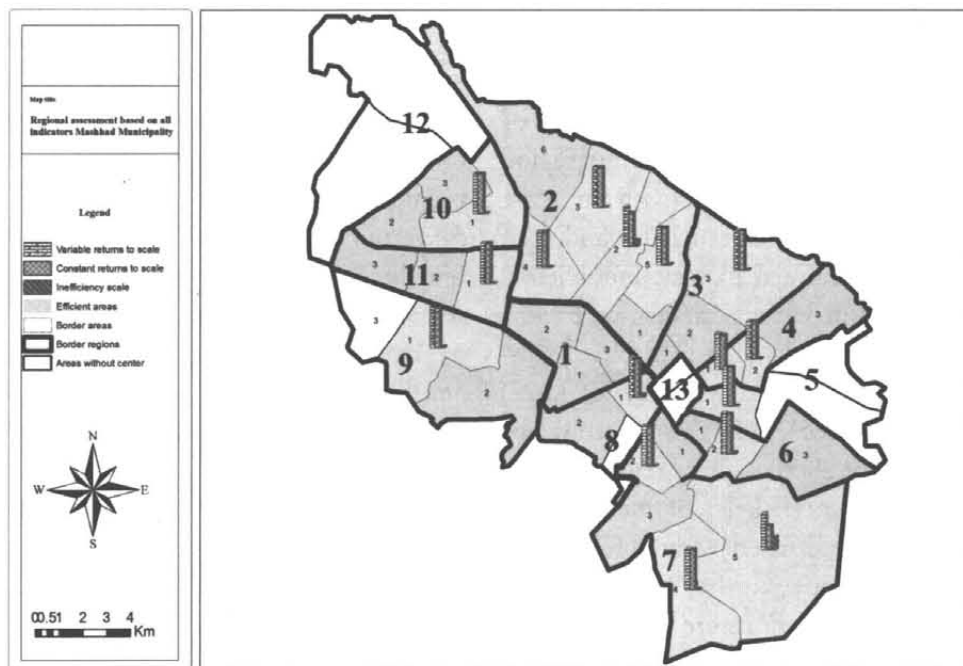
Results

The results of this study suggest that decentralized management in Mashhad has failed to achieve its goals and different municipality regions in Mashhad don't enjoy equal efficiency levels, such that the analysis of efficiency by the CRS model shows that 18 regions in Mashhad (53%) are efficient and 16 regions (47%) out of the 34 regions in Mashhad are inefficient. In addition, the analysis of efficiency by the VRS model shows that contrary to the previous model, 23 regions (67.6 %) are efficient and 11 regions (32.4 %) are inefficient, Of course the efficiency and inefficiency of

The inefficiency of scale	area	The inefficiency of scale	area
0.028	2 6	0	1 1
0	3 6	0	2 1
0	1 7	0	3 1
0.013	2 7	0	1 2
0	3 7	0.151	2 2
0.009	4 7	0.011	3 2
0.303	5 7	0.002	4 2
0.065	1 8	0.015	5 2
0	2 8	0	6 2
0.020	1 9	0	1 3
0	2 9	0	2 3
0.004	1 10	0.013	3 3
0	2 10	0.050	1 4
0	3 10	0.010	2 4
0.001	1 11	0	3 4
0	2 11	0.001	1 5
0	3 11	0	1 6

▲ Table 9. Scale inefficiency in different regions of Mashhad; Source: observations and calculations of the authors

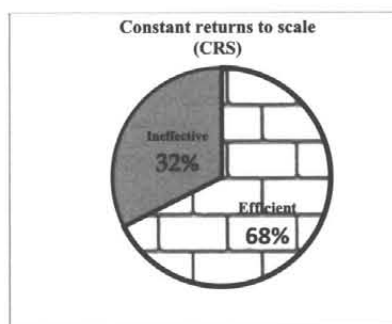
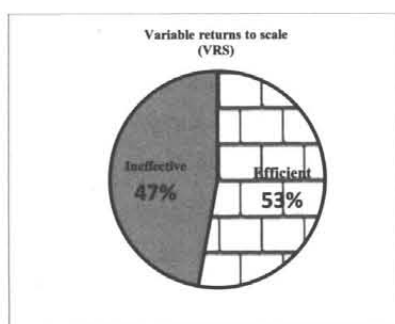




▲ Map 4. Distribution of efficiency in different regions of Mashhad

The percentage of inefficient regions	Number of inefficient regions	The percentage of efficient regions	Number of efficient regions	Number of regions	Testing method
32%	11	68%	23	34	CRS
47%	16	53%	18	34	VRS

▲ Table 14. The results obtained from the DEA model



▲ Diagram 1. Efficiency in terms of scale

these regions differ from the previous model. In addition, the scale efficiency and optimized values were calculated by incorporation of the 2 models. The results showed that regions 1, 2 and three in the first district, 1 and 6 in the second district, 1 and 2 in the third district, 3 in the fourth district, 1 and 3 in the 6th district, 1 and 3 in the 7th district, 2 in the eighth

district, 2 in the ninth district, 2 and 3 in the 10th district and 2 and 3 in the 11th district are 100% efficient in terms of scale, it means that these regions have the best values of efficiency. But the inefficient regions are scale inefficient as well. In other words: region 5 in the 7th district with 30% difference in their optimized value, have the highest level of in-

efficiency among different regions, and after that, region 2 in the second district, with 15% of scale inefficiency ranks second. The inefficiency of these regions is mostly attributed to optimized values. In the meantime, region 1 in the 5th and 11th districts (with the score of .001%) has the lowest efficiency and their inefficiency is attributed to scale inefficiency. In addition, region 2 in the 6th district, 2 and 4 in the 7th districts and 1 in the 8th and 9th districts scored scale inefficiency values of (.028), (.013), (.009), (.065), (.020) respectively. The inefficiency difference of these regions is that the average scale inefficiency of these regions arises from their inefficiency in the CRS model and their efficiency in the VRS model. In other words, these regions are efficient in the CRS model and efficient in the VRS model.

Suggestions for further studies

According to the above explanations, it is suggested that, improvement of different regions' status through complete delegation of authority and responsibilities to regions and integration of regions into central and regional municipalities, can contribute significantly to reduction of this structural complexity and achievement of decentralized management and regionalism goals. In addition, attending the following suggestions can contribute to improvement of different regions' status.

1-First, the municipality should deal with the causes of inefficiency, based on the results of this model. And then increase the inputs or decrease the outputs based on the results of the model, in order to help the inefficient areas reach the efficiency frontier.

2-Providing an exact definition of the position of regions in the hierarchy of urban administration and management divisions can lead to solution of the above problems

3-Delegation of more responsibilities and consequently more authorities to different regions in order to accelerate decision-making processes

4-Anglicization in districts and deployment of district experts to regions in order to rein-

force regional human resources and promote their position and to pave the path for more effective and easier communications between people and authorities and urban administrators and, consequently, reduce the number of urban trips

5-Location of independent and sustainable buildings in terms of frequent relocation of regions in the centers of regions

6-The use of intelligent monitoring systems and automatic polling devices in the service counters leads to increased monitoring of regional performances and therefore can contribute significantly to obviation of deficiencies and shortcomings, and identification of weak and strength points

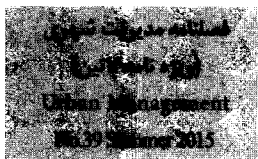
7-Holding briefing and training sessions for the staff using domestic experienced teachers and establishment of virtual training systems in order to elevate the knowledge and awareness of regional forces

8-Installation of info quick and interactive voice response telephone lines, promotion of regionalism and attraction of public participations through public relations and cultural programs held in regional mosques, holy shrines, and Schools in order to venerate the clients and inform them of the services provided in different regions. Provision of regulated and documented manuals of style for any individual regional activity in order to clarify the affairs and accelerate responds to the clients.


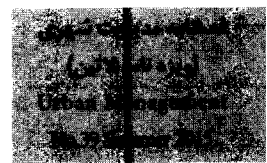
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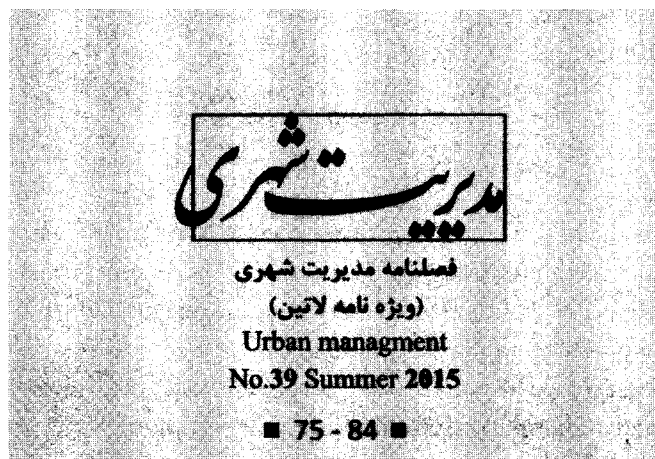
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Received 17 Nov 2014; Accepted 20 Jan 2015

Solution to Material Durability and Energy Consuming Optimization Based on New Technology in Urban Management System

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Abstract

Energy consumption share in construction part and dependent industries is about 40 percent of total energy consuming in Iran which is significant compared to other industries such as transportation, agriculture and therefore is of important. As energy consumption reduction and material durability improvement leads to cost reduction from one hand and environment pollution reduction on the other hand, is considered as one of the most substantial concerns in the field of construction. Energy consuming reduction needs energy consuming pattern modification besides new technology utilization for efficiency improvement of energy consumers and also lifetime enhancement of urban furniture and elements. The article results contributes to right management of energy consuming in urban environment by a brief look to solar energy utilization as a supplier and some new technologies as energy consumption reducers and introduces the best methods to manage their usage.

Keywords: *energy management, consumption optimization, solar energy, new technology, Nano technology*

Introduction

Iran is one of the biggest energy resource owners and so far there are 85 explored oil fields in the country. The country gas reserves are in the second position in the world. Remained gas reserves estimated about 2616 trillion cube meters. Irregular energy consumption trend in Iran will make it decline from an energy exporter to an energy importer by the year 1400. To prevent such a social and economical harm which will be converted to a national threat if to be neglected, performing energy optimization solutions and energy consumption pattern is necessary. This will insure Iran presence in international energy market for longtime period. Energy optimization is a profitable and costless operation for national economy and its promotion will make a lot of jobs. Safety in production process, energy conversion and environmental pollution reduction are other energy consumption optimization benefits [1]. Considering the growing trend of urbanization and subsequent excessive energy consumption in large cities, using new technology in the production of energy and materials used in urban space is important. Due to the limited natural resources, movement towards sustainable development and environmental protection should be able to prevent loss and waste of energy; this requires data on energy management and optimization of its use. Energy management is the means for energy provision, optimum consumption and maintenance and is a set of measures utilized for effective use of existing energy sources; these measures include: energy saving and using alternative energy sources. While during the last two decades annual growth rate of electrical energy consumption in our country has been about 0.7 percent, a statistical comparison shows that energy consumption intensity is approximately 2 times the world energy consumption growth rate. Thus, the importance and necessity of good management and improved energy consumption pattern in the energy sector and especially urban management is obvious and un-

deniable [1]. This paper besides investigating the factors affecting the breeding the patterns of energy consumption through increased efficiency and reductions in direct and indirect consumption of energy, tries to glancing consider and revise the use of solar energy as a supply and use of new technology as a means for significant lowering of energy and its ability to increase the durability of materials in the design, construction and after construction. Solutions to prevent energy waste in buildings Solutions to prevent energy waste in the construction industry can be classified as general use of advanced materials and updating design systems that each of them can directly or indirectly affect energy consumption reduction. Some of these materials will be briefly discussed.

• Concrete elements nanostructure modifiers

As much urban furniture are made up of concrete components, the authors tried to discuss it more than other solutions. These classes of materials help increase the longevity of the structures with quality and durability enhancing building materials and thereby prevent wasting energy. In recent years, many studies have been performed in this field such as increasing the practical life of concrete structures with controlled corrosion process and use of destructive ion conduction reduction by Nano-structured modifiers. These modifiers reduce destructive ion conduction coefficient by increasing and even a man folding the viscosity of the solution inside the pores and because the structure longevity is proportional to the coefficient of conduction of destructive ions such as chloride and sulfate, this makes it two or several times more. Utilizing the fly ash or other additives such as waste and byproducts of other industries that have been suggested from the distant past, can be important in several perspectives. Because, these materials on the one hand by replacing cement and on the other hand by increasing durability of the structure, significantly reduce energy con-



sumption and also and make a more stable and healthy environment by reducing the greenhouse gases released due to cement production and environmental pollutants consumption [2-3]. Also it is important to point out two destructive factors for concrete elements include Chlorine Ions and sulphate Ions.

• Using ceramic Nano pigment in concrete corrosion caused by chlorine ions

With due attention to the application of ceramic nano pigments and their physical and chemical properties, their exploitation and operational sphere can be extended. Corrosion problems can be controlled and highly reduced in humid conditions and harbors near corrosive gases and fluids by utilization of ceramic Nano pigments. Present experimental results for protection of plain and reinforced concretes containing ceramic Nano pigments are summarized as follows: [4]

1. Ceramic Nano pigments increase the mechanical strength of the samples in compare with plain concrete samples.
2. Ceramic Nano pigments increase the impermeability of the samples in compare with plain concrete samples.
3. Considering the reduction of vacancies, permeability of chlorine ions in concrete is reduced and thus causes the prevention of corrosion in concrete and steel rebar.
4. Addition of 3 and 5 percent of yellow and green ceramic Nano pigments improves protection of armature against chemical attacks that this amount of ceramic Nano pigment and colored cement are chosen on the base of prior that regard both of economic and mechanical consideration [5, 6, 7].

• Using ceramic Nano pigment on mechanical properties and concrete corrosion in sulphate perimeter

Present experimental results for protection of plain and reinforced concretes containing ceramic nano pigments in Sulphate perimeter are summarized as follows [8]:

1. Ceramic nano pigments increased the mechanical strength of the samples in

comparison with plain concrete samples

2. Results of measuring potential based on ASTM [9] standard in the samples containing sulphate ion in a compound of sodium sulphate and water showed the decrease of corrosion activities of color against the attested samples.

3. Polarization T results of attested and color samples containing sulphate ion in a compound of sodium sulphate and water also shows improvement in the rate of corrosion of color samples as against attested samples towards control and decrease of corrosion.

4. Polarization cycle result showed non-existence of pitting corrosion in all the samples.

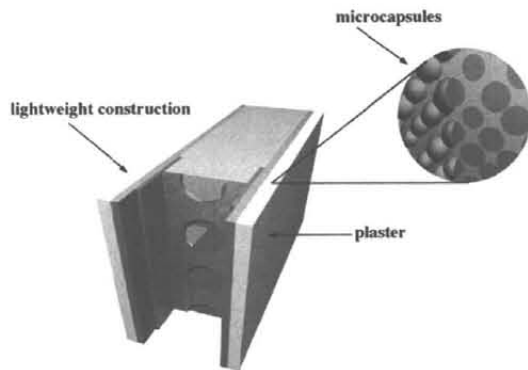
5. The SEM observations and X-ray diffraction analysis also revealed the formation of needle ettringite crystals in the concrete samples that were exposed against sulphate ion.

• Smart temperature regulating insulations

In fact, they are energy-saving insulation materials that release or save the energy when the phase changes. solid - liquid phase PCMs are the most common kind of them, which like other storage materials, store heat energy with increasing temperature and release this energy [10], the time required. These materials which Their phase change can only happen at a certain temperature, have storage capability equivalent to 14 to 15 times other storage materials such as water [11-12]. In these composite materials, usually polyethylene glycols by varied molecular weight, mix with aluminum Nano particles and polymer epoxy resin and convert to composites useful for buildings. These composites, in addition to providing very strong insulation against the temperature difference of the wall sides, gradually release the extra heat they obtain in the heating process of building system in the hours the temperature is below the standard of living; this contributes a lot to energy saving discussions and the ambient temperature. Schematic view of the composite is depicted in Figure 1.

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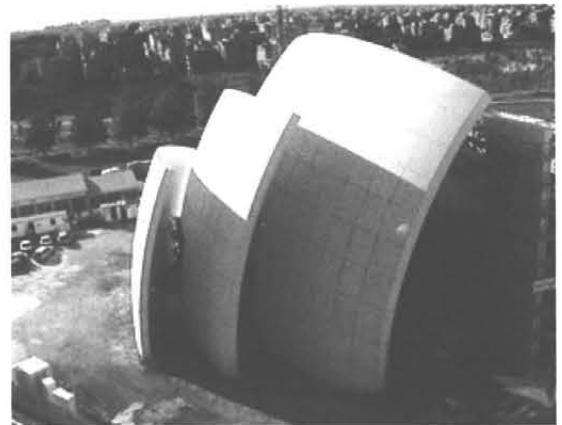
▲ Figure 1. Schematic view of building components covered by heat saver Nano-composites

• Self-cleaning materials

Using self-cleaning surfaces is one of the solutions that can greatly reduce the need for maintenance in the system and hence the cost and energy required to reduce the energy to maintain the facility. This is possible through the use materials with self-cleaning capability. In addition to reducing energy consumption for storage system, these materials can play a very effective role to reduce the pollution of air and so much attention have been paid to this matter by the practitioners in the construction field. These materials show a multiple self-cleaning capability in the moist environment due to their super-hydrophilic surface and their main based materials are titanium oxide nanoparticles [13]. Since these coatings typically used in exterior surfaces, in addition to a very high resistance level and cleaning their surface and a beautiful face with provide a beautiful face with a clean air for the city. An outstanding example of the use of these materials (Figure 2) can be seen on the outer faces of the Davis Cathedral in the city of Misericordia in Italy and MM Tower in Yokohama, Japan [14-15].

• Self-cleaning glass

Self-cleaning and anti-fog glass is another material emanated from Nano-technology process, in addition to bricks and materials used in constructions today. These anti-reflex glasses based on $\text{SiO}_2\text{-TiO}_2$ nanoparticles, at the outset used merely to cover the surfaces of solar cells and gradually have also entered to other



▲ Figure 2. View of the Dives Cathedral in Misericordia, built with self-cleaning cement



▲ Figure 3. MM Tower in Yokohama, Japan with self-cleaning surfaces

sectors of the building. These glasses in addition to self-cleaning and anti-fog property, unlike the earlier glasses were used, having a low refractive index and thus all the light allowed entering into the cell or buildings. Also in moist and foggy areas, which accumulated water drops on the surface and the irregular distribution of light and lowering the visibility resolution is a matter of importance, the use of this glass can be very useful. In these glasses, which their reflected part is very small, the transfer coefficients have increased to 97% that provide the base for providing much of



▲ Figure 4. Use of self-cleaning and sound insulating glasses in Japan

the energy supply by using renewable energy (solar). [16-17.] Moreover, since the usual problem to keep glasses clean, is one of the problems of the occupants (especially in large towers), replacing them with new glasses based on new technology can save energy and cleaning costs [18-19]. In the following, the facade performed by these glasses is shown.

• Self-sterilizing surfaces

Using self-sterilizing surfaces, is one of the other solutions that can considerably bring down energy consumption. The material on the one hand, while providing a healthy environment and sterile equipment, (which can also play an important role in hospital environments and elderly dwellings) on the other hand by eliminating the need to sterilize equipment, make significant energy savings. In this material which has a surface covered by Nano-particles with photo catalyst properties, most bacteria, fungi and microbes on the surface of the photo catalyst activity will be perished. These materials are very popular, where the surface and anaerobic bacteria are present. Experiments conducted on the coating surface, the bricks and materials made from these materials have shown that bacteria in the environment completely cleared and will be lost for one hour. These substances are used in hospital operating rooms that needing a sterile environment are critical, [20-21]. The most important feature of these surfaces is their being non toxic and so recently the photo catalytic elements

(along with other elements such as silicon dioxide (SiO_2)) is also used in the manufacturing of surgical blades; Blades mentioned, in addition to lightness and great strength (which is an important economic dimension), has to be self-sterilizing which are very important in surgeries needing consecutive sterilizing of the devices.[22]

• Air purifiers Nano filters

Another energy management issues, based on new technologies and to reduce the energy consumption of commercial and residential buildings, is optimization of the building's air filtration system. With the development of new science, new technology always has been toward increasing the efficiency of these systems that one of the new sciences is nanotechnology. Application of nanoparticles for use in treating, removing odor and disinfection of the air inside the room, is another application of this science in the construction industry. Small amounts of compounds such as formaldehyde and toluene removed from the furniture and construction materials which lead to building Syndrome as well as fungi and bacteria that threaten the health of residents will be removed from the environment by the use of nanoparticles and nanotechnology in the construction industry. What are common today as air filters are filters which can absorb air pollution, but these filters will be considered later as a new source of pollution, while with the air filters with nanoparticles photo catalytic properties, the situation is quite different. Because, in these filters, pollution and odor-producing substances are decomposed to neutralized material, that on the one hand lead to higher efficiency and reliability and on the other hand the reduction in energy consumption. Powerful absorbents of the activated carbon and zeolite can be utilized in these filters to enhance the absorption efficiency of the filters. These Nano-filters have been used In Japan in many cases, in hospitals and nursing homes [23-24, 20].

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▲ Figure 5. View of a piece of airogel (above) and the building insulated with this material

Airogel new generation, which were first presented by Brown University, in addition to variations in color, can also be used as a surface color which facilitates the insulation [25].

• **Nano coating of insulation evaporation**

Protection against moisture is one of the important discussions in increasing the durability of the buildings that on one hand helps building durability and on the other hand prevent susceptible environment for fungus. Water and moisture are factors that can sometimes have devastating effects on the durability of concrete structures (and hydrophilic or porous). Even in high quality concretes affecting through superficial adsorption and penetration into concrete pores seems inevitable. This penetration that is sometimes accompanied by harmful ions is one of the major threats for concrete structures; using water proofer

Nano-structured material can largely overcome this problem. The material that is made by inspiring from the lotus leaf structure of molecules can be used as a waterproof cover. Surfaces made of these materials, often are like a lotus leaf surface and pass near-surface moisture easily, which as well as high resistance to frost and destructive ions, provide a surface without fungi, algae and moss. The nano-structured polymer materials, in addition to be used as surface coating, are used as additives in building materials [25-26].

• **Self-healing materials with those**

One innovation that exists in the field of composite materials is using Self-healing Nanocomposite materials that this material has a removable key chain, containing ionic and hydrogen bonds which are reversible when damaged. This feature is related to their special structure of poly Petyd - Poly Dimethyl Silocsan copolymers which base Silocsan have been copolymer with a cross connector. Entering these implications to cement, concrete and modern construction materials area, is a new concept but with a different approach. What is today known as the Self-healing ability in Civil engineering and architecture is the use of alloys with elastic coupling with a capsule containing a polymer material with high obtain their initial resistance. These materials after creating some cracks under the effect of elas-

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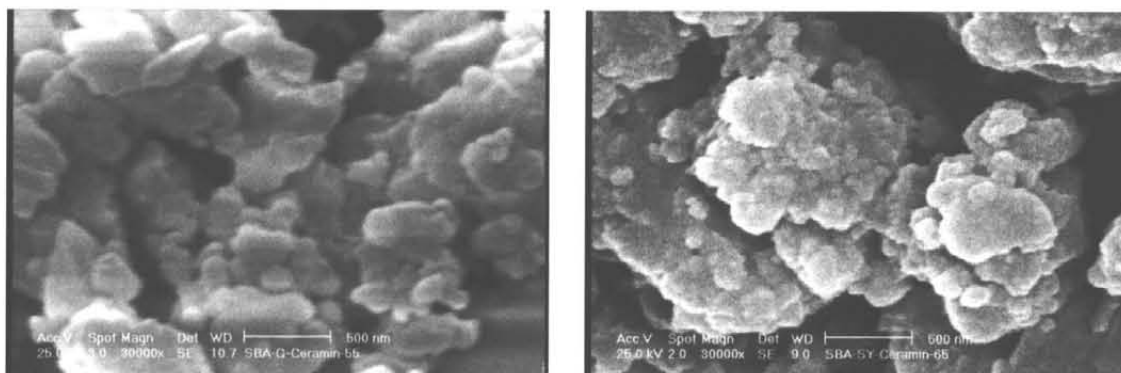
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Mixture	Particle (size)(nm)	Compressive strength of (7th (MPa)	Compressive strength of (28th (MPa)	Permeability (cm) for solution of 3gr/lit NaCl-99%	Permeability (cm) for solution of 5gr/lit NaCl-99%
PC	-	51	62	2.1	2.3
GPC3	< 200	63	73	1.3	1.6
GPC5	-300 200	63	72	1.4	1.65
GPC5	-500 300	58	71	1.42	1.75
GPC5	-1000 500	57	69	1.67	1.81
YPC3	< 200	60	68	1.35	1.5
YPC5	-300 200	61	65	1.3	1.55
YPC5	-500 300	57	64	1.46	1.82
YPC5	-1000 500	56	64	1.75	1.98

Note: the given values are the average value for 5 samples in each test

▲ Table 1. test results (compressive strength and permability) (Test by S. B. Ahmadi)



▲ Figure 6. SEM photographs of materials: (left) Green colored cement (right) Yellow colored cement

tic metal alloys convert to the first shape and the cracks walls close to each other and obtain their initial resistance affected by adhesion of polymeric materials [27]. Replacing these capsules with materials capable of being restored to be re-used, is among the issues which have brings success for the Holland research team. Using materials with Self-healing capability can indirectly and by increasing the structure longevity reduce the energy consumption.

In each of the experiments one standing armature which is 6cm in length and 1cm in section diameter is placed in the middle of the sample. To easily access the armature, a circular groove is created on its body 1 cm from top, and a fine wire is fixed inside the groove according to the standard for later tests. Then it is covered by soldering [30]. For the purpose that the armature corrosion would be limited just to the portion in the concrete where armature has been placed, 3 cm of the shaft was covered by tar so that it would not corroded. Armatures are placed at the distance of 1 cm from the bottom of the mould in the concrete. The armatures primary corrosions were cleaned using sandpaper, their grease were cleaned using caustic soda and then superficial thin layers on the armatures surface were washed using acids.

Powder materials and nanoparticles affect the samples properties in the way that increase the corrosion resistance and physical and mechanical properties [31] which are shown in table 5. These nanoparticles are produced by using plasma arcing and S.B.Ahmadi method and

their effect on mechanical strength of samples is considerable First time S. B. Ahmadi introduced a new method for nano powders production. He introduced his freezing mixing method for dry powder and studied the effect of ceramic pigment's size on coloured concrete strength [28-29,32].

Mix proportion of specimens

Detail of mix proportions for mortars containing ceramic Nano pigment are given in table.4. The water-cementations ratio(w/c) was 0.4 and two content of green and yellow Nano pigment were 3% and 5% by the weight of cementations materials and the dosage of superplasticizer are showed as a percentage of the weight of cementations material amount(table 4) was unchanged for making samples during the test. To fabricate the concrete containing Nano-ceramic pigments, water-reducing agent is firstly mixed into water in a mortar mixer, and then Nano-particles are added and stirred at a high speed for 5min. Defoamer is added as stirring. Cement, sand are mixed at a low Speed for 3 min in a concrete centrifugal blender, and then the mixture of water, water-reducing agent, Nano-ceramic pigments and defamer is slowly poured in and stirred at a low speed For another 2min to achieve good workability. Fresh concrete was poured into oiled molds to form cubes of size for compressive Strength tests and cubes of size for perm ability tests. After pouring, An external vibratoris used to facilitate compaction and Reduce the amount of air bubbles. The specimens are de-Molded at 24h and then cured in a room at

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a temperature Of $20\pm 3^{\circ}\text{C}$ and in water until the Prescribed period, and then are placed in the laboratory Environment before the test for 24h. Mix proportion of specimens used In test is given in Table 4. In order to prevent silicate and calcium hydroxide dissolution from the samples, water was saturated with this two material.

The amount of superplasticizer was sufficient such no bleeding or segregation was reported. Herein PC donates plain concrete, GPC3 and GPC5 donate concrete containing green ceramic Nano pigment in the amount of 3 and 5 by weight of binder respectively and YPC3 and YPC5 donate concrete containing yellow ceramic Nano pigment in the amount of 3 and 5 by weight of binder respectively.

Conclusions

Given the above issues and the energy loss discussion in the construction industry, with a coherent program for utilizing new technologies, standard and optimized energy consumption systems and appropriate urban planning, in addition to ensuring a sustainable energy, it is possible to be successful in the God-given responsibility to preserve these resources for future generations by prevention of waste a huge part of the capitals in the energy sector. with respect to this research, Although running these projects will seem expensive at the first look, but field research conducted in this field has proven that the return on investment obtained due to energy loss compensation, not only compensates these project costs, but also because of the station of these systems and also not requiring significant maintenance costs, will be so profitable for energy sector of the country.

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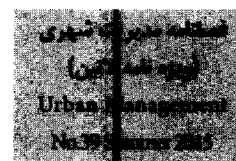


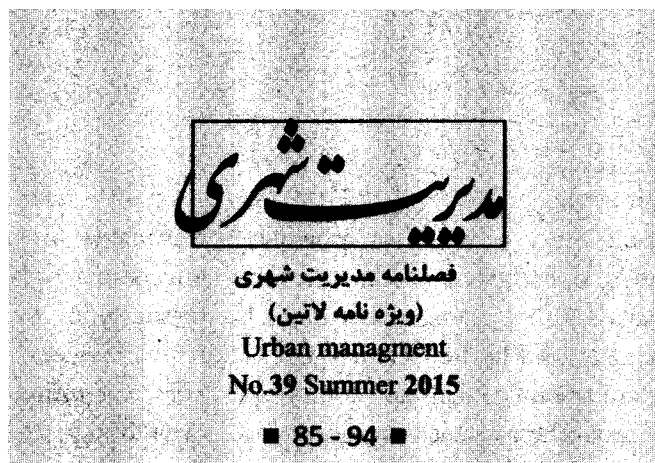
Mixture type	Water	Cement	Fine aggregate	Nano-YP	Nano-GP	UNF(%)
PC	240	590	1478	0	0	0.5
GPC3	240	590	1478	0	17.7	0.5
GPC5	240	590	1478	0	29.5	0.5
YPC3	240	590	1478	17.7	0	0.5
GPC5	240	590	1478	29.5	0	0.5

▲ Table 2. Mix proportion of specimens (Kg/m³) (Test by S. B. Ahmadi)

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Received 26 Nov 2015; Accepted 17 Feb 2015

Evaluation of Urban Green Space on Economic Price in Neighborhoods, Region 1, Tehran

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Abstract

Urban green space is one of the important solicitude for urban planners and designers due to their effects on quality of life. This research used HPM model to estimate economic value of urban green space, in a case study of trees in Velenjak residential place, Tehran Metropolitan Area in Iran. View determined the spread tree on the public spaces and neighbourhoods improve residential land use value about 1.5 MRials resulting a positive neighbourhood externality of studied green spaces and trees. Developed model in this study is capable to popularization on the same region, in order to qualitative value estimation of open spaces.

Keywords: *urban spaces, HPM model, tree, economic value, Tehran.*

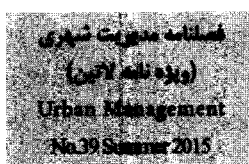
1. Introduction

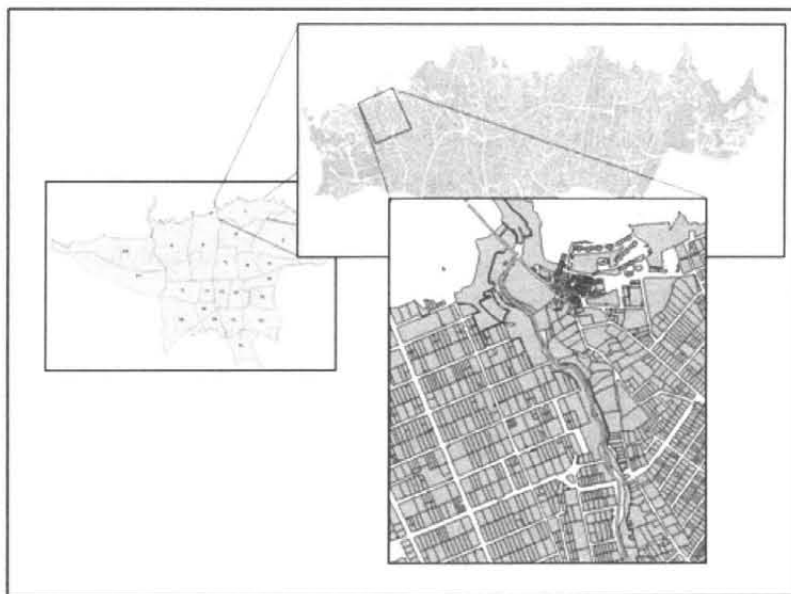
Urban residents price a variety of amenities (e.g. Wetlands, open spaces, parks and recreational facilities) that offer environmental, cultural, aesthetic, and health benefits. Urban green space are amenities that are found on residential properties, street verges, and parks and reserves in urban areas. The environmental benefits of urban trees include protection of the land from soil erosion, reductions in storm-water run-off, habitats for wildlife, filtration of air pollutants, improvements in local air quality, reductions in the urban "heat island" effect, and energy savings by providing shading and insulation (Nowak, Crane, & Stevens, 2006; Pandit & Laband, 2010; Sander, Polasky, & Haight, 2010). Urban trees also provide cultural and health benefits that improve the quality of urban life, as trees may make a city neighborhood seem more scenic, provide privacy, shelter residents from negative effects of undesirable land uses, and improve retail areas by creating environments that are more attractive to consumers (Sheets & Manzer, 1991; Wolf, 2005). These environmental, cultural, and health benefits of urban trees are often difficult to translate into monetary terms, (Anderson & Cordell, 1988) as the market for most of these benefits are absent due to their public good characteristics. The hedonic pricing method (HPM) has been widely used to estimate the values of different environmental and recreational amenities, which are bundled in property values or sale prices (Kim & Goldsmith, 2009; Loomis, Rameker, & Seidl, 2004; Meng, & Polyakov, 2013). One of the several applications of HPM is to estimate the values of urban trees, open space, and forest cover (for example see Donovan & Butry, 2010; Sander, Polasky, & Haight, 2010).

Recently, related studies pointed out that the earlier studies that examined the effect of trees on property value have not differentiated the relative impact of different types, sizes, and

species of trees on the property value. It is reasonable to expect that prospective home buyers may place different values on different types of trees as they provide different services. For instance, conifers provide year round greenery to urban residents, even though they might be less preferred than broad-leaved trees. There have been a few studies that have examined location specific contribution of trees on property values, using tree cover variables such as proportional area covered by trees within and adjacent to the property without differentiating the types of trees (Netusil, Chattopadhyay, & Kovacs, 2010; Sander, Polasky, & Haight, 2010). Each type of forest cover provides different amenities to the homeowner and to society, and it is thus important to differentiate tree cover by tree types to estimate their relative contributions on property values.

The missing link between the type and the location of trees in urban areas and their effect on property values is important to examine in an urban context for multiple reasons. Firstly, the environmental and economic values of trees in residential setting have been widely recognized and strongly held among residents and city planners (Powell, 1976). However, the effect of trees on the property price by their types and location had not been studied. Secondly, the property market is a major issue in cities and understanding the link between tree location/types and value would be useful in property appraisal processes and/or developing new residential neighborhoods to accommodate the growing population of the city. Thirdly, it could lend empirical support to the existing efforts of city councils to develop and maintain urban greenery in residential areas. The aim of this paper is to examine the effect of trees on property values using spatial hedonic models with the emphasis on the types of trees and their locations. Tree locations are differentiated according to whether they are situated within a property boundary (private space), on an adjacent street





▲ Fig. 1: Map of the study area in region and city

verge (public space), or on the neighbouring property (neighbouring private space). The paper is organised into four sections. Following the introduction, lay out the methods of this study including a brief description of the study area, data and variables, and the modelling process. Then we present and discuss the results, and make some concluding remarks along with potential policy implications of the findings.

2. Materials and methods

2.1. Study area

This study covers northern neighborhood of the Velenjak in Tehran metropolitan area in the Capital of Iran. The socio-economic setting of the area ranges from the affluent and established suburbs close to the Velenjak valley. Fig. 1 displays the extent of the study area. The land use of the study area is dominated by residential housing, although a mixture of small shopping, recreational and commercial land uses is also present. Some significant environmental amenities within or surrounding the area includes: university, parks and bush reserves.

2.2. Data and variables

Following a general practice of HPM model and the insights, this research collected data

on three groups of key variables: property, location and environmental. Using multiple sources, data on property sales, geographic locations and the extent of the property, neighborhood characteristics including urban trees were collected. Study used 2012 data on property sales that were acquired from researchers local studies and agencies, the custodian of property data in Tehran. Property sales data contain the parcel number, sale price, date of sale, and structural characteristics for each of the properties sold. The sale price was deflated to the average of 2012 price. For geospatial referencing and delineation of the boundaries of each property, study retrieved cadastral map data. The cadastral map data were also used to identify small parks in the study area.

From all sale records for 2012, selected single (detached) family homes and a sale price of greater than 1,000MRials which resulted in a total of 2149 observations for analysis. Spatial analysis to link the property location with other spatially explicit variables was conducted using ArcGIS10. The property boundary layer extracted from the cadastral map was superimposed on the aerial image of the study area. Broad-leaved and

trees within the boundaries of each property, on the neighboring properties, and on the verges of the streets adjacent to each property were counted visually. A brief description of the variables and their descriptive statistics are presented in Table 1.

The number of trees on the properties ranged from 0 to 11 for broad-leaved and 0 to 10 for palms with a slightly higher mean for broad-leaved trees. Compared to the average number of trees on residential properties, fewer numbers of broad-leaved and trees were found on adjacent street verges (0.4 and 0.03) and on neighboring properties (0.52 and 0.16). This reduction in the average number of trees on street verges is primarily due to the fact that for most of the properties in our sample, only one side was facing the street.

2.3. Model specification

The hedonic pricing model has been widely used to estimate the implicit price of different structural, neighborhood and environmental attributes of a house or property from its sale price (Champ, Boyle, & Brown, 2003; Freeman, 1979). The model assumes that a house is a differentiated good and the differences in house prices are due to different attributes of the house including its neighborhood and accessibility or location specific characteristics (Rosen, 1974). Following Rosen's seminal work we apply a traditional hedonic pricing model that represents the price of a differentiated good which reflects the value of structural, neighborhood, and location specific or accessibility characteristics associated with it. We consider the number of trees within the property boundary (private space), on the adjacent street verges (public space), and on the neighboring properties as environmental characteristics of a house which are parts of both structural and neighborhood characteristics in the model:

$$P_i = \alpha + X_i'\beta + Z_i'\gamma + \varepsilon_i \quad (1)$$

Where P_i is the house sale price; X_i is a $j \times 1$ vector of structural characteristics of

the house and the characteristics of the property ($=j$) that includes property area, house age, indicator for the presence of a swimming pool, the number of structural features of the house, including bathrooms, bedrooms, dining and meal rooms, parking spaces, and the number of broad-leaved and palm trees on the property; Z_i is a $k \times 1$ vector of neighborhood and location characteristics ($=k$) that includes the number of broadleaved and palm trees on street verges adjacent to the property, the number of burglaries per 1000 houses and assaults per 1000 population by suburb, and distances to the CBD, the nearest large parks, sport reserves and small neighborhood reserves (i.e. playgrounds); α is the intercept, β and γ are parameter vectors to be estimated; and ε_i is the error term.

The HPM model in Equation 1 does not account for any spatial relationships. However, spatial data such as house sale prices could exhibit spatial relationships in two ways: spatial correlation among observations of the dependent variable (sale prices) and model errors (Anselin, 1988). Spatial relationships are rooted in the fundamental law of geography referred to as the "first law of geography" that captures the essence of spatial or geographical influence among observational units and states that "Everything is related to everything else, but near things are more related than distant things" (Tobler, 1970).

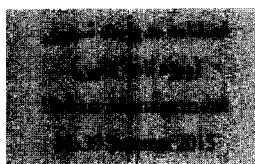
The relationship is referred to as spatial lag when the sale price of a house is affected by the sale prices of neighboring houses. When omitted variable bias exists due to unobserved variables related to the location of a property, the errors of the model may be spatially correlated. The model that takes into account of both spatial lag and spatial error could be specified as

$$P_i = \alpha + \rho W_i'P + X_i'\beta + Z_i'\gamma + \varepsilon_i \quad (2)$$

$$\varepsilon_i = \lambda W_i'\varepsilon + v_i$$

where ρ is the spatial lag coefficient, W_i is a $n \times 1$

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Variable	Median	Mean	STD	Minimum	Maximum
Dependent variable					
Sale price (M.Rials)	425,000	540,000	200,000	102,000	2,240,000
Explanatory variables					
Land area (m2)	712	980	132.23	242	1750
House age (years)	27	29.2	18	1	80
Number of bathrooms	1	1.01	0.5	1	3
Number of bedrooms	3	3.4	0.78	1	5
Number of dining and meal rooms	1	0.9	0.6	0	2
Number of study rooms	0	0.18	0.36	0	2
Number of parking spaces in the garage	0	0.73	0.89	0	3
Number of broad-leaved trees on the property	0	1.02	1.39	0	11
Number of trees on the property	0	0.78	1.52	0	10
Number of broad-leaved trees on the neighboring properties	0	0.56	0.78	0	4
Number of trees on the neighboring properties	0	0.17	0.52	0	5
Number of broad-leaved trees on street verge adjacent to the property	0	0.4	0.756	0	9
Number of trees on street verge adjacent to the property	0	0.03	0.42	0	6
Distance to the CBD (km)	15.12	15.42	6.12	1.21	25.36
Distance to the nearest main road (m)	254	423	320	15	1563
Distance to the large park (m)	1253	1326	1432	12	7245
Distance to the small neighborhood reserve (m)	136	196	130	9	742
Distance to the sport reserve (m)	385	620	456	8	3759

▲ Table 1. Model variables and descriptive statistics.

vector from the spatial weight matrix, λ is spatial error coefficient and v_i is an uncorrelated error term, i.e. $v_i \sim N(0, \sigma^2)$. The spatial weight matrix W defines the way in which observational units are believed to be neighbours and determines the influence of neighbouring observations (see Anselin, 1988; Conway, Li, Wolch, Kahle, & Jerrett, 2010; Taylor, 2003 for theory and applied examples). Most of the observations in the data set are not immediate neighbours. In such cases, common approaches to define the spatial weight matrix are the inclusion of the nearest neighbours or observations within a certain cut-off distance. It is common to assume that the strength of the spatial relationship declines as the distance between the two observations increases.

3. Results and discussion

First, study estimated a traditional HPM model using OLS (Table 2) and explored a potential endogeneity concern in the model. To address

a concern that the number of trees on the verge of the street could be endogenous in the model as trees on the street are more likely to be planted in rich communities, we performed a Hausman test of endogeneity by using property frontage as an instrument. Property frontage represents available space for planting trees on the street verge; thus the longer the property frontage, the higher the number of trees that could be on the street verge. The instrument is uncorrelated with the model error (0.005), but is correlated with the number of trees on the verge ($r = 0.31$). The Hausman test failed to reject the hypothesis of endogeneity (F-statistic=0.0586, p-value= 0.8087), and therefore we conclude that the number of trees on the street verge is not endogenous in the model.

Then explored the presence of spatial dependence using a semivariogram of the OLS model residuals (Fig. 2). the semi variogram presents the semi variance as a function of

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distance between observations. If the residual semi variance of closely located observations is smaller than the residual semivariance of observations located further apart, spatial dependence is likely to be present (Donovan & Butry, 2010). Analysis of the semi-variogram in Fig.2 suggests the presence of spatial dependence, which disappears after approximately 2000 m distance. Data use this distance as a threshold to create the inverse-distance row-normalized spatial weight matrix. This matrix was used to calculate Moran's I statistic, which confirms the presence of spatial dependence in the residuals. It also confirms the presence of spatial dependence in the residuals, but the test using the inverse-distance spatial weight matrix provided slightly stronger evidence of spatial dependency.

The magnitude and significance of spatial control variables, as well as the result of the Wald test for joint significance of spatial lag and spatial error coefficients in Table 2, confirm the presence of both spatial error and spatial lag processes. The results are consistent across the OLS and spatial models in their direction of impact (i.e. sign) and significance for most of the structural variables and variables describing the number of trees on and around the property. The coefficient for the number of broadleaved trees on the street verge is slightly overestimated in the OLS model and the coefficient for palm trees on the property became insignificant in the spatial model. This indicates that there might be some spatially correlated unobserved factors impacting the OLS model estimates, which are unlikely to be correlated with tree variables. On the other hand, there is a substantial bias in the coefficients for most of the distance based and suburb based variables estimated using OLS (the magnitude is greater). For the distance based variables, the distance to a feature (such as CBD, park, or road) is only a proxy for the effect of the feature. Furthermore, the values of the variables are spatially correlated

due to the way they were calculated.

Regression coefficients of the structural characteristics of the house have the expected signs and significance (Table 2). The numbers of bathrooms, bedrooms, dining and meal rooms, study rooms, and parking spaces in the garage have positive and significant impacts on the sale price. House age and sale price have a non-linear relationship with 49.4 years as a threshold age. Up until this age house price decreases as age increases but after this, house price increases as age increases.

The significance of a spatial lag parameter (ρ) suggests the presence of spatial lag effect in the model and that there are direct (own) and induced (from the neighbors) effects on sale price as a result of marginal change in an attribute for each property within a threshold distance. When estimating marginal implicit prices these effects should be accounted for by the use of a spatial multiplier $[1/(1 - \rho)]$ (Kim, Phipps, & Anselin, 2003). Results presents the marginal implicit prices (MIP) of the statistically significant variables in the model at the median sale price and the medians of the explanatory variables. Views show that both the distance to the CBD and the distance to the nearest main road have significant influences on sale price (Tables 2).

Proximity to public open spaces such as parks and reserves can influence house sale prices depending on their types and sizes. Taking insights from the findings of Hatton MacDonald, Crossman, Mahmoudi, Taylor, Summers, & Boxall (2010) and Tapsuwan, Ingram, Burton, & Brennan, (2009), study differentiated public spaces and reserves into five categories of large parks, local parks, sports reserves, small neighborhood reserves, and courses to accurately capture the amenity value associated with different types of parks and reserves. Results suggest that the proximity to local parks with and small neighborhood reserves have positive and

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فصلنامه علمی پژوهشی مدیریت شهری
(دوره شانزدهم، تابستان ۱۳۹۴)
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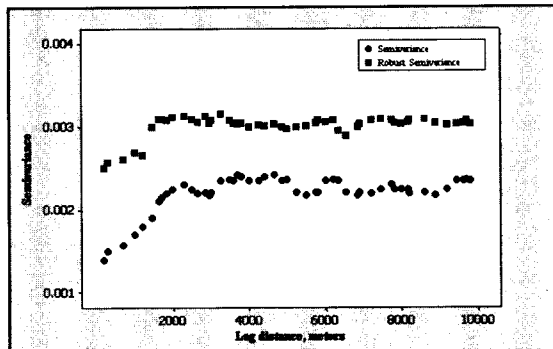
Variable	OLS model	Spatial model
Intercept	14.2300*** (0.1640)	6.42850***(0.85602)
Land area	0.00042*** (0.00002)	0.00042***(0.00003)
House age	-0.00652*** (0.00085)	-0.00850***(0.00231)
House age2	0.00007*** (0.00001)	0.00007***(0.00001)
Number of bedrooms	0.03115*** (0.00830)	0.03154***(0.00659)
Number of dining and meal rooms	0.01950** (0.00656)	0.01775** (0.00552)
Number of study rooms	0.08658*** (0.01458)	0.08548***(0.01256)
Number of bathrooms	0.12350*** (0.010890)	0.08156***(0.01160)
Presence of swimming pool	0.04651*** (0.01256)	0.04256***(0.01258)
Number of garages spaces	0.07541*** (0.00415)	0.04521***(0.00748)
Number of trees on the property	-0.00526* (0.00314)	-0.00045 (0.00561)
Number of trees on the neighbouring properties	-0.00514 (0.00541)	-0.00420 (0.00475)
Number of broad-leaved trees on street verge	0.02014*** (0.00633)	0.02041*** (0.00614)
Number of broad-leaved trees on the property	-0.00312 (0.00213)	-0.00251 (0.00413)
Number of broad-leaved trees on the neighbouring properties	-0.00645 (0.00213)	-0.00251 (0.00413)
Number of trees on street verge	0.00512 (0.01256)	0.01682 (0.01258)
Log distance to the CBD	-0.42150*** (0.01256)	-0.24159*** (0.01258)
Log distance to the main road	0.04651*** (0.01256)	0.022256***(0.00258)
Log distance to the local park	-0.04651*** (0.00456)	-0.04256***(0.00658)
Log distance to the park (bushwalking)	0.04651*** (0.00256)	0.01256* (0.00658)
Log distance to the sport reserve	0.02651*** (0.00556)	0.04256** (0.00658)
Log distance to the small reserve	-0.01651*** (0.00256)	-0.007256 (0.00458)
Assaults per 1000 residents	-0.00714*** (0.00214)	-0.00314 (0.00215)
Burglaries per 1000 houses	-0.00007 (0.00046)	0.00055 (0.00085)
Spatial lag		0.64575*** (0.06742)
Spatial error		0.74035*** (0.08914)
R2	0.614	
Adjusted R2	0.616	
Wald test that spatial lag and spatial error are both zero		156***
Note: Standard errors are in parentheses.		
* Significant at 10% level.		
**Significant at 5% level.		
***Significant at 1% level.		

▲ Table 2. Ordinary (OLS) and spatial HPM regression results of factors affecting property values (dependent variable Log Property price, MRials).

statistically significant impacts on sale price (the coefficient for the distance is negative); while the proximity to large parks and sport reserves have negative impacts (Table 2).

The focus of our study was on examining the effect of broad leaved and palm trees on house sale prices depending on their location i.e. trees located on private space (within the property boundary and on neighboring properties) versus trees located on pub-

lic space (i.e. Along the street verge next to the property); Contrary to our expectations, we found no statistically significant effect of palm trees on the house sale price regardless of their location either on one's property, neighboring properties or on street verges (Table 2). Results show positive and sizable effects of broad leaved trees on sale price only when such trees were located on street verges, while trees on the property and



▲ Fig. 2. Semivariogram of the residuals from the OLS hedonic price model

trees on neighboring properties did not have statistically significant effects. The marginal implicit price of a broad-leaved tree on the street verge is about 750,120 Rials which corresponds to approximately 4.27% increase in the median value of the property in study area.

Results show that both trees on the property and trees on the street verge benefit homeowners. However, trees on the property are associated with the cost of establishment and maintenance as well as opportunity cost (e.g. trees compete for valuable space with other land uses such as lawns, garden beds), which might outweigh the benefit. At the same time, the home owners do not bear costs associated with planting or maintaining trees on the street verges because they are maintained by the public agencies (such as city councils). Therefore, the private net benefit of street trees could be higher to residents while the opportunity costs associated with these trees are lower compared to the trees on the property. Furthermore, since tree cover is spatially correlated, models that do not control for neighborhood tree cover and spatial error might yield an inflated value of the coefficient of trees on the property (Sander, Polasky, & Haight, 2010). The differences in the implicit prices of the variables between the models indicate an omitted variable bias in the OLS model estimates, which signifies the importance and relevance of controlling for spatial lag effects in hedonic modeling.

4. Conclusion

It has been shown by a number of hedonic studies that urban trees are valued by the home owners (Abbott & Klaiber, 2010; Anderson & Cordell, 1988; Dombrow, Rodriguez, & Sirmans, 2000; Tyrväinen & Miettinen, 2000). This study is consistent with these findings while improving our understanding of how people value urban trees in two ways. Firstly, review found that different types of trees have different effects on sale prices. Secondly, broad leaved trees are valued differently depending on whether they are located within the property boundary (private space), on the neighboring property, or on the street verge adjacent to the property (public space). A broad-leaved tree on the street verge, but not on the property, increases the median property price of a house by about 750,120 Rials (4.27%). There might be several reasons why home-buyers value trees on the public space more than trees on the private space. Trees on the property might have some disamenities such as blocking views, dropping leaves, and damaging pavements (Donovan & Butry, 2010), despite their amenity benefits. Moreover, maintaining these trees imposes costs on the homeowners. In contrast, broad-leaved trees on the public space are highly valued by residents as they provide amenity services without incurring significant private costs. The management costs associated with pruning, thinning, and removals of street trees (public space) are borne by the city councils while the benefits are shared among local residents at modest involvement at their will primarily for watering trees in the early stages of plantings.

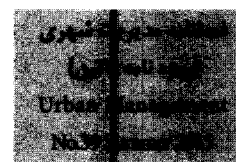
Other outcome of study show that it is economical from the residents' point of view to promote broad-leaved trees along the streets, because broad-leaved tree shave other benefits to residents, including ameliorating micro-climate. For example, shade cast by broad-leaved trees during hot summer

months would help to reduce the temperature underneath the tree thereby ameliorating the micro-climate. Urban green space programmes targeted to develop greenery along the streets would be positively viewed by the local residents and therefore city councils can use a public/private partnership approach in managing street trees, particularly for watering trees in the early stages of establishment. As Donovan and Butry (2011) suggested, it is important to differentiate between the sizes of the trees as residents could have size based preferences. This is an avenue for further research which can be accomplished using remote sensing data to delineate tree cover in private and public spaces to find amenity values associated with different types and sizes of green spaces in Perth. In addition, valuing trees based on their origin would provide useful information to city planners to make choices regarding tree species, such as whether to opt for native species that are more suitable for the dry Perth climate or non-native species that could be more aesthetically pleasing.

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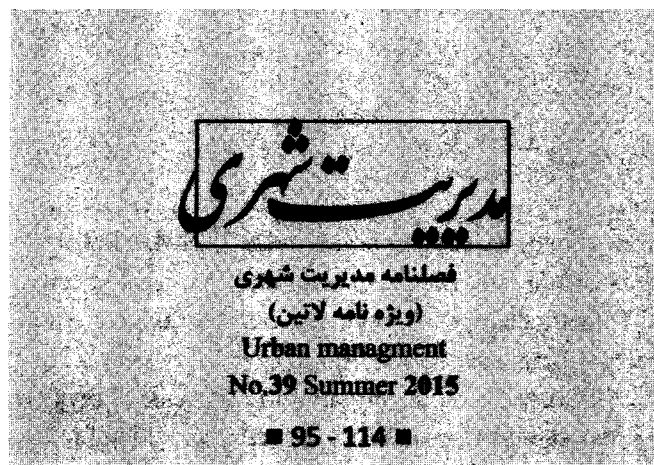
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Received 1 Dec 2014; Accepted 24 Jan 2015

Sustainable Disaster Risk (SDR) Reduction for Developing Countries with emphasis on land system Resilience (LSR) on future study approach; Case Study: Rural and Urban Settlement

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Abstract

With increasing frequency, the developing countries and the people living there are being affected by disasters. More and more often, development efforts are being destroyed. The reason for this trend is their growing vulnerability, which in turn is the result of economic and social development processes, such as the expansion of settlements and agricultural land in risk areas. The economic and social consequences of these disasters for the people in our partner countries last for years. To break and, if possible, reverse this trend, international organizations, governments and NGOs in the developing countries are increasingly upgrading the priority of disaster risk management for policy, and taking concrete preventive measures to reduce the risk to the population. This paper examined the concept of disaster and its management in the light of sustainable development with particular reference to Iran. It enumerated the different human and natural phenomena that could be characterized as disasters. It was discovered that, while hazard and/ or disasters possess anthropogenic origins, their consequences are felt on both human and the physical environments. In all cases, the human tolls have been significant. The paper highlighted the important elements of a typical Disaster Management Information System in Iran. After presenting a typology of disasters in Iran, the paper, advocated for a workable disaster management information system.

Key Words: *Disaster Management, Risk, Hazards, Vulnerability.*

Introduction

Disaster refers to an emergency caused by natural hazards or human induced actions resulting in a significant change in circumstances over a relatively short time period. Typical examples are death, displacement, disease, and loss of crops, damage to physical and service infrastructure, depletion of natural and social capitals, institutional weakening and a general disruption of economic and social activity. A broad definition of disasters include the fact that they are dramatic, sudden, unscheduled events that are often accompanied by large losses of human life, suffering and affliction to a society or a significant part of it, and a temporary breakdown of prevailing lifelines and systems. Such events cause considerable material damages and interrupt the normal functioning of an economy and of society in general (Otero and Marti, 1995). Rural settlements in developing countries suffer significant social, economic and physical impacts as a result of natural disasters (Osterling, 1979; Peacock, Killian and Bates, 198; Husain, 1993). While well-planned disaster recovery and development processes have the potential to improve the long-term stability of these communities, there are significant challenges. Resettlement, for example, is a common policy employed for post disaster development and planning in urban and rural areas of de-

veloped and developing countries (Tamakloe, 1994; Hall, 1994); Post-disaster development policies havemajor positive and negative consequences for communities, in both the short and long term (Afolayan, 1987). On the one hand, if properly managed, disasters provide considerable opportunities to initiate valuable new development initiatives. On the other hand, disasters can reverse large-scale development efforts (erasing years of work overnight). In addition, resettlements (and other development programmers) can increase the vulnerability of a region to disasters and have negative social and economic ramifications. However, development programmers can be designed to reduce adverse impacts and minimize susceptibility to future disasters (UNDP, 2004).

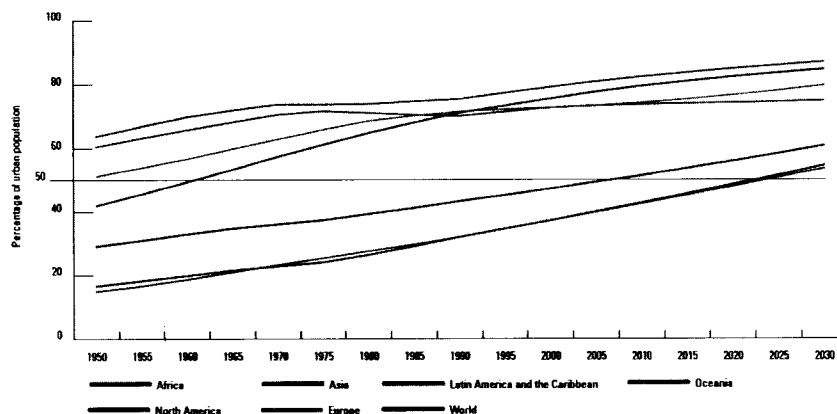
Lecturer review

A hazard is a natural physical phenomenon which can lead to a loss of life or damage to objects, buildings and the environment. The hazard is measured and defined by its nature (type of hazard), location and extent, scope and intensity (damage potential) and its probability of occurrence, duration and frequency (repetition cycles). Examples: floods, earthquakes, droughts, landslides, etc.

(*) Risk

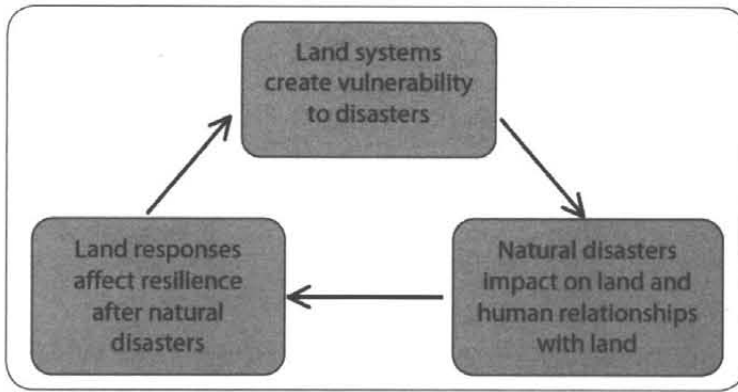
Risk is usually associated with the inability of men to manage hazard events that may

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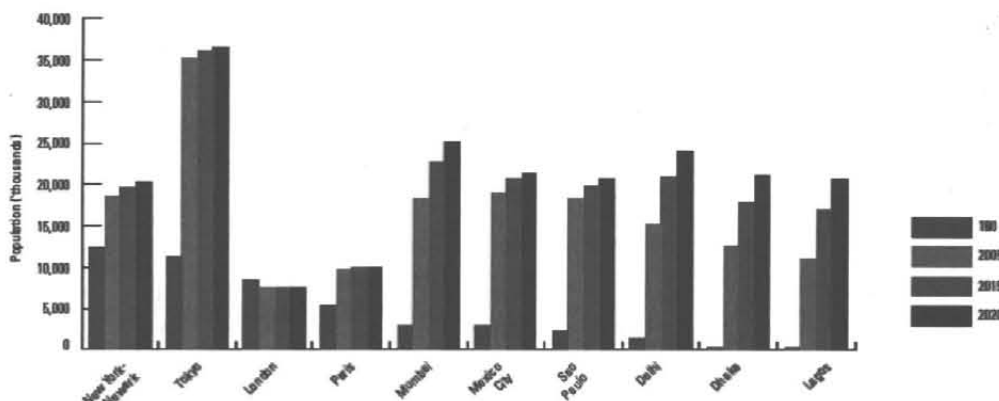


Source: United Nations, *World Urbanization Prospects: The 2003 Revision*.

▲ Fig 1: Proportion of Urban Population by Region, 1950-2030



▲ Fig 2: Understanding post-disaster land issues through vulnerability and resilience analysis



Source: United Nations, *World Urbanization Prospects: The 2003 Revision*.
 Note: Population in 2020 was estimated from population in 2010 and 2015 assuming that trends for these years remain the same.

▲ Fig 4: Urban Growth in The World's Largest Cities, 1950-2020

eventually lead to negative consequences like destruction of the environment, socio-economic activities, properties and losses of lives. Risk in terms of disaster management has a specific focus (UN, 1992). It can be defined as the probability of harmful consequences (ISDR, 2002), or expected losses (lives lost, persons injured, damage to property and/or the environment, livelihoods lost, disruption of economic activity or social systems) due to the interaction between humans, hazards and vulnerable conditions.

(*) Vulnerability

Expresses the level of possible loss or injury or damage to humans, objects, buildings and the environment which can result from the natural hazard; Vulnerability expresses the susceptibility and predisposition to be affected or suffer injury or damage. It also captures

people's inadequate options or ability to protect them against possible damage or recover from the consequences of natural phenomena without outside help. Vulnerability always relates to a concrete hazard. It arises out of the interaction of social, economic, physical and environmental factors. The level of vulnerability of a society to a specific extreme natural phenomenon (hazard) is determined by the potential damage caused by the natural phenomenon. There is just vulnerability which depends on and is influenced by various factors, and not specific sectorial vulnerabilities, such as economic, political or institutional vulnerability, as described in numerous publications. In addition to these "specific vulnerabilities", the specialist literature also often uses the term "ecological vulnerability". This refers to the vulnerability of the environ-

Public Sector	Private Sector	Civil Society
Politicians Military (where appropriate) Disaster Management institutions (existing and specially created) Line Ministries: Land, Housing, Justice, Forestry, Agriculture, Planning, Finance Local Government	Land developers (formal/informal) Estate agents (formal/informal) Lawyers, notaries Surveyors, Planners, engineers, other professional groups/societies Construction industry Bankers, financiers Chamber of Commerce Small holders/ farmer groups	Civil society organisations (including NGOs and community-based organisations) Universities, research institutes, technical institutes Religious and faith-based organisations Media organisations
Traditional Authorities	Households/Individuals	International Development Partners
Traditional Chiefs, elders, councils Informal settlement leaders Conflict resolution mechanisms Influential persons (religious, etc)	Individuals disaggregated according to age, gender and social and economic classifications Households, groups and communities, whether organized on ethnic, religious or other basis Beneficiaries of land related programmes People affected by land management decisions Land owners and leaseholders Informal landholders Refugees and internally displaced people	UN Specialized Agencies World Bank IFAD Bilateral agencies Private Foundations International NGOs/ Charities

▲ Table 1: Indicative list of potential land stakeholders



▲ Fig 5: How land system vulnerability can create human disasters

ment (soil, water). However, “ecology” covers more than just the environment. Ecology in these guidelines is used to refer to the science dealing with the relationship between nature and society, and not just one of these two components.

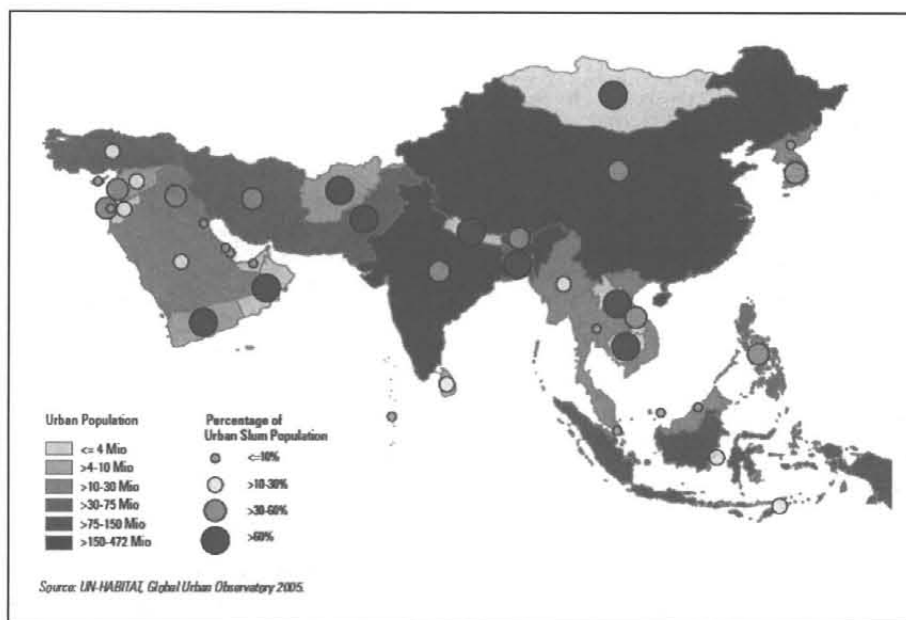
(*)Vulnerability factors

Vulnerability and its severity depend on a range of factors. In these guidelines, vulnerability factors are allocated to the following four categories: physical, environmental, and economic and social. The vulnerability factors to be identified and researched depend on the particular hazard type and location. They are explained in detail in sections 3 and 7. Risk is defined as the product of hazard and vul-

nerability ($R=H \times V$), or – to put it another way – risk as the probability of an encounter between a specific hazard and an element vulnerable to this is interpreted as the probability of occurrence of loss of life or damage to objects, buildings and the environment as the result of an extreme natural phenomenon with a specific strength or intensity.

(*) Disasters

A disaster is a serious disruption of the functioning of a society, causing or threatens to cause, widespread human, material, or environmental losses which exceed the ability of affected community to cope using only its own resources (South Africa, 2002). Disasters can be sudden (flash floods) or progressive



▲ Map 1: Urban Population and Slum Proportion in Asian Countries, 2001

(drought). Disasters are caused due to the interaction of humans with their environment. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk (ISDR, 2002: 25). Extreme natural phenomena do not in themselves constitute hazards. It is only when such phenomena occur in an environment where they pose a threat to human life, property, infrastructure or the environment that they can be classified as hazards. Similarly in the case of technological developments, it is only when such developments pose a danger e.g. industrial accidents, infrastructure failures. In essence, a disaster is the result of a hazard's impact on society. So the effects of a disaster are determined by the extent of a community's vulnerability to the hazard. Hazards in themselves do not constitute disasters. The magnitude of disaster is usually described in terms of the adverse effects which a disaster has had on lives, property and infrastructure; environmental damage; and the costs attached to post disaster recovery and rehabilitation. Simply put, therefore, disaster risk is the product of the combination of three

elements – vulnerability, coping capacity and hazard (ISDR, 2004). This interaction is illustrated in the following formula.

Disaster risk (R) = Vulnerability (V) x Hazard (H)

Capacity (C)

Hazards are increasingly dynamic and with highly varying potential impacts. A wide range of geographical, meteorological hydrological, environmental, technological, biological and socio-political hazards can threaten livelihoods and sustainable development.

(* Disaster risk management (DRM))

The terms disaster reduction (DR) and disaster risk management (DRM) are used as synonyms in the present guidelines. However, DRM is preferred, as this conveys a stronger sense of direct local initiative. In addition to risk analysis, DRM also includes prevention and preparedness for disaster. By contrast, disaster management (DM) consists of DRM as well as disaster response. Risk analysis is used here as a synonym for risk assessment. However, many authors and documents distinguish between these. Where this is done, risk assessment is taken as also including risk evaluation, socioeconomic cost-benefit analysis, prioritization of measures, establishing ac-

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ceptable risk levels, developing scenarios and measures. Risk analysis (RA) is used in these guidelines to refer to a method of determining the quantitative or qualitative degree of risk. The term “risk analysis” has the underlying concept of “participative risk analysis” (P-RA); this means that the affected target population are involved in the various stages of a risk analysis, and adopt the DRM as their own.

The concept of disaster risk as the product of hazard and vulnerability

Natural disasters are the result of the impact of an extreme natural event on people and their vulnerable goods and infrastructure, and cause loss of life and damage to goods and the environment. A disaster is the disruption of the functioning of a society to an extent which exceeds the ability of the society to cope with it from its own resources. The extent of the disaster depends on both the intensity of the event and the degree of vulnerability of the society⁶. A natural disaster always consists of two elements, an (external) event (the hazard) and the impacts of this hazard on a vulnerable social group exposed to this hazard. A powerful earthquake in an unpopulated area is not a disaster, while a weak earthquake which hits an urban area with buildings not constructed to withstand earthquakes, can cause great misery. Extreme natural events only become disasters if they

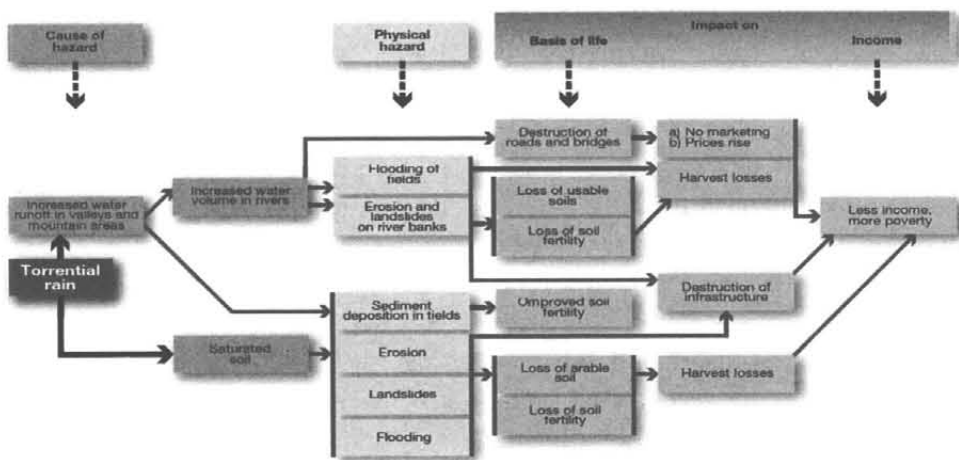


▲ Explanation of fig. 6: Locations and populations in the yellow region are characterized by certain types of vulnerability, those in the red and orange regions are threatened by natural events. However, risk only arises in the orange area, where hazard and vulnerability coexist.

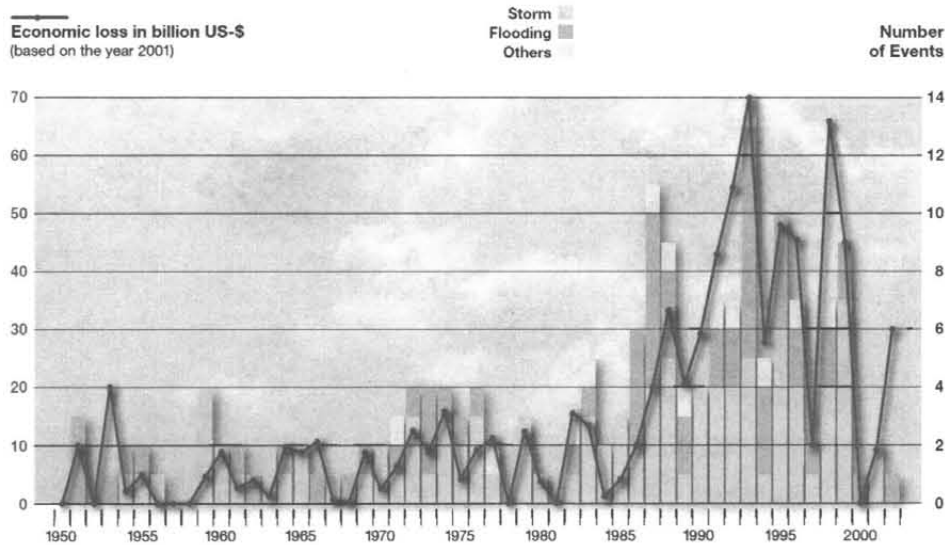
impact vulnerable people, who often expose themselves to natural hazards through carelessness or poverty, or who contribute to or aggravate the events by intervening in nature. Although reducing the risk of disaster can be done by both restricting the hazard and reducing vulnerability, DC mainly tries to reduce vulnerability, since reducing the hazard is usually very difficult or even impossible. Vulnerability, by contrast, is easier to influence by strengthening human response, planning and protective capabilities. Disasters can be seen differently in other cultures. Whether those affected see an event as a risk or as a disaster, or whether they assess the risk as high or low depend on the value system they feel bound by. Perception of risk – or, more accurately, lack of perception of risk – is the most important factor in vulnerability.

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▲ Figure 7: Impact chain for agriculture and income of torrential rain



▲ Fig 8: Major weather-induced natural disasters, 1950 – 2002 (source: Münchener Rück)

Developing nations in particular, experience pervasive risk of devastation, human and property loss resulting from human and natural disasters. According to Henderson (2004), this level of risk was attributable to socio-economic stress, aging and inadequate physical infrastructure, weak education and preparedness for disaster and insufficient fiscal and economic resources to carefully implement the preparedness, response, mitigation and recovery components of integrated emergency management. Disasters are clearly a development problem. First, because certain natural phenomena, including those of hydro-meteorological, geodesic and origin tend to have greater effects on developing countries than on developed countries. Second, because several factors associated with a low level of development exacerbate such effects. Third, because the impact of natural phenomena on the prospects for long term development is considerably greater in less developed countries (BID, CEPAL, 2000).

Finding and results

Although, differing somewhat in the trigger, scope, duration and requisite actions, most disasters – both natural and human-driven generally result in widespread physical damage, death, disability and displacement, as well as the disruption of economic and social activi-

ties (Coletta, 2004, Olokesusi, 2004). Disaster specialists focus on two kinds of vulnerability. The first is peoples' vulnerability to disasters – the extent to which they are at risk (living on a flood plain, having a house unable to withstand floods) and the extent to which they can cope with the impacts (through such provisions as health care and property insurance). The second is the vulnerability of key institutions or systems such as power supplies, water supplies, and hospitals and emergency response networks to disasters. December, 2004, tsunami disaster in South Asia is an example which led to an immense loss of over 270,000 lives in addition to several million dollars' worth of property and infrastructure destroyed.

Disasters and those prone to it increase human vulnerability. In the last millennium, and even now, the world has witnessed a range of natural hazards (environmental emergencies), in greater and more frequent in some areas than in others, slow-acting in some cases and catastrophic in others. The Munich Re-insurance estimated that economic losses due to environmental emergencies have increased three-fold from the 1960s to the 1990s, and in the first few years of this decade, are running about US \$50 billion per year. The majority of these enormous economic losses are incurred

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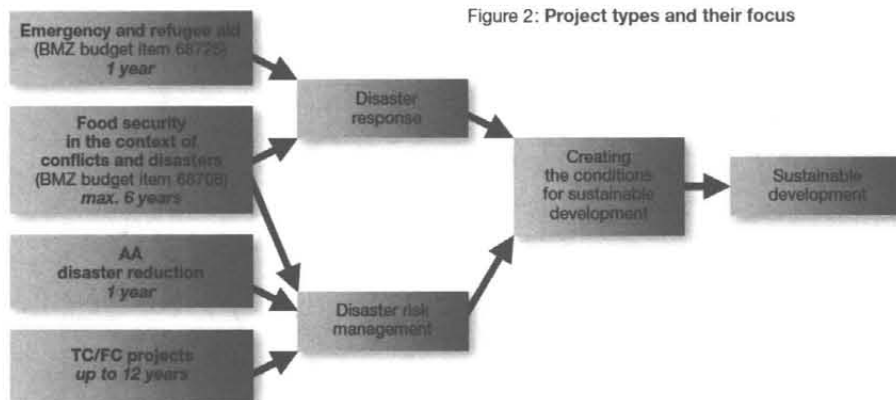
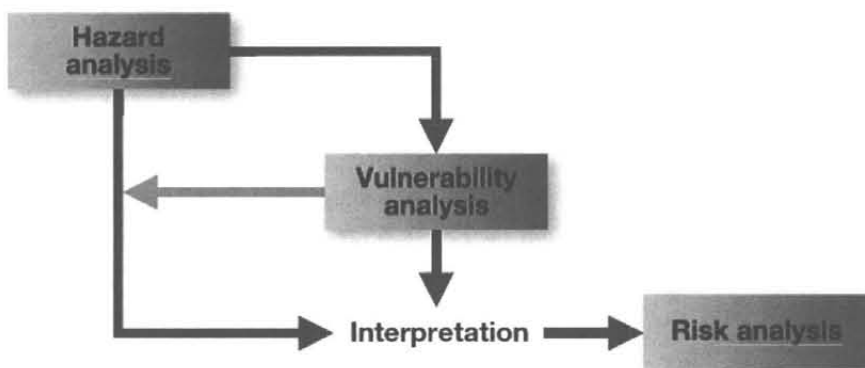


Figure 2: Project types and their focus

▲ Fig 9: Project types and their focus



▲ Figure 10: The concept of risk analysis

in industrially developed parts of the world including Japan, USA and Canada. But the relative impact is much greater in countries with lower per capital incomes, where their effects on such human and economic factors as employment, balance of trade, indebtedness from reconstruction and loss of capital continued to be felt for many years after the event (CERD, 2000; Mac Entire, 2001).

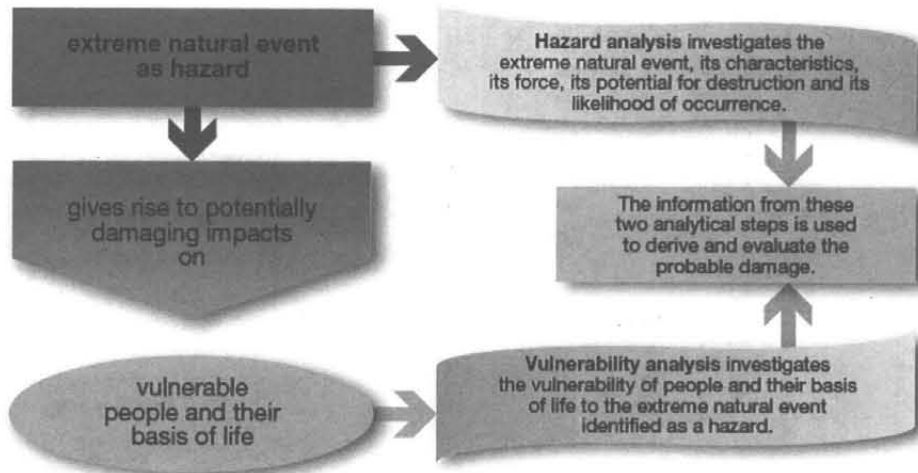
Risk analyses also help with project identification, providing information on whether under certain circumstances short-term activities under emergency aid measures are more efficient and effective, whether aid measures should be aimed more at longer term structural (TC) measures, or whether a combination of the two is needed. In regions threatened by disasters, disaster risk management measures are often integrated into TC measures (programmers or projects) as cross-cutting themes, e.g. in projects of rural regional development, rural development, resource and water catch-

ment area management or decentralization and community promotion. Risk analysis is then part of project preparedness and planning, and is carried out in the framework of instruments such as problem analysis, organization or potential analysis, ROPP (Regionally Oriented Programmed Planning) or land use planning.

Social Risk Management and Disasters

Post-disaster housing assistance by government is an example of a public arrangement for social protection or social risk management. Social risk management arrangements are generally categorized as follows:

- (1) Informal arrangements, such as sale of personal assets or community self-help;
- (2) market-based arrangements, such as property insurance; and
- (3) Public arrangements, such as assistance grants or other social safety nets. All families will use informal arrangements in their recovery and reconstruction, but they are



▲ Figure 11: Assessment of impacts as the goal of risk analysis

unlikely to be sufficient. Only a select group will generally have access to market-based arrangements. The expectation after a disaster is that public arrangements, in this case housing assistance, will fill the gap that remains when informal arrangements and market-based arrangements are inadequate.

Land and vulnerability to natural disasters

Low capacity to access and use resources and vulnerability to natural hazards are closely linked and mutually reinforcing. Marginalized groups are usually more vulnerable to hazards because they enjoy fewer options to diversify their livelihood sources or because they live in more hazardous locations. Increasing the sustainability of land systems will result in lower damages in case of a natural disaster, more stable access to resources, lower vulnerability and shorter recovery time.

Predictors of land system vulnerability

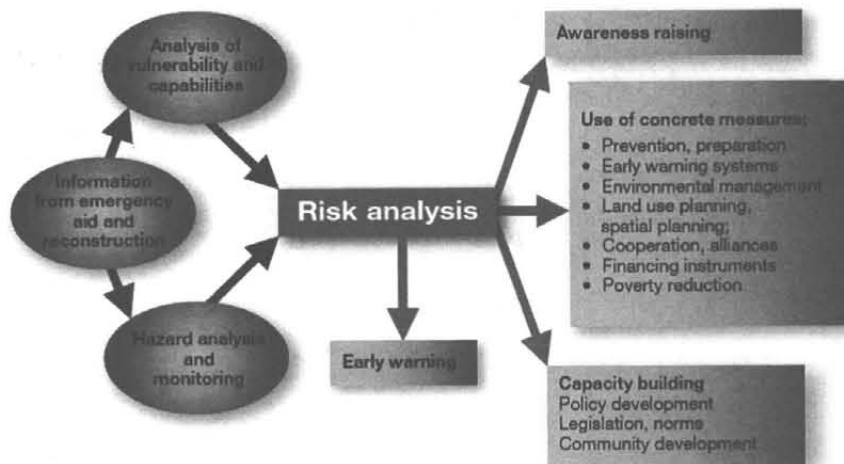
While there is considerable variety across systems for governing land worldwide, a number of characteristics of poor land governance are commonly observed and can help to identify vulnerability to natural disasters. They may be summarized as follows.

1. Unsustainable land use. In many developing countries, choices of housing location and building materials are restricted. Poor settlements tend to be located on steep hillsides, flood plains, water catchments or seismically

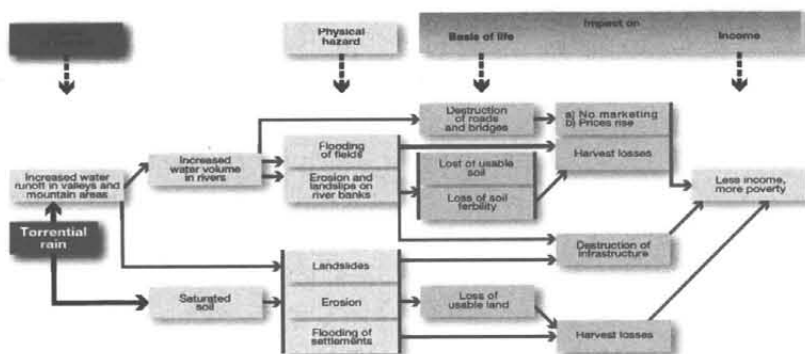
unstable areas. Natural protections such as forests and mangrove swamps may be destroyed or damaged through unsustainable resource exploitation. Poverty, hunger and settlement on hazardous land are induced by the exhaustion of water sources, soil fertility and natural resources.

2. Poor urban planning. City boundaries in developing countries rarely correspond with actual settlement patterns. Zoning bye-laws, building codes and construction standards tend to be unaffordable and unrealistic from the perspective of the poor. Informal settlements tend to proliferate on hazardous land without access to basic services and infrastructure or the benefit of disaster risk reduction planning. Land use plans tend to be incomplete, out-of-date and uncoordinated with land administration systems across different institutions and levels of government.

3. Landlessness. In development settings, many people either own land that is insufficient for agricultural livelihoods or have no access to land at all. Unequal land distribution patterns typically prevail, often due to a history of social conflict over land. Holders of secondary rights (e.g. tenants, sharecroppers, pastoralists, etc.) to lease, use or occupy land are not sufficiently protected against eviction, or are excluded from land information systems.



▲ Figure 12: “Inputs” and “outputs” in risk analysis

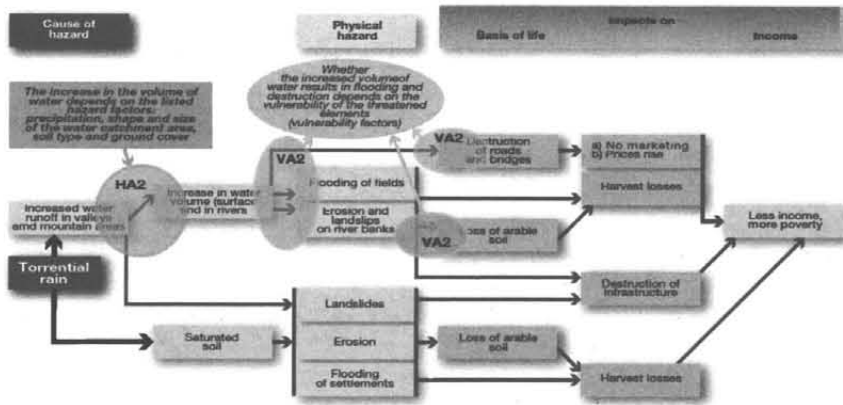


▲ Figure 13: Impact chain to identify the direct physical hazard and its causes and impacts

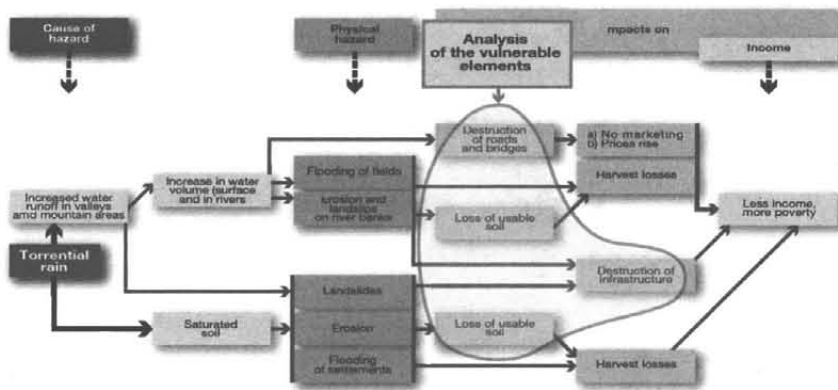
4. Weak land administration. Key land actors typically lack both technical skills and incentives for efficient, transparent and accountable land management and may not serve the needs of all members of the population. Responsibilities for land tend to be fragmented between various ministries and agencies, blocking coordinated approaches. Significant amounts of land are not covered by land information systems; indeed, globally, only some thirty percent of land is formally registered. Data on registered parcels may be poorly recorded, limited to urban or other high-value areas or may simply be out-of-date. The boundaries between different types of land, including land claimed by the state, may not be surveyed or defined with sufficient precision. Land-related disputes tend to proliferate and, in contexts characterized by legal and in-

stitutional pluralism, ‘forum shopping’ (claimants pursuing grievances in multiple decision-making forums) may be common.

5. Land-related discrimination. Many landholders’ rights are deemed illegal or unrecognized despite being based on systems with considerable social or traditional legitimacy. These systems may be based on customary, religious or informal practice. There is often a weak interaction between statutory and customary laws and adjudication mechanisms, with statutory systems bearing little relation to the social practices of poor landholders or the landless. Rules for adjudicating rights to land may be unclear, and subject to excessive discretion by key land decision-makers. Vulnerable groups such as women, children and minority groups may face discrimination on the basis of property, including barriers to access-



▲ Fig 14: Dependence of the scale of flooding and damage on hazard and vulnerability factors



▲ Fig 15: Study of the impacts on vulnerable elements

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ing, inheriting and enforcing rights to land.

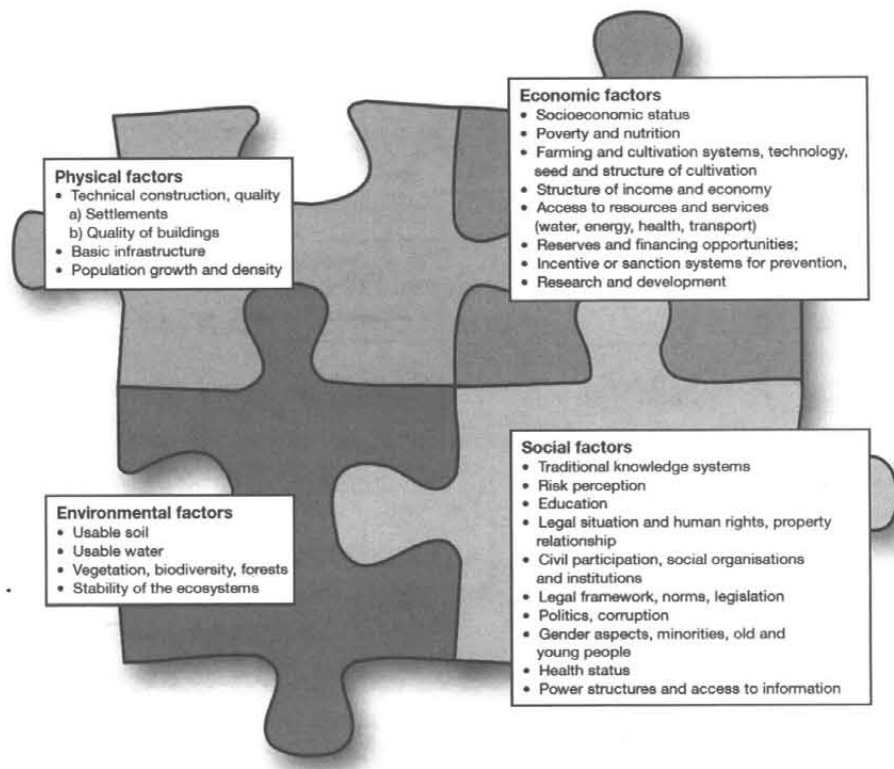
Government as Insurer

In many countries, government acts as the principal insurer of housing after a disaster. This is common when there is an inadequate property insurance system; an insurance market that is unaffordable to some households, no sanctions against being uninsured or underinsured, or disaster damage exceeds whatever insurance coverage people may have had. But when government plays this role, the “insurance terms” are not defined until after the disaster, which creates uncertainty for those affected, and the expectation that government will provide assistance creates political and economic burdens for government.

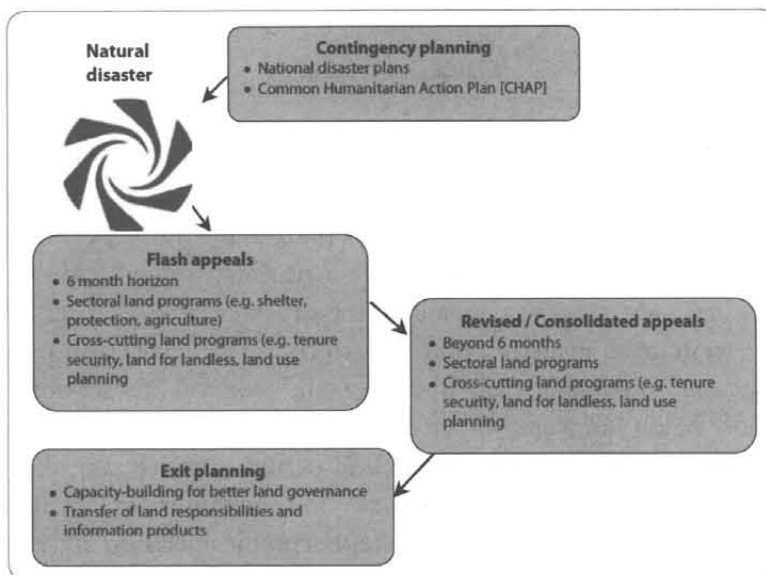
Reconstruction as Opportunity to Resolve Long-Standing Problems

As part of reconstruction policy, government must decide the degree to which construction

will be used to accomplish longer-term development objectives. A disaster is often viewed as opportunity to resolve long-standing development shortcomings and, with a significant flow of external assistance, the potential for correcting inadequacies in pre-disaster housing and community services obviously increases. It is clearly sound policy to rebuild houses and infrastructure that is less vulnerable to future disasters (“built back better”). A more complex decision in development terms is whether to move disaster-affected communities “to the “head of the line” of all those waiting to have their basic needs met (e.g., providing sewerage systems or updated road configurations), thereby favoring affected communities with a standard of living higher than that in similar, but unaffected, communities. The savings of taking a comprehensive approach to reconstruction may justify it,



▲ Fig 16: Classification of vulnerability factors



▲ Fig 17: Planning land responses through humanitarian action

even at the risk of political fallout, Assessing Damage and Setting Reconstruction Policy. It explains how strengthening of housing not damaged by the disaster was defined in the reconstruction policy as an integral part of the reconstruction effort.

Key Principles underpinning land system resilience

These guidelines will outline steps to address vulnerability and promote resilience in a land governance system based on the following key principles:

1. Build on community-based initiatives. Understanding and supporting community response strategies is critical to improving resilience in the long-term, particularly where they serve to strengthen land rights documentation and land use planning, and can be integrated into the broader land governance system.

2. Take a flexible tenure approach. Promoting a range of tenure options, including short-term use rights, can reduce the risk of eviction and promote recovery. Flexible hierarchies of evidence can ensure that people without legal documentation are not excluded from shelter, livelihoods or other assistance programs. Adopt strategic and flexible planning, land-use and construction policies. Flexible land use planning standards can facilitate reconstruction aimed at building back better and mitigating the risk of future disasters. Housing standards should aim to reduce the risk of hazards by building on existing skills and practice, rather than promoting unaffordable or inappropriate techniques and materials.

3. Focus on vulnerable groups. Secure rights and access to land are crucial for the vulnerable groups most affected by a disaster, including renters, informal landholders, widows and orphans. At the same time it should be recognized that vulnerable groups often depend on less vulnerable groups for access and use of land, and that exclusive focus on vulnerable groups can be perceived as threatening to those less vulnerable, creating incentives for them to limit access and use rights. Mutually beneficial arrangements that promote access to land without arbitrarily destabilizing ownership relations should be promoted.

4. Take a pro-poor approach to land administration. Land administration systems should be pro-poor; they should not require levels of education, wealth, influence and technical capacity beyond the reach of poor individuals or Government capacity.

Range of Futurist Views and Perspectives

Within the Futures field, there have always been a wide range of views and perspectives

from people who have come from a very wide range of different disciplines and backgrounds and interests. Futurists run a whole gamut of views between the following two poles, and everything in between:

•**“Doom and Gloom” Futurists:** so-called because they tend to focus on current real world problems, without easy solutions (such as the nuclear danger during the Cold War, or the continuing population explosion, world hunger, depletion of fossil fuels and other nonrenewable resources, and environmental preservation and pollution) and project these trends into the future, showing that if current trends continue,...then the future will be much worse than the present.

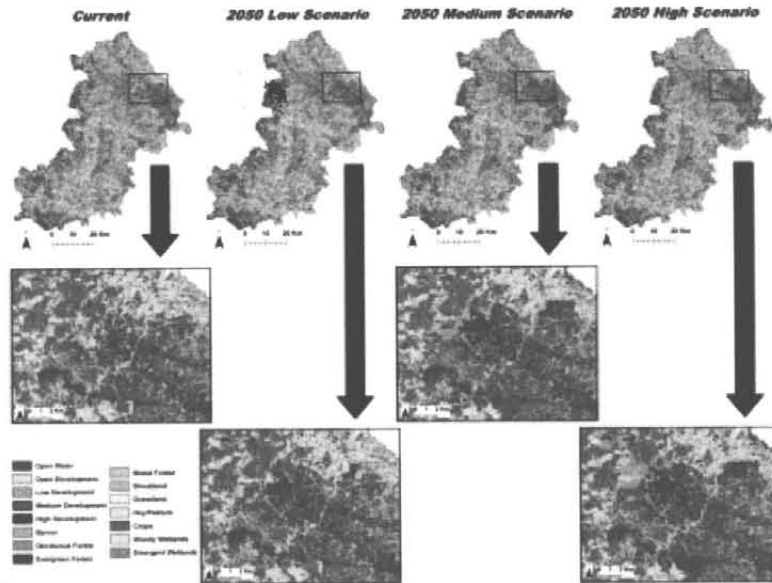
It is important to note that even “Doom and Gloom” Futurists are not totally pessimistic, however. Indeed, no futurist would dedicate their whole life to studying change and the future if they were totally pessimistic. The major reason for pointing out negative trends and scenarios for the future is to alert people to the potential problems ahead, so that we humans can be informed and change our current policies so that a more desirable future can be created.

•**Futurists who create different scenarios of the future**--from negative, “doom and gloom” views, to most probable or likely views, to positive, visionary views (an in-between perspective, that acknowledges all these possibilities for the world future, and which points out that our actions and policies NOW will help to determine which of these scenarios actually transpires in the future).

•**Positive, Visionary, and Evolutionary Futurists:** they focus more on positively imagining the more desirable futures that we would like to create; articulating the positive values that we would like a future world to be based on; focusing on technological, societal, and human potentials; tracking groups that are actually trying to create such preferable futures in the world today; and generally empowering people to see that we always have choices (in

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▲ Fig 17: Planning land responses through humanitarian action

what we think & feel, and in how we behave in the world), and that we DO have the power to create a more desirable future world by committing in the present to change what we are doing NOW.

Methodologies for Studying Change and the Future

Since the future has not yet happened, futurists have had to develop a number of different methodologies for studying the future and change that are different from traditional scientific methodologies for studying the present and the past--on which data already exists or can be generated. These methodologies range from quantitative, left brain methods to visionary, creative, intuitive right brain methods, and various combinations in between. It is important to remember here that futurists believe in many alternative futures--including probable, possible, and preferable futures. Futurists are thus not only interested in looking at probable futures (based on extending past trends and developments into the future), but also at designing preferable alternative futures, and showing how one can plan to get from the present state to this more desirable future. A wide range of methodologies must thus be employed to cover these very diverse different views of the future. Some of the more

prominent futures methodologies include the following:

- Trend Extrapolation:** Projects past trends into the future, for some given period of time. Assumes that the future will in some way be an extension of past trends.
- Dynamic Systems Analysis and Computer Modeling:** Shows how various variables in different areas interact with each other, within a whole systems context, over time.
- Simulations and Games:** An attempt to take certain variables from "reality" in some area and create a computer model or game situation in which one can see how those variables might interact with each other over time. Computers or humans (as role players) or both can be involved. With computers, humans can play "what if" games, where by making certain choices, they can then, see the consequences (in terms of policy) that follow from those choices.
- Cross Impact Analysis:** Shows how choices concerning one variable interact with choices concerning another variable, providing a table of all possible combinations of choices for each variable, and showing which combinations are viable and which not.
- Technological Forecasting:** An attempt to forecast what technological breakthroughs

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and developments are most likely to occur in future and when they are likely to occur. In an age in which technology is a major driving force for change, such as today, keeping on top of the latest developments in technology is essential--especially if one works in the high technology area today.

•**Technological Impact Assessment:** Looks at how new technologies are likely to impact on society or the environment.

•**Environmental Impact Assessment:** Looks at how new developments in some area will impact on the environment. Often required today, before new building plans can be approved.

•**Social Impact Assessment:** Looks at how new developments in some area will impact on society or on some community.

•**Delphi Polls of Experts--on Either Probable or Preferable Futures:** Poll experts in some area on what events they think are most probable (or preferable) and when they are most likely to occur; also the reasons for their answers. Summarize results; give to experts; ask them to take poll again. If they think other people's reasons for their answers are better, they 'can' change their answer the second time; or the third time they take the poll. Gives good results re: expert's views of what's likely to occur in future.

•**Futures Wheels:** A group brainstorming technique to quickly determine what some of the first, second, and third order consequences might be, 'if' some event were to occur in the future--either for the first time, or if something were to either decrease or increase in value in future. Everything follows from this event put in the center of the futures wheel.

•**Scenarios:** A possible sequence of events that 'could' happen in the future, based on certain initial conditions or assumptions and what could follow from that. Futurists often construct at least two or three different scenarios about the future in some area, believing that different alternative futures are possible.

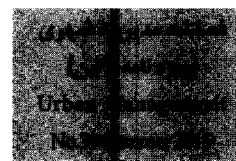
Examples include: best case, worst case, most probable case, and other type scenarios.

•**Science Fiction:** A possible story of what could happen in some future social or world situation. Based on a scenario of some kind (i.e., a possible sequence of events that 'could' happen in the future) to which characters (with their own personalities, even representing different alien species in some cases) interact with that sequence of events over time. Science Fiction has replaced cowboy movies as an important genre of films today. Both dystopian and utopian science fiction stories are possible. Science fiction does not claim to predict the future, but sometimes good scientists (who know their topic well) intuitively write about something in science fiction that later becomes a reality. The most famous case is Arthur C. Clark and the communications satellite, which first appeared in a science fiction story.

•**Intuition & Intuitive Forecasting:** A right brain experience, in which you suddenly 'know' something to be true, or you suddenly see patterns and relationships between things that you didn't see before. Intuition is another way of knowing, a "sixth sense," beyond our five senses. Intuition is important in future studies because in a world in which change is occurring so fast, and one does not always have time to get all the information that one would like before one must make a decision about what to do, one must often rely on one's intuition to fill in the missing pieces and make a decision. Intuition is also the source of creativity and new ideas--in whatever type of work one is in. Good artists, scientists, corporate executives, and leaders in any area all tend to be intuitive. Our Western culture has not always valued intuition, but its importance to creativity (a key skill in the information age) is increasingly recognized, and training programs seek to develop this skill in many people today.

•**Experiments in Alternative Lifestyles:** One of the best ways to find out if alternative

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values can work is to try them out in practice. Those new “fads” or alternative lifestyles that work, and respond to some social need, often see themselves becoming more mainstream with time.

•**Social Action to Change the Future:** People willing to join together with others to educate people on some issue and to work for meaningful change often find that their efforts ‘can’ effect and help to change the future.

•**Short, Medium, and Long Range Planning:** Futurists look at planning in short, medium, and long range terms. [See Earl Joseph’s five different time periods for looking at change and the future.]

•**Relevance Trees:** A way to map out the sequence of events, and in what order, that are necessary to get from where you are now to where you want to be as your end goal by some future date.

•**CERT/CPM Analysis:** A method for doing complex planning of great numbers of people and subcontractors working on some large project, such as the space program. Indeed, this methodology was first developed for use by NASA in planning how to get to the moon. One begins with a relevance tree, and then adds layers of additional information. A way to map all the different pathways that must be completed between where one begins and the end goal one plans to achieve. One also calculates, from all these pathways, what is the “critical path” (which will take the longest and which one must not get behind on, or the whole project will be delayed). Between any two events along any given pathway, one usually adds estimates of: time needed, number of people needed, budget needed, etc. One can then calculate dates for the completion of each event along a pathway; plug this all into a computer and print all the pathways out, and use this to monitor a project, once it begins; to be sure it stays on time, on budget, etc. If a particular pathway--especially the “critical path”--starts getting behind, one can then move additional resources to that

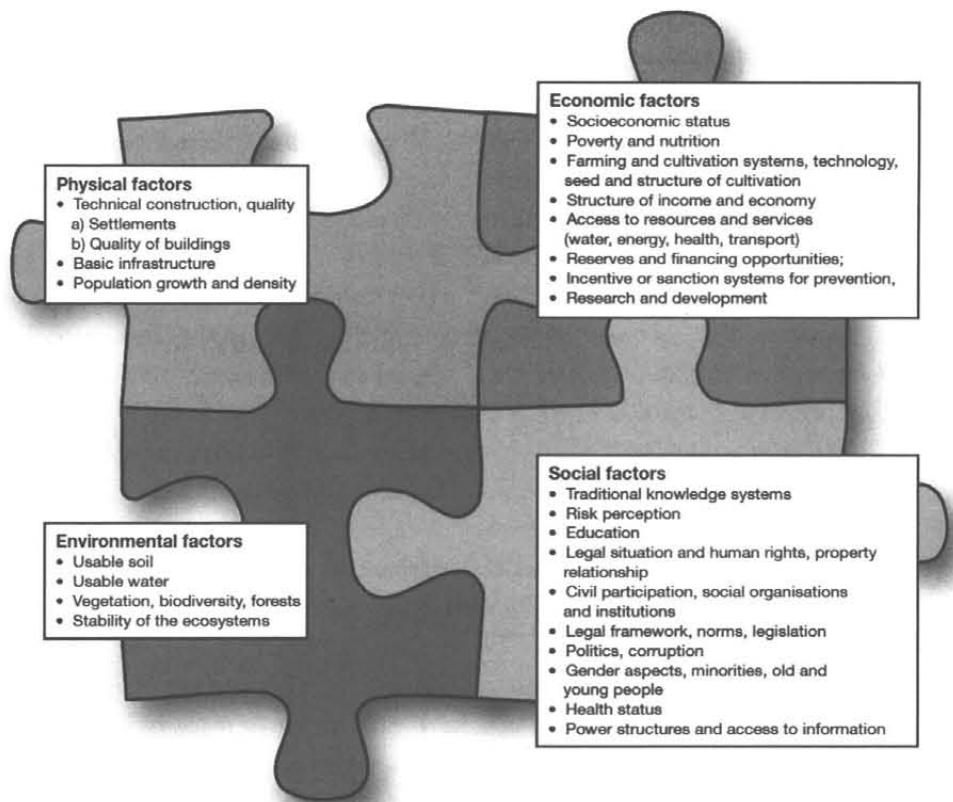
pathway, to correct the problem, so the whole project stays on time.

Conclusion

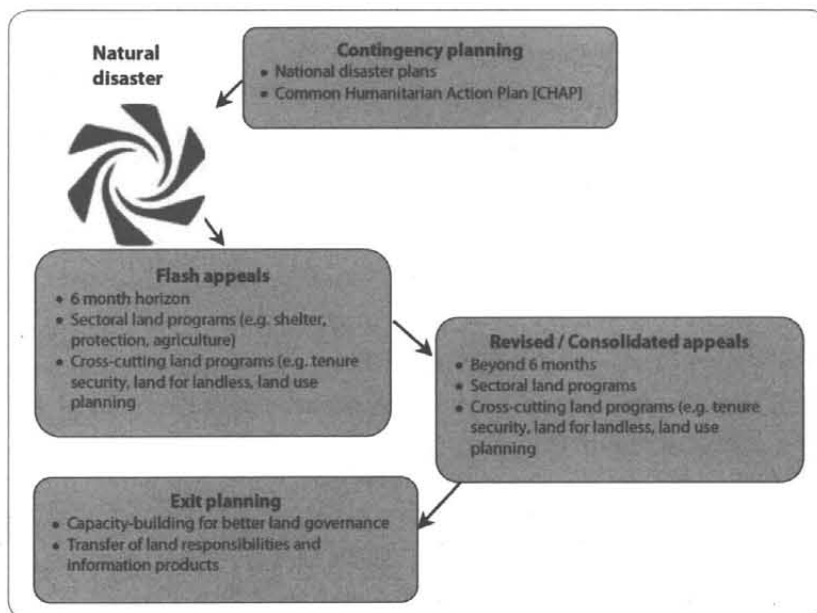
When placed in the context of sustainable development, disaster management represents an important aspect of socio-economic and national security, therefore facilitating a continuous development process. Disaster reduction policies and measures need be implemented with a two-fold aim; to enable societies to be resilient to natural hazard while ensuring that development efforts do not increase vulnerability to these hazards. Although, differing somewhat in the trigger, scope, duration and requisite actions, most disasters – both natural and human-driven generally result in widespread physical damage, death, disability and displacement, as well as the disruption of economic and social activities. Disaster specialists focus on two kinds of vulnerability. The first is peoples’ vulnerability to disasters – the extent to which they are at risk (living on a flood plain, having a house unable to withstand floods) and the extent to which they can cope with the impacts (through such provisions as health care and property insurance). The second is the vulnerability of key institutions or systems such as power supplies, water supplies, and hospitals and emergency response networks to disasters. Post-disaster programming must take into account the underlying issues that create vulnerability to natural disasters. It is essential that short-term reconstruction efforts include planning for early recovery land programs to reduce vulnerability and build resilience to future disasters. These land programs should include measures to:

1. Build on community-based measures to ensure tenure security after a natural disaster, with a goal of securing land tenures for all those affected (including women, tenants and informal landholders).
2. Undertake rapid hazard and risk assessments. Promote return to safe land and housing where possible. Where safe return is not





▲ Fig 18: Classification of vulnerability factors



▲ Fig 19: Planning land responses through humanitarian action

feasible, promote public consultation mechanisms to ensure public awareness of reconstruction restrictions on and, where required relocation from hazardous land.

3.Target the shelter and livelihoods needs of

vulnerable groups who have lost access to land after a disaster, including women, the landless and customary landholders.

4.Apply flexible participatory community planning techniques to all disaster-affected

settlements, including customary and informal settlements, so as to improve long-term sustainability and mitigate the risk of future disasters.

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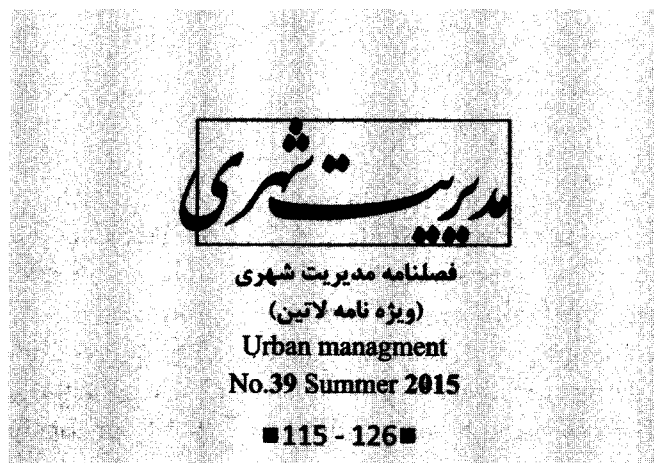
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Received 14 Dec 2014; Accepted 7 Feb 2015

Assessment and Location of Rural Waste Management Systems (Case Study: Ilam Province)

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Abstract

The growing trend of rural waste generated in the country requires careful considerations about rural waste management and emphasizes its role in preserving the environment. Due to the large number of villages and small amount of the rural waste, collecting rural waste needs spatial planning so that it could cover a vaster area through economic and shared use of equipments. The main goal of the present study is to examine potential assessment and location of rural waste management system in Ilam province. Methodology of the research is a combination of developmental and measurement methods whose dominant approach are the measurement factors. Statistical population of the current study included all the residential villages, which were 627, overall, and all of them were examined throughout this research. The required information was accumulated through a questionnaire. Village chiefs (head of the rural administrations: 398 people) and informed people (in villages without an administration: 229 people) and members of the village council (390 people) were the ones who filled out the questionnaires. Additionally, in order to define the appropriate standards of collecting village waste, the required data was collected from among 65 directors of the village unions, municipality experts, rural administrations' members, and the City Hall of Ilam province. To determine the satisfaction level of villagers with the quality of services provided by waste management system of the village, a single-sample Chi Square Test was prepared. Besides, in this study, for assessing scenarios for covering the services of waste management system of the village, network analysis in Arc GIS software has been used as well. Results of the research indicate that although 26 villages in this province did have the equipment's for carrying the waste, villages that directly own the so-called equipment's only use these services, and other villages of the province are deprived of that. Besides, the results show that if the present equipment's are properly allocated and used, relevant services can be provided for all the villages of the province.

Key words: *Waste Management, Rural, Network Analysis, Ilam Province*

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Introduction

From the beginning of mankind's life, producing waste in different parts including domestic, agriculture, sanitarian, medical and industrial has been inseparable from life and all that waste have always caused deep environmental problems. For years, the human-made waste has been thrown away in nature without any regard to engineering and environmental principals and with complete negligence toward nature. It has been evacuated on earth and waters and therefore, has caused severe damages to water, soil and air and has put human life as well as other organisms' lives at stake.

The quality and quantity of the produced waste in different zones have been heterogeneous and influenced by environmental conditions, seasons, geographical conditions, economic, social and cultural factors, etc. (Russell, 2008). Because of population growth, improvements in the quality of life, and technological developments, diverse solid waste materials, which are resulted from human and industrial activities, are increasing day by day. Since past times, on one hand, because the destructive impacts of the solid waste materials on the environment were not known, not much attention was paid to waste management, and on the other hand, lack of technological facilities and national resources and staff were a big hindrance for proper management in this area, namely, solid waste management (Burtone, 1991).

Comprehensive waste management is a selection among different technologies and management programs in order to fulfill its goals, that is, preserving the environment and controlling pollution. The so-called management should include all parts of waste system such as urbane, rural, industrial, business and hospital waste (Hobanoglous, 1993). Nowadays, wastes are an inevitable part of human life (Saeednia, 2004); thus, management and proper eradication of them have always been a concern for human beings (AmirSoleimani and Tavakoli, 2010).

Hence, collecting and eradication of wastes

appropriately and efficiently in a way that could reduce direct and indirect dangers which threaten people's lives and damage the environment, is of great significance (HICPAC, 2001). It is evident that Iran's Waste management system is not an efficient one and is sure far from satisfying. This very issue is even more complicated when its negative and damaging impacts are discussed in relation to other systems including environmental systems. Rural areas contain the largest number of population and natural resources of the country, and therefore, the village communities play a vital role in economic and social life of the country.

Considering the significance and place of rural communities in the country, and problems and challenges with which the society is faced, recognizing and analysis of the rural development plans, and working on all aspects of the issue seem quite indispensable. In the meanwhile, paying attention to the rural environment in the process of rural development plans is definitely necessary for the rural management system.

Waste management contains a series of coherent principles and systematic rules, which are about production, storage, collecting, transportation and the process of solid material eradication corresponding with public health principles, economy, resource preservation, aesthetics and other environmental requirements and things important to people in general. Having said that, waste management includes administrative, financial, legal, and design and engineering issues all together (Tchobanoglous et al 1993). Rural Waste management system consists of different components. These components are called dutiful agents and support affairs. Thus, rural waste management system is a series of integrated components working together in order to resolve the problem of waste materials in rural areas (Abdoli et al, 2012).

The current activity of dutiful agents in waste management system in the villages is collecting

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and burying the waste under the ground. Industrial tractor, motorcycle, Amico vehicle for collecting the rubbish, Nissan, Draj, and handbarrow are normally the vehicles used for collecting the waste. It is evident that the Ministry of the State has given almost all these vehicles to the villagers. Eradicating the waste on the ground is mostly done in the form of storage, storage and burning, and rarely burying under the ground and covered by soil; these processes are done very unsystematic and not regularly, though. Support affairs classically include financial issues, installment, the staffs' equipment managing, reporting, and calculating the expenses and the budget, arranging the contracts, security, guidelines, and public relations. Currently, none of the factors of support affairs exists in the waste management system of the country, and therefore, the Ministry of the State is attempting to formulate a rural system for waste management. Consequently, it is noticed that our rural waste management system sure does lack enough competence, and problems are indeed seen everywhere in the villages (Abdoli et al, 2007).

On one hand, extension of rural communities and changes in the quality of life, which are, largely, the result of consuming man-made products instead of natural ones, is the reason why decayed and recyclable rural waste is replaced by disposable and non-recyclable materials such as paper, plastics, and metals. On the other hand, the amount of the waste has also increased largely. This change has resulted in notable amount of both recyclable and unrecyclable rubbish on pavements and suburbs, which not only has put the sanitation of people in danger, but also it has indeed stimulated an unpleasant and disharmonious scene in the nature of the villages (Ibid, 2012).

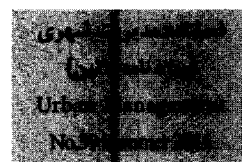
According to the Article number 60 and 61 of the Forth Development Program of the country and administrative management, waste disposal should be done by proper environmental and technical approaches, and hygienic methods of collecting, transportation, recycling

and eradication. On the contrary, according to the Articles of the waste management law and its administrative regulations, city centers that have more than one million residents by the end of 2013 and other cities and villages should attempt to collect all their wastes in a categorized way. Therefore, by the end of 2013, all the wastes should be collected in a categorized and partitioned way from all over the villages (Darban Astane, 2011).

In order to examine and discuss the producing of waste in rural areas in Ilam province, consultant engineers conducted a careful study in 2009. In this study, a total number of 81 villages were examined during all seasons of the year. The villages were selected based on their district and with regard to the fact that every district can be considered a heterogeneous complex from cultural and climate point of view. Then the samples were distributed among the districts. In every district, one village was selected quite by chance and in the end, a total number of 81 villages were selected to be examined during four seasons.

In this study, the produced waste of the so-called villages was examined and the variables mentioned below were assessed. Per capita of rural solid waste was estimated based on daily producing of the waste: gram/per day. Density of the waste was because of kg/ m³. Percentage of components of rural waste including paper, plastic, decayable materials, different kinds of metal, glass, textile, construction waste, wood, rubber, dangerous waste and other materials were based on their amount. The findings of the study indicated that the average amount of waste produced in villages is presented in table 1 and the data are categorized based on each person's share per day and percentage of the components of the waste in comparison with the province and the country. The average of Ilam's per capita of waste is 312.75 gram/per day and its mean (average) in the country counts as 451.44 gram/per day and its density is estimated as 375.75 kg/m³. Considering the previous studies in which the

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average of rural solid waste was estimated about 1 kg/m³, it seems the amount of rural solid waste is one-half of the solid waste generated within most cities. This difference can be due to different reasons such as culture of life, income and other factors, which have concluded in an increase in consumerism in cities than villages (Reyabco, 2009). According to the results, Ilam province is among provinces with the lowest amount of produced waste and it has the per capita of 312.30 gram/per day. Decayable waste (47.69%) is the greatest part of the whole waste of the province. Then, in succession, we have construction waste (13.18%), plastic (7.27%), other materials (2.71%), paper (7.15%), metal (4.94%), glass (4.56%), textile (4.65%), wood (3.87%) and rubber (3.18%). As it was observed the amount of paper as part of the rural solid, waste is taking up 7.15 % of the whole waste; therefore, taking action in order to separately collect paper and recycle it would be profoundly useful and efficient in the long term (Ibid, 2009).

To sum up, the waste management system includes sections such as generating, collecting, carrying, processing, and recycling of the waste. It is evident that without having a comprehensive plan concerning each section, namely, without applying changes in consuming patterns of the families, generating and collecting process, it would be impossible to fulfill goals of the management system. Providing services by the waste management system in rural areas is currently pursued by rural administrations and from area to area, though it is hardly beneficial due to the low population of the villages. Another approach in this field is to provide shared services in different areas. Based on this approach, by the end of 2012, from among 20 districts, in 13 districts of the province, rural union companies have been established, however, services of the waste management in different districts are not pursued systematically. Therefore, in this research, besides examining the quality and quantity of the services provided by waste management and

villages it covers, different scenarios have been conducted so that the quality of services could be improved and sufficient substructures and equipment's could be utilized. To put it in other words, one could see that this study seeks to answer the following questions:

1. How does waste management in Ilam's villages provide the quality and quantity of the services?
2. What are the proper Substructures and equipments for providing the services by waste management system in Ilam's provinces?
3. What percentage of the villages in Ilam province will be covered by the services of waste management?
4. What is the best spatial trend for providing services for rural waste?

Methods and Procedures

The present study's methodology is Action Research. Action Research is an organized and scientific activity based on problem solving in which the one who takes the action in the studied environment tries to find creative and innovative answers for unpleasant situations. In this study, it is aimed to collect the required information in several stages and step by step, and then the researcher uses these findings to identify the places in which a rural waste management system can be implemented and used in the best way possible (Johnston, 1999). Since accumulating the information relevant to the quality and quantity of collecting the waste and the current equipments needed updated information, therefore, censuses of all the villages with permanent residents (198 villages) were gathered. Moreover, all required information was collected through a questionnaire, which was filled out by 55 rural administrator, 143 informed people (in villages where there was no rural administration), and 55 members of village council.

In addition, in order to define appropriate standards for collecting rural waste, the required information was accumulated from 65 directors of rural unions, rural administrations and municipality experts and governor of Ilam



province. In this study, GIS tools are used to evaluate the scenarios which cover the services provided by rural waste management system because the variety of influential factors has determined various variables in locating of the practices. Due to the large amount of information, it is impossible to analyze it with the conventional method of manual handling of the maps. Therefore, using powerful tools such as geographic information system in finding the location of the practices seems vital (Hadiani and Kazemirad, 2010).

Determining an access area through GIS is done through diverse ways. The simplest way to go with is to use Euclidean circle screener or buffer drawing that equals with remoteness of the destination. Although this method is simple, it has a number of disadvantages, as it does not consider pavement network and the current obstacles for commuting of the vehicles. The other method is to draw Thiessen Polygons. This method too has some defects. It only divides the equal space between the stations and it is not possible to observe the standards in this method (Upchurch, 2004). Besides, there could be Attraction Models like Attraction Huff's Model to determine the best access centers.

On this ground, the centers with more attractions and less access costs could find more extended accessible areas than the other ones. These models can be performed in ESRI products such as Arc GIS using Spatial Analyst techniques.

In recent decade, GIS architecture has developed based on the concept of networking. It is also improved in order to meet some of the requirements of locating and determining access areas according to their accessibility. The network is defined as a series of points (called Node) and a series of Arcs, which are attached to a pair of nodes (Cheng et al, 2004). Concerning the capacity of network analysis, which is also supported by Arc GIS 10.1, this technique was used for determining access points of rural waste management system.

For this purpose, the province path network, rural areas, rural areas with rural administrations and administrations with collecting waste system were put in use. After determining the rural areas for which these services were provided, other rural areas were also identified and in the second phase, the locating of the current system of collecting waste was specified based on experiences of the unions of the rural administrations.

Findings of the Research

The Quantity of the Services Provided by the Waste Management System

Services provided by the waste management in the studied district includes collecting and burial; collecting, eradication and carrying to a place outside the rural area. Based on table 1, only 1.12 % of the whole generated waste is collected and buried. 14.19 % is collected, buried and kept outside the rural area, and 84.69 % of the produced waste is not collected at all. The best system for collecting the waste is collecting and burial. In this district, only 1.12 % of the whole service is provided in this way. In general, it indicates that there is not a good and efficient service here.

Collecting the waste is done mostly on a daily basis, every other day, weekly and more than a week. It is clear that the best timing of collecting would be the daily collecting option. Based on table 3, the results of the research show that in the studied district, only 3 % of the whole waste is collected daily; 24 % is collected every other day, 56% weekly and 17% in more than one-week time.

The Quality of the Services Provided by Rural Waste Management System

Satisfaction level of the villagers and members of the village council with the collecting process is considered as one of the indicators of the quality of these services. To assess the satisfaction level of the villagers with the qualities of the services provided by rural waste management, the single-sample Chi-square Test was used, and since this test has found ground in all these Dehestan (sub district), the average

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The Waste Management System	Frequency	percent
collecting and burial	7	1/12%
collecting, eradication and carrying	89	14/19%
No collecting	531	84/69%
total	627	100/00%

▲ Table 1. The Waste Management System

Time period	Frequency	percent
daily	20	3.19
every other day	148	23.60
weekly	340	54.23
more than a week	119	18.98
total	627	100%

▲ Table 2. Time period of Waste Collecting

Dehestan (sub district)	Mean	Std.	CV	Chi-square	sig
Dehestan of Zangovan	1.93	.13	.066	175.401	0.00
Dehestan of Karzan	2.07	.27	.129	243.038	0.00
Dehestan of Iomar	2.39	.14	.057	179.871	0.00
Dehestan of Asman Abad	2.45	.28	.115	206.160	0.00
Dehestan of Bijnavand	1.81	.16	.088	187.884	0.00
Dehestan of shabab	2.39	.30	.127	187.180	0.00
Dehestan of zardalan	2.10	.10	.048	201.318	0.00
Dehestan of holeilan	2.20	.16	.074	205.32	0.00
Total Of province	2.13	0.93	0.437	198.31	0.00

▲ Table 3. Satisfaction level of the villagers with the Quality of the Services Provided

of the satisfaction level was easily evaluated. The conclusion is that the statistical population is not satisfied with the system's services.

The Current Equipments of the Studied Rural administrations.

The results of examining the current equipments in (Dehyaries) rural administrations are mentioned in table 4. Accordingly, on the whole, 33 rural administrations have construction and service equipments. However, since the required vehicles for carrying the waste should be useful and suitable, rural administrations that only have one holder machine (the machine for collecting the waste) (6 villages) and one tractor (one village) cannot provide services for collecting the waste. In addition, 11 rural administrations own tractor accompanied by a trailer, and although they can be

used in their own villages, they will not be able to work in the waste management system because they cannot be moved quite easily. Thus, in this study, rural administrations, which own equipments such as Nissan truck, can provide required services from area to area. Based on the findings of this research, 14 rural administrations have this capacity.

Radius of operational performance

Functionality and efficiency of shared services has a close affinity with the distance of the operation (radius of operation). Distances between the villages have been increasing and the transportation costs are going high as a result. Therefore, it is necessary to choose a more suitable zone for this purpose. Moreover, due to residential differences in different provinces, identifying a suitable zone seems

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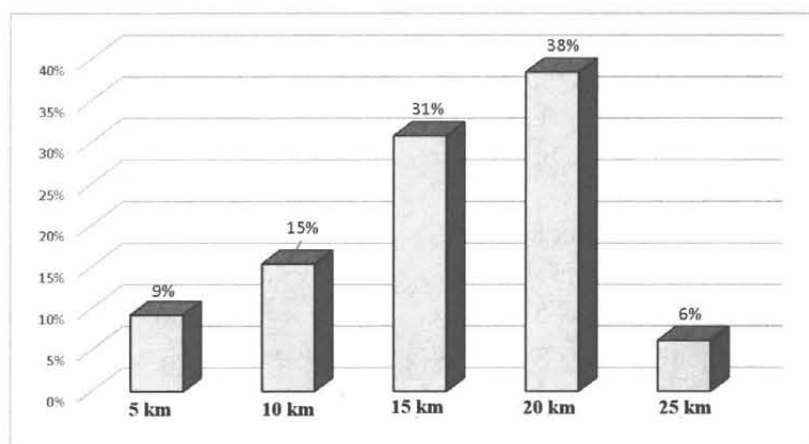


Types of equipments	Frequency	percent	Suitable for point pattern	Suitable for Shared pattern
Without equipment	517	82.46	No	No
Backhoe - loader	25	3.99	No	No
Tractor	4	0.64	No	No
Tractor with Trailor	35	5.58	yes	No
Dump Truck	7	1.12	yes	yes
Dump Pickup	35	5.58	yes	yes
fire truck+ Dump Pickup	4	0.64	yes	yes
Total	627	100		

▲ Table 4. The Current service Equipment of the Studied (Dehyaries) Rural administrations

Administrative divisions	Frequency	percent
rural hoze (rural agglomeration)	12	27.91
Rural majmoe (sub district)	18	41.86
Rural manzome (district)	13	30.23
county	0	-
Total	43	100.00

▲ Table 5. The best radius of the operational performance of shared Waste Management (According to the managers of Iranian rural administration cooperatives)

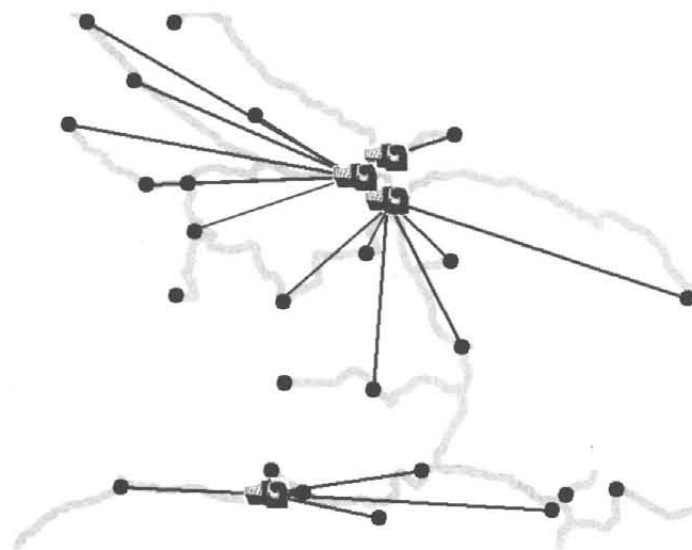


▲ Fig 1. Maximum radius of the operational performance of the rural administration cooperatives (Km) (According to the managers of Iranian rural administration cooperatives)

difficult. However, since there have been vast researches conducted about space organizing and rural residential places all over the country, and zones and rural districts and sub-districts were defined, different provinces now can relatively be compared. In this study, the above mentioned planned units have been used and experts were asked to explain the best performance radius (distance) of a union. The results of this survey have been gathered in table 5. As seen here, those who answered the questions

believed the best zone for giving shared services is first sub-districts which takes up 9.41% of the whole services and then these services are best presented in districts which are 2.30%. After that, rural agglomeration zone that is normally less than a village can have 9.27% of the whole services.

In this study, the performance radius (performance distance) is examined based on distance factor. The results have been shown in the chart below. Accordingly, 9% of the direc-



▲ Map 1. Unsuitable distribution equipment in province

tor managers have seen a radius of 5 km quite suitable for providing the shared services for waste disposal; furthermore, 15% of them also believe a 10 km distance would be the best distance for covering these services. Also, 31% think of 15 km distance as the best answer; 38% see 20 km as the best distance and the remaining 6% believe 25 km would be the best distance for shared services.

Evaluation of Waste Management Services

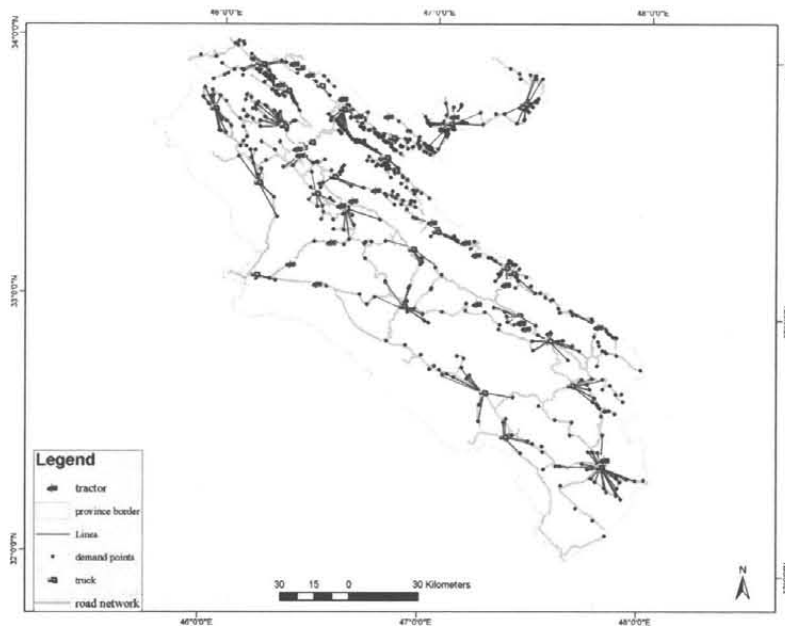
According to rural administrations laws, after the allocation of credit or equipment to a certain rural administration, those funds and equipment is owned by that rural administration, and the moving and adapting it to other villages simply is not possible. Only in the case of paying the cost of equipment, the vehicle can be transferred from one village to another; however, performing such an action is indeed costly. On the other hand, funds and equipment distributed among rural administrations are of their related funds (values of added tax credits law). Therefore, any allocation of credit or vehicle to villages without rural administration is not possible under existing laws, so in planning and implementing waste management systems, the mentioned limit should be taken into account. As noted earlier, while conducting the project, 42 villages are equipped with Nissan

trucks and compressor trucks, which can offer services. On the other hand, 35 villages are equipped with tractors and trailers, which only provide services from one spot to the other. Therefore, three scenarios can be evaluated.

Scenario I: Evaluation of coverage of services by rural administrations with Nissan trucks and compressor trucks

First scenario consists of examining and assessing the coverage by rural administrations with Nissan trucks and compressor trucks. As mentioned above, the maximum radius of 20 kilometers was taken into consideration. Using network analysis, coverage of the services was investigated, resulting in the map number (2). Accordingly, only 335 villages or 53.4% of villages in the province are covered by the mentioned services and 292 villages or 46.6% of villages are not covered by the above-mentioned services.

Based on the analysis results, due to improper positioning and layout of some villages with waste collection equipment, servicing is not performed in an appropriate manner, and in some cases only one village is in the service area. For example, in the central part of the Malekshahi city, distribution of machinery is seen.



▲ Map 2. Villages covered by existing waste collection system

Scenario II: Assessment of potential villages with tractor and trailer equipment. Second scenario is to equip villages having tractors and trailers to trucks or Nissan compressors in order to offer services in the area. In these circumstances, and taking into account the radius of 20 kilometers, network analysis was performed again, and results are listed in the following figure. Accordingly, 426 villages in the province which are equal to 67 percent of villages are without the equipment covered by the aforementioned services, and 201 villages are not covered at all. Based on the results of network analysis, from the total of 77 equipped rural administrations, 11 rural administrations were not included in the analysis because of overlapping and adjacent rural administrations which were equipped together, and only 66 centers can offer services in rural areas.

Third scenario: Use of centers in rural agglomeration

Centers in rural agglomeration, based on designed study plan for the rural development of Ilam province were determined in Ilam province. Under this scheme, a total of 95 rural agglomeration centers of the province were determined (Darban Astane, 2010). As these villages were identified based on field studies, in the present study, suggested sites for

evaluation services were used. Analysis results indicate that in the case of using 95 rural agglomeration centers with a radius of 15 kilometers, all the villages of the province are covered with services.

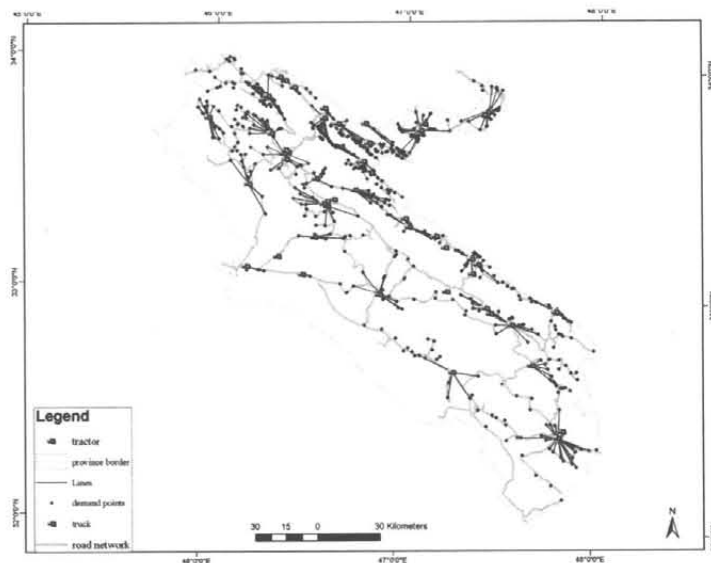
Since the assumption is on the economy and full use of the machinery potential, in the network analysis, setting of the least service provider (problem type: Minimize facilities), and also a function of radius of 20 kilometers was considered significant. The results are inserted on the Map No. 4. Based on the results of the study, 59 rural agglomeration centers were included in the analysis with the coverage ability of providing service to 610 villages or (97% percent) of the total villages of the province in the study, and 36 more centers were not included in the network analysis, and were encoded as candidates. In other words, in the case of equipping 59 rural administrations with field service equipment and 36 rural administrations to spot of service equipment, 97 percent of villages in Ilam province can be covered by services.

Conclusion

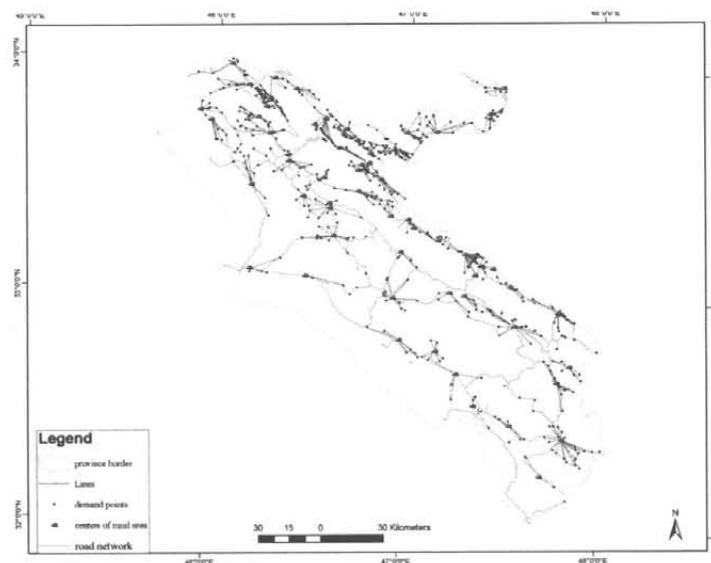
In rural areas, despite the differences of these regions, in terms of lifestyle, with urban environments, due to changes in people's lifestyles, environmental pollution and the resulting

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▲ Map 3. Villages covered by waste collection system According to the second scenario



▲ Map 4. Villages covered by waste collection system, Assuming minimal provider centers

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health risk for rural people, waste management has emerged as an important issue. Therefore, achieving a proper waste management model requires the identification and assessment of existing conditions in the area. This study aimed to evaluate and locate waste management systems implemented in Ilam province. Based on the results of the study, only in 27 villages of the province garbage collection is done, (42 villages are equipped with Nissan trucks and compressor trucks, and 35 villages are equipped with tractors and trailers). In this study, coverage of rural services according to

existing equipment in all three scenarios was evaluated. The first scenario is based on the evaluation of service coverage by rural administrations having Nissan trucks and compressor trucks. It has been demonstrated that only 335 villages or 53 percent of villages in the province are covered by the service. 292 villages are not covered by the above mentioned services. In the second scenario, equipping villages having tractors and trailers with trucks or compressor Nissans is for spot services. Results show that 426 villages or 67 percent of villages are without equipment for covering

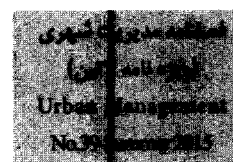
the aforementioned services, and 201 villages are not covered at all. In the third scenario, rural agglomeration centers were used and the results show that in the case of using 95 rural agglomeration centers with a radius of 15 kilometers, all the villages of the province are covered with services. In addition, According to the results of network analysis, in the case of equipping 59 rural administrations of the province with field service equipment and 36 rural administrations with spot service equipment, all the villages in the province can be covered. With regard to the mentioned factors, the main result of the research is the improper allocation of the equipment and the lack of a clear plan of the province management to provide services to rural people of the province. Therefore, according to the results of research and in the case of coordination of local managers, rural administrators, and executives, the possibility to the proper use of equipment in order to provide services to the high proportion of rural areas exist.

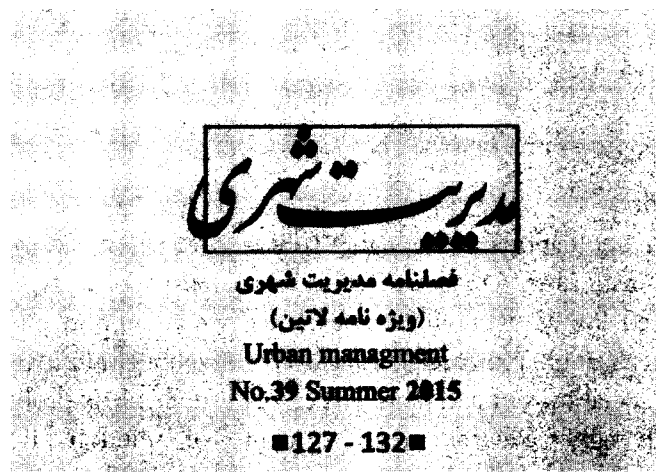
Therefore, it is suggested that in the distribution of machinery, construction and service equipment, principles of jurisdictional planning and the settlement hierarchy shall be taken into consideration.

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Received 22 Dec 2014; Accepted 14 Feb 2015

Intrinsic appraisal of quality in the field of urban development in region Islamic Azad Universities

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Abstract

Present research investigates intrinsic quality in region1 Islamic Azad Universities and presents a pattern to improve quality of universities. In present research, we appraise professors, and students, ideas about educational, administrative-financial, student, research and cultural factors. Present research is survey- descriptive. Its statistical society consists of 78440 students of undergraduate study fields in region1 Islamic Azad Universities in 2011-2012. The sample equals 382 students. We selected them based on Cochran formula and by using cluster random sampling. The data collected by one questionnaire that is made by the researcher based on liker's spectrum. Questionnaire used after determination of their validity and stability (students 0.84) by the specialists. The analysis of data carried out using descriptive statistics (frequency, the percent of frequency, mean, skew, median, and standard deviation), inferential statistics (T-test and one-side variance analysis in significant level 0.05) and SPSS software. The results of research show that: In students, opinion, the efficacy of student, research programs is lower than average, the efficacy of educational programs is average and the efficacy of cultural and administrative –financial programs is higher than average.

Keywords: *Intrinsic appraisal, students, region1 Islamic Azad Universities*

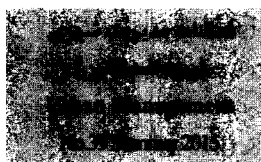
Introduction

Government and nations notice higher education as key institution. Obtaining technology and advanced knowledge can have effective role in the realization and acceleration of economic and social movement. This object will achieve with higher education reinforcement and its qualitative and quantitative programming (Farokh Nezhad, 2006). In fact, university is a cycle that is the producer and supportive of national innovations system (Bill, 2004). Universities role in the production of human capital can cause development (Efron2005). Nowadays, one of the universities challenges is quality purport (Girtz, 2005), so we need to appraise it. Appraisal of higher education is a systematic analysis process that improves the quality of higher education programs or institutions. This type of appraisal carries out using Intrinsic and extrinsic appraisal (Vlasceanu, 2007, Harvey2002). The discussion of quality, Intrinsic and extrinsic, is fundamental object that modern university notice on a regular basis (d Andrea.c and Gosling.d 2005). Quality in higher education includes all activities such as education, research, employee, students, facilities and equipment, services to society and university. We should notice all of elements such as input, output, process, product, outcome (Bazargan, 2002) to improve the quality of higher education based on organizational elements pattern. Appraisal should provide the better organizational motivation base (Greer, 2000). In intrinsic appraisal, university appraises itself in order to 'self-appraisal in mirror' and recognizes itself power and weak aspects and corrects weaknesses. This appraisal is first step to improve educational quality, and educational center members (group, college and university) can plan to have better future based on the recognition of facilities, weaknesses, opportunity, threats (bazargan,2012). Jacson (2001) expresses that intrinsic appraisal is a method to recognize and carry out things intellectually, so we can apply this attitude to improve method or performance. Arnoldlov

(2005) quote from El-Khawss (2007:82) defines intrinsic appraisal in this form:” intrinsic appraisal is type of experimental researches that support planned alternation and organizational improvement. Intrinsic appraisal role not only is problem analysis and presentation of solution but also is mistakes correction and implementation of presenting solution to solve weaknesses.

Many researches carried out that present research investigates some researches. Ahmadi (2005), in his research “The intrinsic appraisal of the quality of Tehran university environment engineering group” appraised many factors such as the management and organizing of group, students, teaching-learning process, implemented educational course, the facilities and equipment of educational and research. The result of his research showed that the management and organizing of group and implemented educational course were partly desirable and students, teaching-learning process and the facilities and equipment of educational and research were desirable. Farokh nezhad (2006), in his doctoral dissertation appraised the quality of intrinsic and extrinsic of the master and doctoral courses of the groups of educational management, educational psychology and sociology in Shiraz University. The results of his research showed that there are partly desirable situation in this university. Alvez and Vieira (2006), in their research investigated the services quality of higher education institute in Portugal and understood that the management and organizing of group, students, teaching-learning process, implemented educational course, the facilities and equipment of educational and research had partly desirable situation at these universities and faculty members and students appraised in desirable level. Yilmaz et al (2007), investigated the services quality of higher education systems in two Turkey universities and appraised 7 factors. In this appraisal, the management and organizing of group, students, teaching-learning process had desirable situation, but students

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didn't satisfy of themselves situation. The general results of the validation of 3000 colleges until 2002 in America showed that the results of the 10 criterion of validation had partly desirable situation in 2003.

Latrob University in 1994 appraised feedback relevant to curriculum dialects, facilities and equipment, the management of educational group, research and financial problems at different course. The results of appraisal showed that facilities, equipment and financial problems had desirable level and research, curriculums, the management of educational group and faculty had partly desirable level. At the end, they presented methods to improve (Sim, 2001:72). Intrinsic appraisal is a method to increase higher education quality, so this research introduces questions relevant to the intrinsic appraisal of quality in region1 Islamic Azad Universities:

"How do students of undergraduate study appraise the efficacy of presenting programs in region1 Islamic Azad Universities?"

Research method

Present research is survey- descriptive in type of goal, application and the method of data collection. In present research, statistical society consists of student's undergraduate study in region1 Islamic Azad Universities in 2011-2012. The sample selected based on Cochran formula and by using cluster random sampling. Society and sample size are given in table 1.

Society	Society size	Sample size
students	78440	382

▲ Table 1. The statistical society and sample size of research

The data collection instrument is a questionnaire that is made by researcher. Questionnaire includes 36 questions that investigate students, ideas about educational, administrative-financial, student, research and cultural components. Specialists determined the apparent and content validity of questionnaire. Research carried out two weeks apart among 30 students and questionnaire stability appraised by using

the coefficient of Cronbach Alpha 0.84. The analysis of data carried out using descriptive statistics (frequency, the percent of frequency, mean, skew, median, and standard deviation), inferential statistics (T-test and one-side variance analysis in significant level 0.05) and SPSS software.

The result of research:

"Investigation of the appraisal of programs efficacy in undergraduate study Islamic Azad Universities": Statistical indexes (frequency, the percent of frequency, mean, skew, median, mod, standard deviation) each component are given in table 2, 3

Table 2, 3 show that students, opinion about administrative-financial and cultural components has tendency toward above average, and students, opinion about student and research components has tendency toward below average. Skew values determine this attitudes tendency; also many students appraise educational components (close to average). We used one-side single-sampling T-test to investigate the significant of attitudes tendency. Based on likers spectrum is allotted rank 3 to average, so average value each component is compared with constant value 3. The results are given in table 4.

According to T-test results in table 4, test is meaningful in two cases and isn't meaningful for the rest of cases and we can't accept this hypothesis that average is higher than 3, so we can say that average of ideas about administrative-financial and cultural components is higher than value 3 (higher than average) and average of ideas about the rest of components is lower than or close to average.

Conclusion

The results of the appraisal of educational programs efficacy show that the efficacy of educational programs is close to average in region1 Islamic Azad Universities, in students, opinion. The results of present research are in accordance with Ahmadi,s (2005), Farokh nezhad,s (2006), Lim,s (2001), America validation organization(2003), Alovz,s and Viera,s

component	The percent of Frequency				Statistical Indexes					
	Very low	low	average	high	Very high	mean	median	mod	standard deviation	skew
educational	11.41	25.71	40.31	25.71	8.30	3.05	3	3	1.09	-0.25
administrative-financial	11.47	28.43	29.16	28.43	13.72	3.16	3	3	1.20	-0.23
cultural	9.53	27.96	36.13	27.96	11.73	3.18	3	3	1.12	26.-
student	25.52	13.29	34.42	13.29	7.40	2.58	3	3	1.21	+0.24
research	24.71	11.65	36.49	11.65	4.84	2.50	3	3	1.13	+0.24

▲ Table 2. The results of the descriptive analysis of components (students, opinion)

measure of efficacy programs	Below average	average	Above average	total
educational	25.68	40.31	34.01	100
administrative-financial	28.69	29.16	42.15	100
cultural	24.18	36.13	39.69	100
student	44.89	34.49	20.69	100
research	47.09	36.49	16.49	100

▲ Table 3. The appraisal of programs efficacy in undergraduate study Islamic Azad Universities

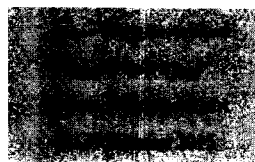
Test result	mean	Statistical value T	Freedom degree	component
educational	3.05	0.935	381	Accuracy of zero hypothesis
administrative-financial	3.16	2.558	381	Rejection of zero hypothesis
cultural	3.18	3.098	381	Rejection of zero hypothesis
Student	2.58	-6.84	381	Accuracy of zero hypothesis
Research	2.50	-8.75	381	Accuracy of zero hypothesis

▲ Table 4. The result of T-test relevant to students

(2006) researches that were appraised nearly average and aren't in accordance with Araste, Sobhani Nezhad, and Homai (2008), researches that was appraised higher than average and Yilmaz et al (2007), that was appraised lower than average. Students appraised the performance of administrative-financial programs higher than average in Islamic Azad Universities. This object can attract students to Islamic Azad Universities. The result of research is in accordance with Lm (2001), Yilmaz, et al (2007), researches that were appraised higher than average and isn't in accordance with America validation organization (2003), Alovz, and viera, (2006) researches. Students appraised the performance of cultural programs higher than average in Islamic Azad Universities and students,

opinion relevant to this component show that Islamic Azad Universities have effective role in this base. We should exactly plan due to necessity of cultural performance in Iran Islamic society. The result of research isn't in accordance with Mohamadi, (2003) researches.

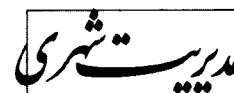
Students appraised the performance of student programs of the lower than average in Islamic Azad Universities and students, opinion relevant to this component show that universities have low activities in this case, so Islamic Azad Universities should plan to provide better services for students. The result of research isn't in accordance with Farokh Nezhad, (2006) and Yilmaz, et al (2007), researches that were appraised higher than average. Students appraised the performance of student programs lower than average in Islamic



Islamic Azad Universities and students, opinion relevant to this component show that reg1 Islamic Azad Universities have effective role in this base and they need to revise themselves activities. The result of research isn't in accordance with Farokh Nezhad,s (2006), Mohamadi,s (2003) , America validation organization (2003), Ahmadi,s (2005), researches.

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فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 133 - 146 ■

Received 26 Nov 2014; Accepted 17 Feb 2015

Measuring Iran's Industrial Clusters Competitiveness: Through Porterian Diamond Framework and Factors

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Abstract

Competitiveness is divided into two broad categories named as macroeconomic and microeconomic competitiveness. Microeconomic competitiveness indicators have a direct impact on company productivity within which state of cluster development is the most important pillar of microeconomic competitiveness that are introduced by Michael Porter and its framework as Diamond Model. The Diamond reveals almost every things matters for competitiveness and based on six indices and 24 sub-indices. In This article by the way of DEMATEL technique and MATLAB software the priority of 6 indices and 24 sub-indices has been showed in 47 industrial clusters (in 19 provinces) and interaction of these indices and sub-indices also has been depicted. This priority is as below: 1-Demand conditions, 2-Role of Government, 3-Factor conditions, 4- Context for strategy and rivalry, 5-Chance, 6- related and supporting industries. This priority for 6 indices and 24 sub-indices could be used as a toolkit by policy makers to enhance regional economic development so that those factors should be used that have most effect on regional economy and leased influence form exogenous factors.

Key words: *Competitiveness, Industrial Clusters, Diamond Model, DEMATEL*

Introduction

The concept of industrial clusters has been considered in Iran for more than one decade. Such an attention is due to legal obligations to industrial clusters and the way of increasing small and medium enterprises competitiveness. For instance, we can refer to the rules of the third, fourth and fifth economic development programs as well as general policies of the system. Industrial clusters play a significant role in countries' competitiveness (Ketels & Memedovic, 2008). Focusing on small and medium enterprises which possess a high proportion of employment and value added of countries, clusters cause to the increase of their productivity as well as promoting countries' competitiveness (Tambunan, 2005: 14). In fact, the main cause of small and medium enterprises weakness is not their small size but their relative isolation which leads to the increase of their competitiveness through creating clusters consisting of small and medium companies (Humphrey & Schmitz, 1995: 22). As the most famous theorist of industrial clusters, Michael Porter believes that countries should be specialized in certain clusters to promote their competitiveness. Therefore, it is highly necessary to identify industrial clusters and determine their development priority. In this regard, there are few studies conducted and in Iran, no study has attempted to identify and classify indices affecting industrial clusters in 24 indices as well as their effect on each other and the whole cluster development process. To this end, the next sections present the definition and classification of industrial clusters as well as the related literature on the issue. In the following, introducing theoretical principles, Diamond Model has been referred as the most important determinant of micro economics competitiveness, 6 main indices and its 24 sub-indices. Then, the opinions of 47 industrial clusters in 19 provinces of the country have been gathered with a focus on the main and secondary indices as well as DEMATEL

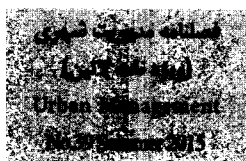
technique and MATLAB Software. Finally, causal relations governing these factors and the extent of the indices' effect on each other have been explored.

RELATED LITERATURE

Michael Porter (1998, 2000 a) was the first person who proposed the concept of industrial clusters. Formulating a book (Porter, 2000b), he structurally and topically classified this concept and selected the title of industrial clusters for companies which actively work in a domain. Cluster refers to the geographical focus of interrelated businesses from suppliers of ingredients, machineries, labor force, capital, and related entities working in a certain domain (Porter, 2000a). Of course, other interpretations such as business clusters, competitive clusters, Porterian clusters, have been employed by some entities such as UN industrial development organization (Nadvi & Barrientos, 2004: 7), work international organization (Marchese & Sakamoto, 2008: 12), development and economic cooperation organization (2009: 27), monetary international box (Tiwari & Vinals, 2012, 6), and so forth. Mansouri (2006) introduced industrial clusters as an accumulation of business units which produce and supply goods and services in the context of communication and completing each other's activities. Mainly, they face with common challenges and opportunities. This concept is the same definition presented in business clusters development regulations (2013) in which business refers to an active collection in a domain focused in a geographical region (Small Industries and Industrial Towns of Iran, 2013: 12).

The studies conducted regarding industrial clusters, after the achievement of Italian companies called industrial areas led to the formation of the third Italy (Humphrey & Schmitz, 1995: 7-8) as well as the achievement of software companies (Klepper, 2010) caused to attract countries to such developmental pattern. Of course, various international organizations also played a significant role to

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develop this concept. For example, we can refer to the World Bank analysis with a focus on the role of competition and competitiveness in industrial clusters (Shakya, 2009), development and economic cooperation organization (2005) with a focus on innovation aspects in industrial clusters and UN industrial development organization focusing on the role of clusters to decrease poverty (Nadvi & Barrientos, 2004). Today, there is a wide academic literature and Harvard University and competitiveness institute, Stockholm University, Sweden Institute for Strategy and Competitiveness, Center for Strategy and Competitiveness, and University of Minnesutta are the leading entities in this regard.

A main part of studies related to industrial clusters pertains to determine the relation of selective place of companies and their productivity and development extent. Weber (1909) investigated the effect of selecting the place of company on its benefits. Harris (1954) and Pred (1966) explored automatic and unconscious process based on which the place of companies is selected such that it has a good access to market and ingredients supplies or final products. Such a selection leads to the improvement of access conditions of other companies to that place (Anderson et al., 2004: 21-24). Various studies have been conducted on the effect of clusters on countries economy. For example, we can refer to the study of Smilinger (1993) in Germany, the study of Saksinan (1994) and Porter (2002) in America, Friedman (1988) in Japan, Will (1997) in New Zealand, and Hawknes (1999) in Norway (ibid, 25-28).

Today, although the fact that state of cluster development is annually mentioned as an important index in countries' competitiveness report, countries attempt to introduce superior clusters on their own. For example, China has put industrial clusters development as one of the main strategies of their industrial development such that this country has acted in more than 100 superior clusters

by 2010 (Zen, 2011). Other countries such as America, England, New Zealand, and Canada introduced their superior clusters. In fact, by introducing clusters, countries try to promote their competitive power of isolated companies and create supportive companies as well as changing position from natural resources-based economies to knowledge and innovation-based economies (Porter, 2007).

Developing industrial clusters is regarded as one of the most successful methods of increasing competitiveness during the two last decades (Porter, 2003; Delgado et al., 2011; Turner et al., 2013; Ministry of Economy of Poland, 2013). In this regard, the book of Competitive Advantage of Nations (Porter, 1998) explained the relation between industrial clusters and competitiveness in America. In his book, Porter considered efficient clusters as one of the main causes of decreasing countries' competitiveness (ibid, 4). He believed that countries should be specialized in certain clusters to increase competitiveness (Porter, 2007: 24).

According to World Economic Forum (WEF), competitiveness includes a set of entities, policies and factors determining productivity level (Janati Far & Nik Raftar, 2011: 12). Annually presenting Global Competiveness Index (GCI), this forum considers industrial clusters development as one of the factors affecting this index. Clusters influences competitiveness through three ways. Firstly, clusters increases companies' productivity and their active industries; active countries in a cluster have access to better labor force, ingredients, information and educations compared to companies out of clusters. Secondly, clusters promote companies' innovation and productivity; usually, in clusters, more innovation opportunities are created for companies and there are more capital and human resources for these innovations in clusters. Thirdly, clusters provide the context of creating new businesses which are accompanied with new innovations. It is due to the fact that

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the presence of experienced labor force or professional services of business development and high-quality ingredients in clusters, there are fewer barriers to enter to market for new companies and newly established companies can grow in clusters (Porter, 2007: 23-34).

Factors influencing competitiveness can be divided into two groups of microeconomic and macroeconomic. Microeconomic includes business environment, state of clusters development, and companies' capability. In addition to influencing competitiveness at microeconomic, the state of clusters development, influences total productivity of economy as well as the formation of new companies (Porter et al., 2008: 52-54).

Presenting competitiveness index, WEF investigates the factors affecting countries' power to achieve sustainable economic growth and long-term wealth and considers the factors determining competition at micro and macroeconomic level from 1979 (Janati Far & Nik Raftar, 2011: 19-20). Presenting the state of companies' competitiveness in this index, WEF consider 12 elements for countries' competitiveness and classify them in three groups (Mirahasani, 2013). Meanwhile, the state of cluster development of countries is placed at the 11th element. In 2014, Iran has been the 99th country out of 148 countries of the world (Schwab & Sala-i-Martin, 2014: 221) and in 2013, it has been placed the 85th rank (out of 144 countries) (Schwab & Sala-i-Martin, 2013: 203). Most of the countries of the region have a higher place of Iran in terms of the state of cluster development. For example, we can refer to United Arabs Emirates (the 3rd rank), Qatar (the 10th rank), Saudi Arabia (the 23th rank), Jordan (the 27TH rank), Bahrian (the 32th rank), Oman (the 36th rank), Pakistan (the 62th rank), and Kuwait (the 90th rank).

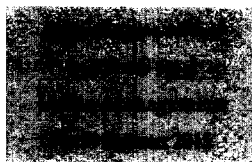
THEORETICAL PRINCIPLES

Various priorities of business clusters have been presented so far. In Latin America, clusters have been classified into survival

clusters (consisting of small and very small units), fordist clusters (consisting of small and medium units), and transnational clusters (consisting of big units including international companies branches) (Altenburg & Stamer, 1999, 3). In another study, clusters' priority, based on co-association type of companies within the clusters, are divided into four classes: Marshallian clusters in which a number of small and medium companies works at a region, Hub and spoke clusters in which one or several big companies are surrounded with a large number of small and medium companies and are probably related with out of the region, Satellite cluster in which their driving force is brand companies which are mainly the branches of multi-national companies, and State-Anchored clusters which mainly includes governmental companies which are usually non-profit making and are supported by a large number of companies providing various business development services (Markusen, 1996). The third classification includes clusters' classification based on activity field in a supply chain. This classification includes light manufacturing industrial clusters (such as electronic and clothing), heavy manufacturing industrial clusters (such as oil, petrochemical and steel), construction industrial clusters (such as building cluster), and service clusters (such as communications cluster) (Yingming, 2009: 35-38). Of course, there are other classifications such as technology-based clusters (such as resource-driven industrial clusters, low-tech industrial clusters, mid-tech industrial clusters, high-tech industrial clusters, and knowledge-driven industrial clusters) (Manning, 2013; Saxenian, 2005) or cooperation type-based classification (such as horizontal and vertical industrial clusters) (Kleinhardt-FGI Pty Ltd, 2002: 7-9).

Porter (1990, 2007) explains the classification of industrial clusters using a model called Diamond Model. Diamond Model classifies the state of clusters development and the factors affecting their development in four

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Production (F1)	Demand (F2)	Related and support institutions (F3)	Corporate strategy, structure and competitiveness (F4)	Government (F5)	Chance (F6)
Raw materials S1	Preferring domestic products/ foreign customer's knowledge of domestic products S5	Relationship with governmental and public institutions S9	Corporate prospect/ strategy S13	Social security S17	Significant change in global financial markets/interest rate S21
Technology S2	Corporate structure (micro, small, medium, large) S6	Relationship with civil institutions S10	Corporate ability to shift from domestic to international markets S14	Subsidy/tax S18	Sudden change of macroeconomic variables S22
Infrastructure S3	After sales services efficiency S7	Relationship with universities and research institutions S11	Intra-industry competitiveness S15	Various incentives S19	War, revolt, etc. S23
Internal market size S4	Bureaucracy level S8	Cooperation of companies in joint purchases S12	Various qualifications/ certificates (ISO, TS, etc.) S16	Written/ unwritten laws (professional ethics of business, mutual trust level, etc.) S20	Natural disasters, etc. S24

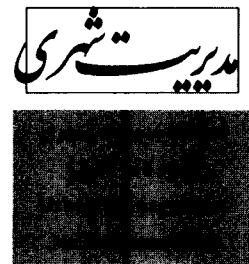
▲ Table 1. Indices and sub-indices of Diamond Model, Source: Smit, 2010; Bakan&Dogan, 2012)

main elements including factor conditions, demand conditions, related and supporting industries, firm strategy, structure and rivalry, government, and chance. Table 1 shows the classification of each of them into many other sub-indices (Porter, 1988: 125-127).

Various studies have been performed to investigate the extent of each index's importance on clusters' development. In the study of Kirankabes & Arik (2014), due to few data (26 regions in Turkey) and their normality assumption, Spearman correlation coefficient has been used. In this study, the state of clusters' competitiveness has been also investigated during 2008-2011 through defining clusters density index (CDI) and employing criteria such as cluster size, importance degree of cluster in the region's economy and location Quotient (LQ). Relying on factor analysis methods, input-output tables, algorithmic graph theory, and quasi-

industrial clusters, Yingming (2009) attempted to identify clusters and quasi-clusters of China and prioritize them. Also, relying on Data Panel, Delgado et al. (2012) investigated the state of microeconomic of these companies' competitiveness in 130 countries during 8 years (2001-2008) using ordinary least squares (OLS) method. They found that among 4 above mentioned factors, production and strategy factors, structure and competitive power of company play more significant role in clusters' successful.

Relying on Diamond Model and using algorithmic graph theory and DEMATEL technique, this paper tends to investigate direct and mutual effects of each of clusters in industrial clusters of Iran. Then, identifying the way of these factors' impressionability, the importance extent of each factor has been determined (just like the study of Delgado et al. (2012)). On the other hand, in this paper,



unlike Cronkobs' method (investigating 26 regions in Turkey), 47 industrial clusters (in 19 provinces of Iran) have been investigated.

DEMATEL technique used in this paper was first introduced in 1971 by Fonetla& Gabus and was used in human sciences programs and projects implemented in the Geneva Research Center (GRC) between 1972 and 1976. This method is most commonly used to study complex issues and the use of expert judgment in various fields (Trevithicket al., 2003). This technique is based on charts dividing involved factors into two groups of cause and effect and providing the relationship between them as a comprehensible structural model.

DEMATEL considers the set of factors that influence the phenomenon as a system consisting of a set of elements of $C = \{C1, C2 \dots Cn\}$ and seeks to identify the interactions between these elements. To illustrate the theoretical structure DEMATEL technique and its application in 47 industrial clusters of the country, the six step in this technique as discussed in cluster development literature are provided here:

1- Collecting opinions and forming matrix Z: In this stage, 47 people provided their opinions as cluster development agents (CDAs) first about the 6 indice and then about the 24 indices, according to Table 1. The direct effect of and interaction between indices and sub-indices of Table 1 were denoted by x_{ij} (effect of index i on index j) and effect of each index on other indices was shown by a number between 1 (the least effect) and 5 (the highest effect). A nonnegative 24×24 matrix was formed for each CDA where $[x_{kij}] = X_k$ where k represents the number of CDAs (47 people). In this set, there are 47 matrices of the form $X_1, X_2, X_3, \dots, X_{47}$ reflecting opinions of CDAs. In order to integrate the views of 47 of Cluster Development Agents in the country, the average matrix Z was calculated as follows:

$$Z = \frac{1}{k} \max \sum_{i=1}^k x_{ij}^k \quad (1)$$

2-Calculation of normalized direct relationship matrix D for elements of table (1), where $D = [d_{ij}]$ and value of each entry in this matrix is $[0,1]$. Accordingly, calculation will be as follows:

$$D = \lambda * Z \quad (2)$$

$$[d_{ij}]_{24 \times 24} = \lambda [z_{ij}]_{24 \times 24} \quad (3)$$

$$\lambda = \text{Min} \left[\frac{1}{\max(1 \leq i \leq 24 \sum_{j=1}^{24} |z_{ij}|)}, \frac{1}{\max(1 \leq i \leq 24 \sum_{i=1}^{24} |z_{ij}|)} \right] \quad (4)$$

According to Marov Chain Theory, D^m is equal to power of matrix D^s , for example, $D^2, D^3, \dots, D^\infty$, and due to convergence, the outcome of this chain will be as follows:

$$\lim_{m \rightarrow \infty} D^m = [0]_{n \times n} \quad (5)$$

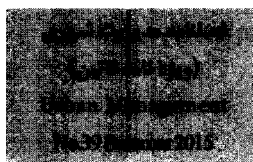
3- Calculating total matrix T: Total effects matrix of the elements of table (1) is obtained from formula (7), where I is a 24×24 matrix (number of elements in table (1)) and t_{ij} entries show effect of invert agent i on agent j , and finally, matrix T shows the overall relationship between elements of this set.

$$T = \lim_{m \rightarrow \infty} (D + D^2 + \dots + D^k) = \sum_{k=1}^{\infty} D^k = D^2, D^3, \dots, D^\infty \quad (6)$$

$$= D(I + D^1, D^2, \dots, D^{k-1}) = D(I - D)^{-1}(1 - D)(I + D^1, D^2, \dots, D^{k-1}) = D(I - D)^{-1}(I - D^k) \quad (7)$$

4- Calculation of sum of rows and column s of matrix T: In matrix T, sum of rows and columns of matrix are shown by r and c vector, therefore,

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$$r = [r_{ij}]_{n \times 1} = \left(\sum_{j=1}^n t_{ij} \right)_{n \times 1} \quad (8)$$

$$c = [c_j]_{1 \times n} = \left[\sum_{i=1}^n t_{ij} \right]_{1 \times n} \quad (9)$$

where $[c_j]$ is a transpose matrix.

where $([c_j])'$ is a transpose matrix.

If r_i is sum of i -th row of the matrix T , then r_i represents the total value of direct and indirect effects of element i on other elements and c_j similarly represents the sum of the direct and indirect effects that other elements exert on the element j . If $i = j$ then the value $(r_i + c_i)$ represents total direct and indirect effects exerted and received by element i . More precisely, $(r_i + c_i)$ shows that what effects the sub-index of quality of raw materials has on other factors of Table 1, and what impact it receives from them. Similarly, $(r_i - c_i)$ is the net effect on total system of element i showing the effect of this index on the whole diamond model. If $(r_i - c_i)$ is a positive value, the net effect on the whole of the system of that element is a net one, and if this amount is negative, it receives a net effect from the whole system.

5- Calculation of the threshold (α): To map the relationships between indicators of the diamond model, the threshold value should be calculated. The method can trace relationships between the elements in Table 1, drawing remarkable relations network. Only those relationship whose value is greater than the threshold values in the matrix T and are shown in map and in form of relation (10).

$$\alpha = \frac{\sum_{i=1}^n \sum_{j=1}^n [t_{ij}]}{N} \quad (10)$$

Where N is the total entries in the matrix T . To calculate the threshold value of the following relation, simply the average of values of matrix T must be calculated. After having obtained the threshold value, all those values of matrix

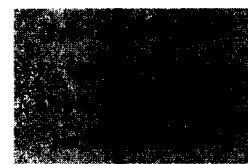
T that were smaller than the threshold value were removed and the respective relationships were not considered as causal.

6. Developing map of the relationships between indices in the diamond model: The map illustrates the relationship between the indices of all relationships in $(r_i + c_i, r_i - c_i)$ by which the highest interactions between indices were identified. Then, those factors of t_{ij} having a value larger than threshold value (α) were displayed in the map (Shieh et al., 2010).

4- Methodology and Results

In this section, for the implementation of the six stages that were mentioned under the theoretical framework, after having extracted the 6 main factors and 24 sub-indices based on table (1), a questionnaire was prepared and administered to a group of experts in the field of cluster development in the country to obtain their opinion on the 24 indices to ensure the accuracy of all the indices. The expert group consisted of 4 academic members of the University (advisors of PhD and Master's theses in the field of development of industrial clusters), 4 cluster development agent (CDA) and 3 experts from Iran Small Industries & Industrial Parks Organization (as the main authority in charge of the development of clusters industry in the country). However, after the interview and getting their opinion, the questionnaire was modified. 47 cluster development agents of the country from 19 provinces were asked (according to Table 2) to fill in the questionnaire. Among these 47 experts, at least 3 had history of industrial cluster development and over 5 years of experience in industrial works. After having collected all opinions and interviewed the experts, importance of these factors and their interaction was measures. First, opinions of CDAs were collected about the 6 factors, and then theirs about the 24 factors were collected. It should be noted that industrial clusters were started around September 2001 and over 388 industrial clusters have been identified so far, and 47 industrial clusters had already

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received work completion license by the time this paper was written.

MATLAB software was used because of large number of matrices formed in DEMATEL technique and the calculations were divided into two parts: those determining the importance of the 6 factors affecting the development of industrial clusters of Iran and those determining the direct effects and interaction of the 24 factors. In this section, the sixth stage concerning remarkable causal relationships (based on the diagram (1)) where the alpha value is greater than the threshold value ($\alpha > 0.2374$) is discussed, and because of large number of matrices, diagrams and calculations, the individual interactions of 24 sub-indices are provided in the annex.

Importance of the 6 factors and the 24 factors is measured in terms of the value of $(r + c)$ as shown in Table 3. In this table, F2 (factors affecting the demand) has the highest value at 3.6319 while F3 (related and support institutions) has the lowest value at 2.271. On the basis of $(r + c)$, priority of the 6 factors in the diamond model will be as follows:

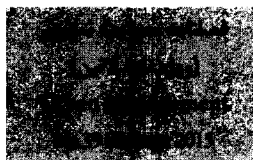
$F2 > F5 > F1 > F4 > F6 > F3$

In other Bat, decisions regarding the priorities of the diamond are as follows: demand factors, the operating state of production factors, operating strategy, structure and Tvarqabty

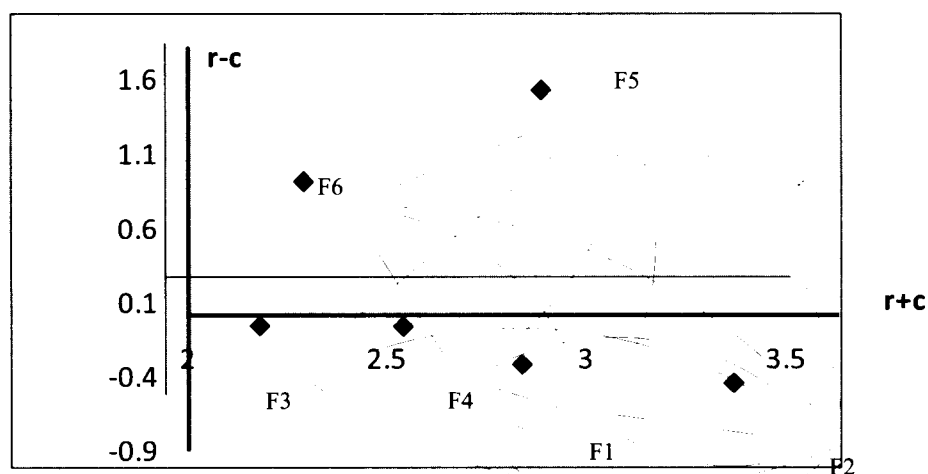
company, the element of chance, and finally the support of relevant institutions. In other words, priority of decision making regarding the factors of the diamond model is as follows: demand factors, government factors, production factors, strategy factors, corporate structure and competitiveness, chance factor and finally related and support institutions. On the basis of $(r - c)$, the said factors in the diamond model are divided into two groups: a) effective and b) affected.

a) If the value of $(r - c)$ is positive, then the factor falls in the former group and other factors affect diamond model and consequently, the higher the value of $(r - c)$, the more will be its impact on other factors. Here, F5 (government) and F6 (chance) having values of 1.4514 and 0.7513 were appointed to effective group. The $(r - c)$ value for government factor also showed the government was a key factor impacting the other factors in the diamond model. On the other hand, the impact of government factor on other factors had a one-way nature and other factors did not affect the government. Namely, to improve the microeconomic competitiveness through the development of industrial clusters, very much focusing must be placed on the government in Iran should and the development of other factors will not affect the development of factor of

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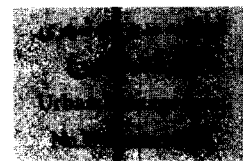
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▲ Diagram 1. Remarkable relationships 6 factors of diamond model (the threshold value is equal to 1.351); Source: Research's calculations

No.	Name of Province	Name of business cluster	No.	Name of Province	Name of business cluster
1	East Azarbaijan	Leather shoes	25	Khuzestan	Date
2		Tabriz Stone	26		Oil, gas and petrochemicals
3		Wooden Furniture	27	Semnan	Plaster
4		Tabriz Home appliances	28		Semnan Auto Parts
5		Auto parts	29		Meimand golab and essences
6	Western Azerbaijan	Herbal essences, noghl and willow	30	Fars	Northern Fars stone
7	Esfahan	Brick	31	Qom	Qom shoes and slippers
8		Rock	32	Kurdistan	Kurdistan building materials manufacture
9		Gold	33	Kerman	Date
10		Rubber products	34		Pistachios
11		Kashan carpet	35	Kermanshah	Bread, rice and traditional sweets of Kermanshah
12		Dorcheh linen weaving	36	Golestan	Supplements and drugs for livestock and poultry
13		Khomeini Shahr towel weaving	37	Gilan	SHALIKOBI
14		Kordabad tarpaulin manufactory	38	Mazandaran	Juibar agricultural implements
15		Gold	39		Babol wood
16		Tehran	Hospital equipment	40	Central
17	Rock		41	Moisture insulation	
18	building industry		42	Mahallat stone	
19	Leather clothing		43	Hamedan	Razan rubber Rollers
20	Furniture		44		Malayer wooden furniture
21	Shoes		45		Lalejin ceramic
22	Chaharmahal & Bakhtiari	Boldaji gaz	46	Yazd	Ceramic tile
23	Khorasan Razavi	Furniture	47		Textile
24		Saffron			

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▲ Table 2. Industrial clusters with project completion license, Source: Iran Small Industries and Industrial Parks Organization, 2014



The 6 factors	The 24 factors	r+c	r-c
Demand (F2)	Demand (F2)	3.6319	-0.8053
	Corporate structure (micro, small, medium, large) S6	4.9877	1.0852
	Preferring domestic products/foreign customer's knowledge of domestic products	4.7417	-1.3634
	After sales services efficiency S7	4.6013	-0.7608
	Bureaucracy level S8	3.8478	1.0391
Government (F5)	Government (F5)	3.0802	1.4514
	Written/unwritten laws (professional ethics of business, mutual trust level, etc.) S20	3.8008	0.6594
	Various incentives S19	2.5700	-0.6130
	Subsidy/tax S18	2.2802	0.2016
	Social security S17	1.5778	-0.2480
Production (F1)	Production (F1)	3.0253	-0.6625
	Internal market size S4	3.7062	0.4627
	Raw materials S1	2.5745	0.0160
	Technology S2	2.4628	-0.0669
	Infrastructure S3	1.9891	-0.4118
Corporate strategy, structure and competitiveness (F4)	Corporate strategy, structure and competitiveness (F4)	2.6841	-0.3697
	Corporate ability to shift from domestic to international markets S14	5.6217	0.4026
	Various qualifications/certificates (ISO, TS, etc.) S16	5.2790	-1.5223
	Intra-industry competitiveness S15	5.2640	0.1842
	Corporate prospect/strategy S13	4.9121	0.9355
Chance (F6)	Chance (F6)	2.3977	0.7513
	Significant change in global financial markets/interest rate S21	2.0243	-1.2323
	Sudden change of macroeconomic variables S22	1.8602	-0.9017
	Natural disasters, etc. S24	1.7320	1.4870
	War, revolt, etc. S23	1.6089	0.6469
Related and support institutions (F3)	Related and support institutions (F3)	2.2710	-0.3652
	Cooperation of companies in joint purchases S12	6.1487	0.9362
	Relationship with universities and research institutions S11	5.7905	-0.2161
	Relationship with governmental and public institutions S9	5.2621	-0.5546
	Relationship with civil institutions S10	5.2164	-0.1656

▲ Table 3. Direct and indirect effects of the 6 and 24 factors of diamond model, Source: Research's calculations

government.

b) If the value of $(r - c)$ is negative, then it falls in affected group and is affected by the other factors in diamond model. In this paper, F2 (demand factors) and F3 (related and support institutions) received the highest and lowest impact from other factors at -0.8053 and -0.3652.

Based on the table (3), in the section on the factors influencing demand, the greatest importance that is measured in terms of $(r + c)$ is related to the structure of the company and then to the preferring of domestic products and after-sales service efficiency and finally bureaucracy. It should be noted that the factor of structure as a factor influencing others in terms of $(r - c)$. In other words, the presence of large or small structure has an important role in attracting the market demand by a company. Similarly, the factor of preference over other products is an affected factor so that as the demand for products of a company increases, preference for using its products increases inside the country. More precisely, as companies become large, demand for their product increases, and preference of their product inside the country also increases. The results from the study of government factors also showed that that the factor of written or unwritten laws was the most important factor in this group and because $(r - c)$ was positive, it was an effective factor. In other words, government has an important role in the development of clusters and the most important in policy making for clusters is written and unwritten laws affecting supply and demand of products, and it is the only index affecting itself as well. As the quantity of such laws increases, because such laws cause distrust among economic actors, such increase results in even further increase of such laws. As regards the production factors, the domestic market size is the most important element, but it is affected by other factors because its $(r - c)$ is negative. More precisely, one of the factors affecting the development of industrial

clusters in the country is production factors and increase of the quality of these factors leads to an increase in the size of the domestic market.

The most important index related to factor of strategy is corporate structure and competitiveness. The index of ability to shift from the domestic market to foreign firms is $(r + c)$, which is equal to 5.6217, thus it is influenced by other factors. In other words, the better the corporate strategy and structure and competitiveness, the higher its potential to move from internal to external markets.

Factor of chance itself is divided into several sub-sections, 4 of which were discussed in this study based on literature. Significant changes in interest rates was overall important, $(r + c)$ equal to 2.0243) and as $(r - c)$ was -1.2323, it was a factor under influence by other factors. It showed that the factor of change of interest rate was a variable that despite its importance was affected by other policies, and that improved business condition resulted in better interest rate condition.

The last factor in diamond model is that of related and support institutions, in which the index of cooperation of companies in joint purchasing had the highest r (with the $(r + c)$ equal to 6.1487), which reflects the combined effects. This index, due to the positive $(r - c)$, is a factor affecting the other factors and as the level of cooperation of companies in joint purchase increased, related and support institutions gave more support and help to companies as regards development of clusters. In other words, companies can gain more support from civil society and government by increasing cooperation among themselves.

5 – Conclusion and Suggestions

This paper focuses on the concept of competitiveness, categorizing it into two microeconomic and macroeconomic competitiveness. According to the Global Competitiveness Report, the most important factors affecting microeconomic competitiveness is development of industrial

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clusters of countries. Accordingly, and in order to assess the development of industrial clusters, the diamond model was used here, in which the 4 main factors of production, demand, related and support institutions, and corporate strategy, structure and competitiveness and a total of 2 comprehensive factors including factors of government, chance, and 24 sub-indices were used.

To determine the direct effects and interaction of the 6-fold and 24-fold factors, DEMATEL and MATLAB software were used to analyze opinions from 47 industrial clusters in 19 provinces, and the 6 factors of the diamond model in this case were prioritized as follows: 1. demand factors, 2. government factors, 3. production factors, 4. factor of corporate strategy, structure and competitiveness, 5. factor of chance, and 6. Factor of related and support institutions. On the other hand, in addition to determining the priority of 6-fold and 24-fold for policy making regarding the development of business clusters, the causal link and interaction between these factors was determined. Determining interaction between these factors enables policy makers to use those factors that not only have maximum effect on the entire system of cluster development of country, but also are least affected by external drivers in order to ensure improvement of microeconomic competitiveness. Thus, it is suggested that future researches update data collected for this paper and extend them to all provinces of Iran, and that focus is placed on comparison between development condition of industrial clusters development of Iran and that of other countries.

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Received 17 Nov 2014; Accepted 20 Jan 2015

Assessing the Sustainability of Urban Neighborhoods in 17 District of Tehran city Using ANP Model

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Abstract

Neighborhood development is considered as one purpose of sustainable urban development (SUD) and a key action to reach the sustainability. This approach (SUN), enhance this new approach that the city's problems can be expected in return to the neighborhood concept. Applied methodology is based on descriptive-analytical, case study and librarian methods. In continuous, it was used of interview with experts and officials for assessing sustainability rates in Neighborhoods of 17 districts in Tehran city using analytic network process and Delphi methods. In this study, 25 different indicators in the size of socio-cultural, economical and Physical-environmental dimensions have been studied for measuring sustainability. Results showed that there is significant difference among neighborhoods, in terms of different dimensions of sustainability. Also, the results indicated that Yaft-Abad Neighborhood by achieving the highest score (0.574) had first rank and Fallah Neighborhood with the lowest score (0.719) of the final award and ranked as the most disadvantaged Neighborhood of distinct in accordance with sustainability indicators. Finally, in the end of this presented some solve ways.

Key words: *SUN, SUD, ANP Model, Urban Neighborhoods*

1. Introduction

Tehran is the most important population center and urban region, one-third of Iran's urban population is dwelling in this region. Tehran with an area of approximately 180 Km² and 2.27 million populations in 1966 has been turning to 707 Km² and in order: 7.2 and 8.2 million populations in 2006 and 2012 censuses. So, nowadays we have 7 million population in Tehran and about 3.5 million in other towns and cities which in general makes (Iranian Census center, 1966- 2012 & 2014). A sustainable neighborhood is one that has value as a place to live over many generations (Falk & Calery, 2012). In other word, A SUN is a small-scale, urban area within a city that comprises social, economic and environmental sustainability. The term "SUN" is significant; sustainable relating to its longevity and reduced environmental impact, urban relating to its location and physical character, and neighborhood constituting the social and economic wellbeing of the area (Rudlin & Falk, 1999). The SUN concept is significant to UK urban design, as it is based on the actual experiences of living and working within a city and is located within existing towns and cities. It recognizes that cities are inseparable from the historical processes that formed them and works with the complexity and disorder of existing urban areas, rather than proposing a radical new vision. Advocates claim it is the answer to anti-urban post-war planning principles that have fed urban decline. The SUN concept is one of many urban theory models in the ongoing process of understanding what sustainable urban form is actually (Williams & et al, 2000; Garreau, 1992). SUN theory is broadly influenced by:

1. The smart growth movement of the US – a concept specifically opposed to urban sprawl, it advocates high density, mixed-use development, sustainable resource use, and open space conservation. It aims to foster a sense of community, a sense of place, and promotes denser residential development,

housing being a significant part of the built environment (Danielsen & et al, 1999).

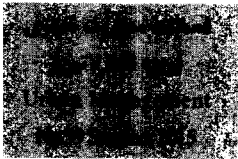
2. The compact city theory that arising from combat car dependency, CO₂ emissions, energy consumption levels, and overall accessibility issues, it reuses existing infrastructure, promotes green space, and rejuvenates existing urban areas to produce a higher quality of life and dynamic sites of economic interaction (Commission of European Communities, 1990; Brindely, 2003).

3. New Urbanism Movement: point on the importance of local place, innovative architects, developers and builders reacting to suburban sprawl and failed urban development by providing urban communities with culturally-diverse housing, easy access to work, play and schools, efficient transportation within the globalizing world (De Roo, 2000; Smith, 2002).

The expressions of sustainable development and urban sustainable development is gradually has turned into a modern and dominant paradigms in the common practical and theoretical literature of urban planning and development. Though, this paradigm Oversees the various interpretation and concepts, totally stresses on "sustainability" and continuous development for all people and future generation via time and it also focuses on comprehensive perspective of the overwhelming dimensions of economic, social and environmental development process (Rahnamei & Pourmousavi 2006).

Furthermore, changes of Iranian planners and policy makers attitude to the metropolises in the past two decades has emerged. So that, negative and anti-urban metropolises by 1960s; nowadays the attitude have changed toward positives effects of these cities in context of national development and more realistic management view and planning and metropolitan development instead of thinking about limit and urban growth controlling (Nazarian, 2001). Therefore, the more paying attention to "urban development

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management”, gradually “urban sustainable development” and attention to dimensions and elements will have process that becomes the prevailing theory in space organizing. With expansion of cities and urban population growth the problems of urban communities increased, so they should have a realistic view on participation effects (Sheikholeslami & et al, 2009). With increasingly complex problems of urban particularly in metropolitans need to have holistic and sustainable solutions is Inevitable. Of course, it is better that the holistic approach be started in the lower level and objective things of life. For this reason, Neighborhood-oriented planning according to the needs and Neighborhood development and research has been expanded on current decades. In order to, the question and hypothesis of this research can be presented as follow:

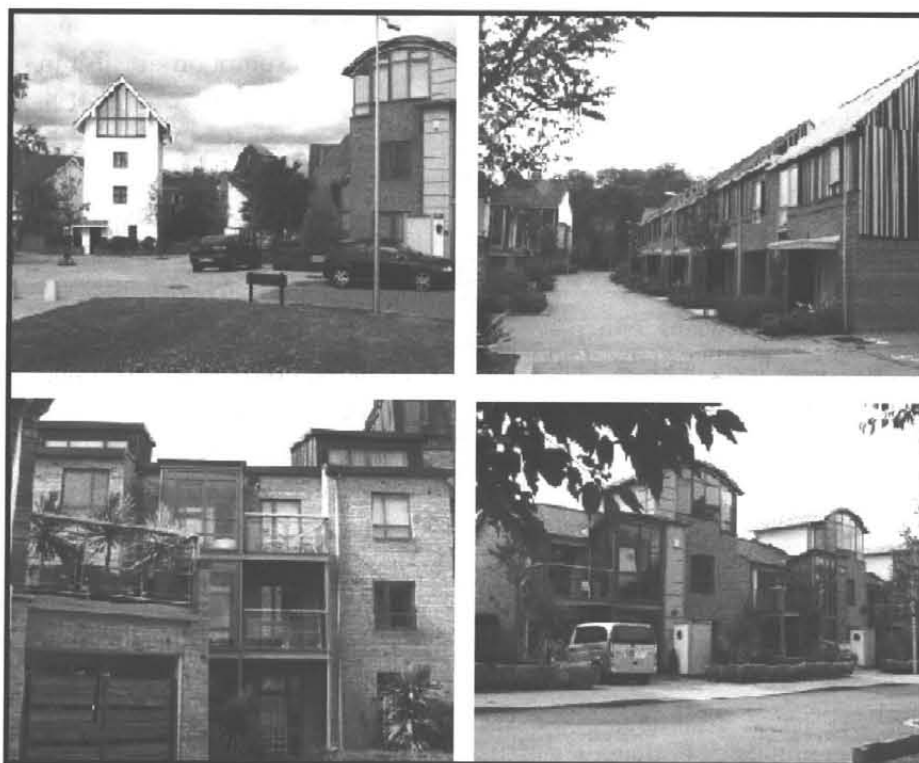
- What conditions do the neighborhoods of District 17 in Tehran on sustainability have?
- There are significant differences between the District 17 of Tehran’s neighborhoods based

on sustainable indicators.

2. Background

The term “sustainability” has become ubiquitous, and yet, the focus is almost always on the environment. The other dimensions of sustainability - social and economic - are glossed over or even ignored (Livable cities, 2012). Most SUNN new communities are urban extensions, but some also involve estate renewal. The great theorists of the 20th century city were Utopian academics and their ideas have had a lasting effect on modern town planning. Below are the ideas of what Fishman (Fishman, 1982) calls the three most important visionaries of the last century:

1. Urban Ecology and eco city theory: An eco-city is a city built off the principles of living within the means of the environment. The ultimate goal of many eco-cities is to eliminate all carbon waste, to produce energy entirely through renewable sources, and to incorporate the environment into the city; however, eco-cities also have the intentions of stimulating economic growth, reducing poverty, organizing



▲ Fig.1. Examples of Sustainable Urban Neighborhoods Network (SUNN) in different cities., Source: Falk, 2012.

cities to have higher population densities, and therefore higher efficiency, and improving health (urban ecology, 2011). Its indicators consist of:

- Operates on a self-contained economy, resources needed are found locally;
- Has completely carbon-neutral and renewable energy production;
- Has a well-planned city layout and public transportation system that makes the priority;
- Methods of transportation as follows possible: walking first, then cycling, and then public transportation;
- Resource conservation—maximizing efficiency of water and energy resources, constructing a waste management system that can recycle waste and reuse it, creating a zero-waste system;
- Restores environmentally damaged urban areas;
- Ensures decent and affordable housing for all socio-economic and ethnic groups and improve jobs opportunities for disadvantaged groups, such as women, minorities, and the disabled;
- Supports local agriculture and produce (Ewing, 2009; Traditional Architecture Group, 2014).

2. the smart growth movement;
3. compact city theory;
4. New urbanism movement (early 1980s US);
5. The urban village's movement (late 1980s UK).

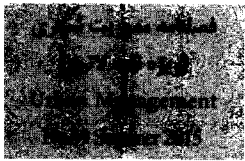
2.1. Sustainable Neighborhoods

District in Dehkhoda means one parts of city multi-parts or village and borough. In the following compounds; he believes that "Neighborhood" refers to an independent borough not merely borough such as Isfahaiian Neighborhood or Astar-Abadi Neighborhood, Jewish Neighborhood and so on (Dehkhoda 1976). In general, Neighborhood's idiom can be identified through social, psychology, mental, conceptual, architectural, physical and political aspects. Each one of aspects has different definition of neighborhood. On the other hand, these definitions in

different communities and historical periods can be different. For instance, the word "Neighborhood" can be defined as a true expression for (neighborhood) based on global literature, while their population ranges are from 2000 to 10000 and 15000 to 40000 respectively. In other words, job opportunities are the main criteria in neighborhood definition. This neighborhood has a lot of facilities such as school, supermarket and recreational centers (Azizi 2006).

Sustainable development issues can be discussed in different layers, that includes scales in international, national, regional-provincial, local (urban), neighborhood, adjacent units, site and architectural. In comparison with different definitions and concepts of sustainable development in international, national, regional and urban levels; however, urban neighborhoods are spaces and areas that issues' dimension are exactly appreciable. For example; the families' structure changes and generations' changes, increasing and decreasing of relocation and immigrations, sensitivity of environmental issues in open spaces, natural spaces degradation and increased resources consumption are features that can be sensed on neighborhood scale (Nourian & Abdullahi, 2008). On physical aspect and indexes quality of life can point to access the services, job location, housing quality, changes of transportation systems and its effects on communication network, passages' shape, Realization of the ideas in urban design, different methods of constructing, Urbanizing regulations implementation. In this regard, urban planning in neighborhood scale presents the different processes, subjects and opinions, for example, base neighborhood planning theory. At the late 1980s and early 1990s, New Urbanism Association have been established following the urbanism' dissatisfaction from deterioration and destruction of urban centers, increasing the scattered neighborhood community, designing based on the car dependency, urbanization at the national

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Year	Theorist	Views
1898	Ebenezer Howard	Howard has divided his Garden City into some section referred to as "ward" with a population of 5,000 with primary school which are located in between a few streets of the city.
1923	Clarence Perry	He has defined a framework for neighborhood: a place with 5,000 of population, an area of 160 Acres, with the primary school located at the center of it and allocation of 10% of land to Parks and Green Space
1928	Clarence Stein	In his view a neighborhood unit is for the residence of 7,500 to 10,000 with the function radius of a primary school and public Green Spaces.
1950	Patrick Abercrombie	He states that so many of modern cities after World War II have been constructed according to neighborhood units.
1960	Kevin Lynch	Neighborhoods are units with middle or large size and due to the common features that they have are completely cognitive and their appearance can be distinguished from inside. The boundaries of a neighborhood should be defined visually.
1960-70	Jane Jacobs	Defending the theory of mental health, the necessity of focusing on various land uses in neighborhood, density and the presence of people in the neighborhood.
. 1980-90	New urbanism theories	Neighborhoods should be Pedestrian – oriented, compact and have mixed land uses as well as an extensive range of housing for groups with different levels of income.
2004	Hogh Barton	He has authored a book "Shaping neighborhood" in this regard in which he has introduced dynamic, vitality, sustainability and health care as the main pillars of a neighborhood.

▲ Table 1. Opinions and ideas of researchers on sustainable neighborhoods; Source: Rafeian & et al., 2012

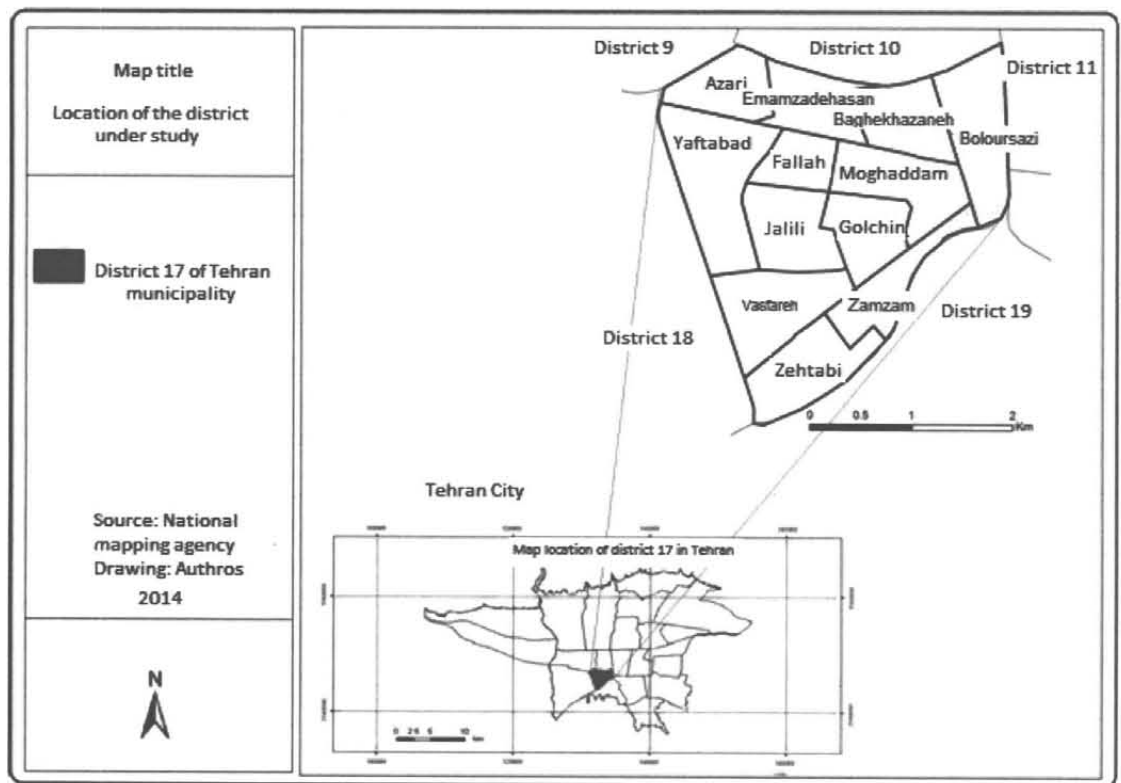
level to develop local communities has been recognized.

Sustainable urban planning is based on this principle that city space is formed and continues in neighborhood. Accordingly, it is necessary to increase the depth case studies to access the formulation of principles and criteria of the neighborhood scale.

3. Case study region & Methodology

District 17 of Tehran Municipality is located on south of Tehran and constrained to 9, 10 and 11 districts from the north and to 16, 18 and 19 districts from the south. The population

in this area was 287367 on 1998 and was reached to 256022 on 2011. That indicates the negative growth of population (-0.8) and migration of this district to other areas. The total resident households are 70563 household in this district. Different urban capitation is generally low. Based on existing statistic, green spaces' capitation is 1.37m², cultural 0.079 m², educational 1.2 m², sports 0.23 m²; and correlation coefficient in this district is 0.83%, women's unemployment 21%, people in a family 3.61% person, total illiteracy 12.99%, of population up to 6 years (The statistical



▲ Fig.2. The status of case study region.

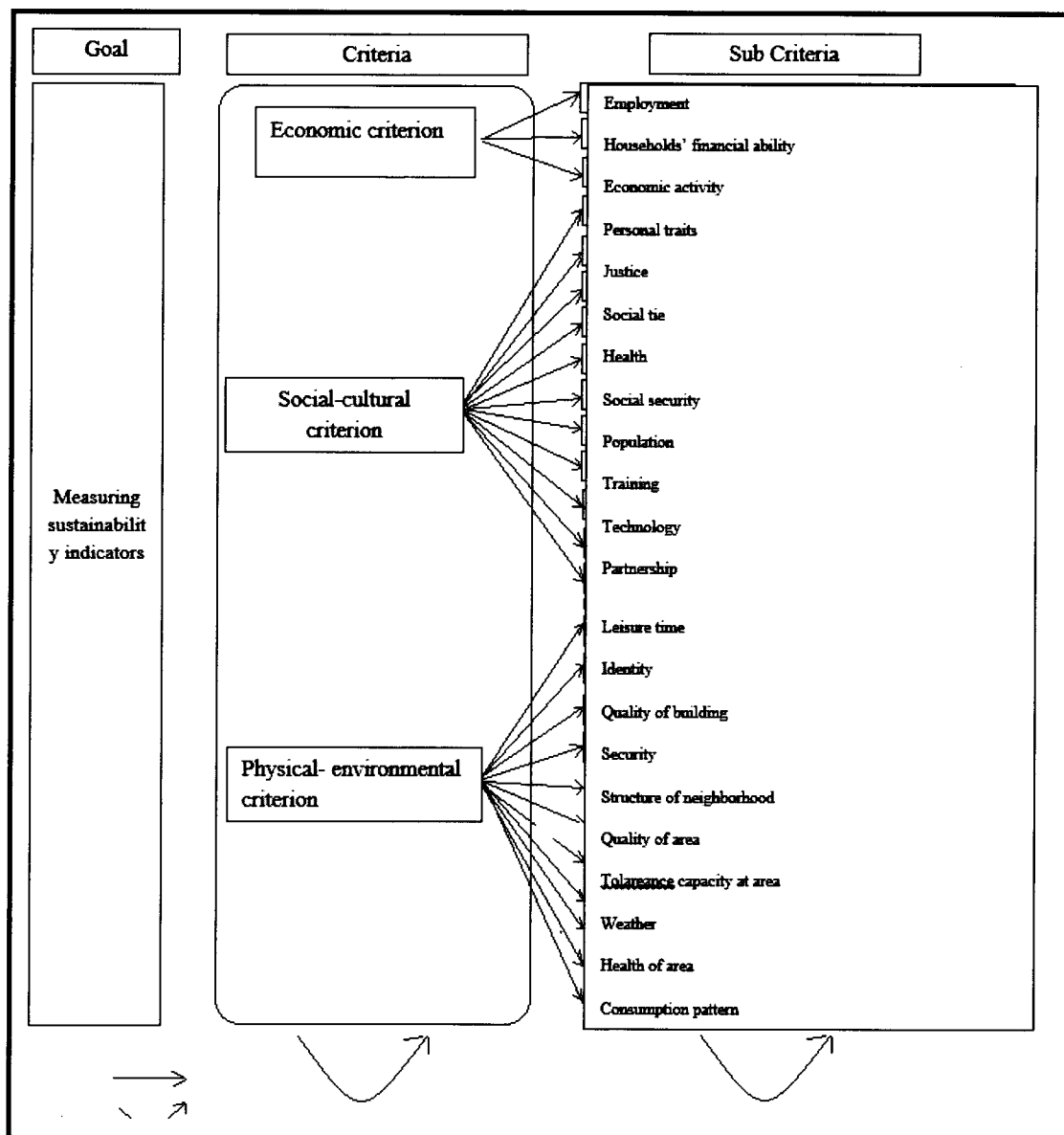
center, Iran, 2007). The area of this district was 827 Hectare on 1998, but reached to 822 Hectare on 2006. This district based on district Municipality's divides has been comprised of 12 neighborhoods. Figure one shows the location of the district among other districts of Tehran and also neighborhoods in District 17 (Topography organization 2009). In this research in order to assessing and compare the neighborhoods of district 17 in Tehran based on sustainability indicators, the secondary data has extracted from Detailed plan studies of Tehran and also Latest Statistical Yearbook published by the Statistical Organization of Iran, the research and information technology of Tehran Municipality on 2013.

Indicators can lead to better decisions and more effective function through simplifying and containing a set of existence data for policy makers. So far, 440 indicators have been presented for sustainability assessment (UN, 2007). This research has study the sustainable urban development dimensions in terms of ecology, economic and social as follow (fig. 2

& 3):

4. Findings & Results

After forming the network model of research, interdependence main criteria will be examined. Table (2) shows interdependence of the main criteria to each other. It is necessary at this stage, according to the model Network structure (figure-3), general structure of Inharmonious super matrix or super matrix be specified. At this step, comparative matrixes of main criteria, dependence of the main criteria to each other, sub criteria and dependence of the sub criteria to each other formed and also their compatibility is controlled. Binary comparison of the triplet main criteria is performed based on 9 scale pattern of LSATTI in the same way which the Analytical Hierarchy Process (AHP) is used. Binary comparison of the three main criteria based on 9 scale pattern of LSATTI and in the same order in which the Analytical Hierarchy Process (AHP) is used, is performed. The Result of the Binary comparison of main criteria and also its harmonious vector, namely W_{22} is provided in (table 3). To achieve



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▲ Fig.3. Network model for ranking twelve Neighborhoods in 17 district of Tehran.

main criteria	Economic	Cultural-social	Physical- environmental	Eigenvector
Economic	1	0.50	3	0.309
Cultural-social	2	1	5	0.582
Physical- environmental	0.33	0.20	1	0.109

▲ Table 2. Binary comparison and eigenvalues of the triplet main criteria; (Source: authors)

the desired outcome, from Judging team has been used for binary comparison of the main criteria that binary comparison's matrix elements of the main criteria obtain from group's viewpoint. Thus, the W_{22} vector is obtained. It is worth mentioning, the results of

the binary comparison matrix and also matrix of determining the interdependence is based on experts' viewpoints.

To obtain the W_{22} matrix elements, to understand the interdependencies between the main criteria, Binary comparison of the main

main criteria	Economic	Cultural-social	Physical- environmental
Cultural-social	1	3	0.750
Physical- environmental	0.33	1	0.250

▲ Table 3. Binary comparison of main criteria with respect to their interdependence, with controlling the economic criteria; (Source: authors)

Clusters	Main criteria	Sub-criteria	Eigenvector
Main criteria	1	2	0.667
Sub-criteria	0.5	1	0.333

▲ Table 4. Comparison and clusters' special vectors

criteria is performed on 9 quantitative hours. For calculating the Coefficient of each main criteria (according to the interdependence between them), binary Comparison of two major criteria (By controlling the main criteria of the economic criteria) is provided in (table 3). How to inquire the Coefficient in this case, is as: how much is the relative importance of the main criteria towards each other when the "economic measures" are controlled?

Similarly, interdependence main criteria, with controlling two other main criteria examined and three binary comparisons of main criteria formed and Compatibility factor of each one of them has been controlled. So that, the matrix related to the interdependencies main criteria (W_{22}) can be calculated; after formation of four matrixes and performing the necessary calculations, results is provided in W_{22} matrix. Similarly, two other matrixes mean W_{22} and W_{22} calculated, now, you can put all of the calculated matrixes at the initial super matrix and make the inharmonic super matrix. Inharmonic super matrix should convert to harmonic super matrix means matrix that sum of its column's components is one (Whatever Saati calls it random matrix). For converting inharmonic super matrix to harmonic super matrix, it should be multiply inharmonic super matrix at cluster Matrix. Cluster matrix reflects the influence of each cluster to achieve the objectives of the study. Cluster matrix obtains from binary comparison of Clusters within initial super matrix structure. Based on Saati's proposal, to obtain the relative importance

of clusters initial inharmonic super matrix, it's necessary that Cluster matrix calculated so that Cluster column considered as controlled elements. Otherwise, nonzero column Clusters of the initial inharmonic super matrix with other Clusters in the column put in the binary comparison till importance vector of each column Cluster obtained and finally column Clusters got with putting importance vector to each cluster. With Looking at the initial super matrix structure of this research shows that only in column Cluster related to main criteria should be compared this Clusters with sub criteria cluster.

Now, for obtaining the harmonic super matrix, each one of column Clusters elements in inharmonic super matrix must be multiplied at relative importance Vector of the cluster. Inharmonic super matrix is random or probabilistic. It means, sum of the column elements is one. Finally to extent harmonic super matrix, we can determine relative value of each sub criteria in the model.

$$\lim_{k \rightarrow \infty} w^k$$

Harmonic super matrix: W

Great optional numeric: K

The purpose of extending the harmonic super matrix is that long-term relative impact of each element on other is resulted. For importance coefficient's Divergence in each element of harmonic matrix, so we exponentiation to "K" that is a great optional numeric. Until all elements of super matrix be identical (be equal), this performs with repeating. In such

final weight	sub-criteria	final weight	sub-criteria
0.038	Individual traits	0.017	Employment
0.036	Justice	0.062	financial ability
0.028	Social tie	0.048	Economic activity
0.029	Health	0.001	Education
0.031	Social security	0.034	Technology
0.060	Population	0.023	Partnership
0.024	Weather	0.003	Entertaining time
0.017	Health of area	0.024	Identity
0.048	Consumption pattern	0.073	Quality of buildings
0.081	Performance of area	0.028	Security
0.115	Users	0.116	Structure of neighborhood
0.009	street network	0.024	Quality of area
		0.038	Tolerable capacity

▲ Table 5. Final weight of each sub criteria

a case the deal super matrix obtained. In this case, relative weight of each sub criteria is earned. To achieve the final weight of each sub criteria, it's sufficient that relative weight of sub criteria been normalized. Final weight of each sub criteria in (table 4) is shown.

After specification of weight and final value of each sub criteria, options' evaluation matrix shows the status of every district on having each one of sub criteria. To form the options' evaluation matrix, at first, status of each sub criteria in every district has been specified. Then, all numbers has been normalized to the Z-Score method and simultaneously, sub criteria that had reverse ratio with development, has been normalized reversely. At the end, final weight of each sub criteria on applied matrix till option's evaluating matrix formed. Tables show the options' evaluation matrix.

Finally, digits in each row are summed till every neighborhood's score is specified. (Table 10) shows the neighborhoods' score and grade.

5. Conclusion & Suggestions

A sustainable neighborhood is one that has value as a place to live over many generations. In other word, A SUN is a small-scale, urban area within a city that comprises social, economic and environmental sustainability. The

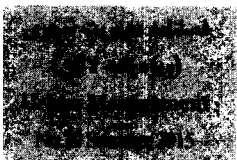
term "SUN" is significant; sustainable relating to its longevity and reduced environmental impact, urban relating to its location and physical character, and neighborhood constituting the social and economic wellbeing of the area. The SUN concept is significant to UK urban design, as it is based on the actual experiences of living and working within a city and is located within existing towns and cities. Furthermore, changes of Iranian planners and policy makers attitude to the metropolises in the past two decades has emerged. So that, negative and anti-urban metropolises by 1960s; nowadays the attitude have changed toward positives effects of these cities in context of national development and more realistic management view and planning and metropolitan development instead of thinking about limit and urban growth controlling. Therefore, the more paying attention to "urban development management", gradually "urban sustainable development" and attention to dimensions and elements will have process that becomes the prevailing theory in space organizing. With expansion of cities and urban population growth the problems of urban communities increased, so they should have a realistic view on participation effects. With increasingly complex problems of urban

Sustainability sub-criteria													
Districts	BUS	HCF	EAN	EDU	Tec	Par	Lei	Idc	QBU	Saf	NES	ENQ	BEC
Yaftabad	0/11	-0/03	-0/04	0/08	0/19	-0/01	-0/02	0/01	-0/01	0/04	0/00	0/06	0/06
Ghalili	-0.03	0/00	-0/07	-0/02	-0/13	-0/02	0/21	0/00	0/02	0/00	0/00	-0/13	0/00
Moghadam	0.08	-0/03	-0/01	0/08	0/15	0/00	-0/02	-0/01	0/00	0/03	0/00	0/14	0/03
Zehtabi	-0.01	-0/01	0/01	-0/01	-0/04	0/00	-0/01	0/03	-0/03	0/01	0/00	0/18	0/01
Vasfenard	0.05	0/00	-0/08	-0/07	0/14	0/01	-0/01	0/01	-0/01	0/00	0/00	0/12	0/02
blorsazi	0.17	-0/01	-0/12	-0/06	0/12	0/00	-0/04	0/03	-0/03	0/05	0/00	0/12	0/04
Imamzade Hasan	-0.04	0/03	0/07	0/03	0/02	0/00	-0/01	0/00	-0/01	-0/02	0/00	0/00	-0/03
Azari	-0.06	0/00	0/15	0/01	-0/09	0/03	-0/01	-0/01	-0/01	-0/01	0/00	-0/13	0/00
Bagh Khazane	-0.01	0/01	0/00	0/00	0/08	-0/02	-0/02	-0/04	0/06	0/00	0/00	-0/13	0/02
Zamzam	-0.07	0/00	0/15	-0/02	0/00	0/02	-0/02	0/02	-0/02	0/02	0/00	-0/08	-0/02
Falah	-0.05	00/0	0/07	0/01	-0/15	0/00	-0/01	0/04	-0/04	-0/04	0/00	-0/13	-0/02
Golchin	0.00	00/0	-0/08	-0/06	-0/02	0/00	-0/01	-0/02	0/01	-0/02	0/00	0/12	-0/02
District	PCH	JUS	SOR	Hea	SOS	Pop	Air	HEH	COP	USN	USE	STN	
Yaftabad	-0/01	-0/03	0/15	-0/01	0/00	-0/03	0/03	-0/04	0/02	-0/06	0/12	0/00	
Ghalili	0/00	0/01	0/13	-0/02	0/00	0/07	0/01	0/01	0/02	0/02	-0/01	0/01	
Moghadam	-0/03	-0/08	0/01	-0/02	0/00	-0/03	0/02	-0/11	0/01	-0/06	0/07	0/03	
Zehtabi	0/00	0/00	0/02	-0/01	0/00	-0/03	0/01	0/00	0/02	0/01	0/01	0/01	
Vasfenard	0/01	0/02	0/03	0/05	-0/01	-0/01	0/01	0/03	0/03	0/04	0/04	0/04	
blorsazi	0/01	0/03	-0/06	0/05	-0/01	-0/02	0/02	0/03	0/00	0/01	0/08	0/00	
Imamzade Hasan	0/00	0/01	-0/04	-0/02	0/00	-0/02	-0/02	0/01	0/00	0/00	-0/06	0/07	
Azari	0/01	0/02	-0/07	0/00	0/00	-0/02	0/00	0/02	0/02	0/01	0/01	-0/01	
Bagh Khazane	0/00	0/00	0/07	-0/01	0/00	0/04	0/02	0/00	0/02	-0/04	0/03	0/03	
Zamzam	0/00	0/00	-0/04	0/00	0/00	-0/04	-0/02	0/00	-0/02	-0/01	-0/02	0/00	
Falah	-0/01	-0/02	0/04	-0/02	0/00	0/04	-0/01	-0/02	-0/01	0/00	-0/05	0/04	
Golchin	0/01	0/03	-0/07	0/04	0/00	0/07	-0/01	0/03	0/00	0/04	-0/03	-0/03	

▲ Table 6. Findings and Options' about evaluation matrix, Source: statistics' 2010 in Tehran, Atek consulting engineers, Bavand, Saravand, Sharestan, Shahr o Khane: Authors' calculations for 2014.

particularly in metropolitans need to have holistic and sustainable solutions is Inevitable. Of course, it is better that the holistic approach be started in the lower level and objective things of life. For this reason, Neighborhood-oriented planning according to the needs and Neighborhood development and research has been expanded on current decades. Based on research results about final valuation of criteria that is obtained using the ideas of ten experts. Neighborhood structure indicators, users, neighborhood functions, Buildings Quality are the most important Sustainable indices that have been determined in neighborhoods of District 17 of Tehran. Also, research results on the case of neighborhoods' ranking based on dimensions and Sustainable criteria indicates that Yaft- Abad neighborhood which is located in the West region, by obtaining the highest

score (574/0) has the first rank and Vasfenard and Jalili Respectively have second and third rank among the neighborhoods of District 17 of Tehran. On the other hand, Fallah neighborhood has gained lowest score (719/0) and have been the latest rank as the most disadvantaged neighborhood of 17 districts on Sustainable indicators. The main reason for the instability of Fallah neighborhood and other low level neighborhoods can be in absence of safety and security indicts, urbanity uneven growth and Immigrants in this neighborhoods to reason of industrial development, Infrastructural capacities in neighborhood of District 17 is reached to saturation. From Ecological and pathological characteristics of District's instability neighborhoods can be pointed to lack of social integration, severe shortage of services, Installation and urban facilities, growth rate of



Score	Rank	District	Score	Rank	District
0.081	7	Bagh Khazane	0.574	1	Yaftabad
-0.081	8	Golchin	0.410	2	blorsazi
-0.087	9	Imamzade Hasan	0.402	3	Vasfenard
-0.140	10	Azari	0.235	4	Moghadam
-0.173	11	Zamzam	0.155	5	Zehtabi
-0.341	12	Falah	0.085	6	Ghalili

▲ Table 7. The score and grade of each neighborhood in evaluation process

population, high unemployment and etc. that attention necessity of urban authorities on distribution of services is required. In the end, the purpose is that from one side each of these issues and problems in urban neighborhoods are reduced and on the other hand, according to the facilities and development capabilities of neighborhoods, in order to achieve individual comfort and social well-being and promoting the quality of life and safety in urban neighborhoods, basic steps be taken. So that, neighborhoods' population preservation and increasing of servicing of each neighborhoods, effective planning be accomplished to reach the sustainable development. After reviewing the mentioned themes and presenting a clear illustration of the limitations and potential, executive and practical proposals, shall prove to address the problems and optimal utilization from opportunities and abilities. Therefore, in consideration of the issues and potential, strategies and actions to achieve the desired system is proposed:

1. Organizing the coordination council composed of academic institutions, Natural resource liables and tourism offices, lawyers and members of district councils in order to formulation rules and regulations of protecting environmental resources and tourism arenas;
2. Increasing the role of private sector in the economic structure of the city;
3. providing the appropriate designs in order to implement of sewage system and treatment plant and recycling in the city;
4. using of empty spaces in neighborhoods for

citizens uses;

5. attention to the needs of all citizens groups in urban planning of case study region;

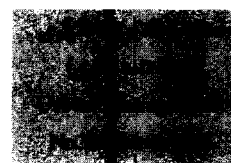
6. More Appropriate locating of sanitary and therapeutic spaces;

7. Absorb and attract the domestic and foreign investment in all economical and infrastructural sectors;

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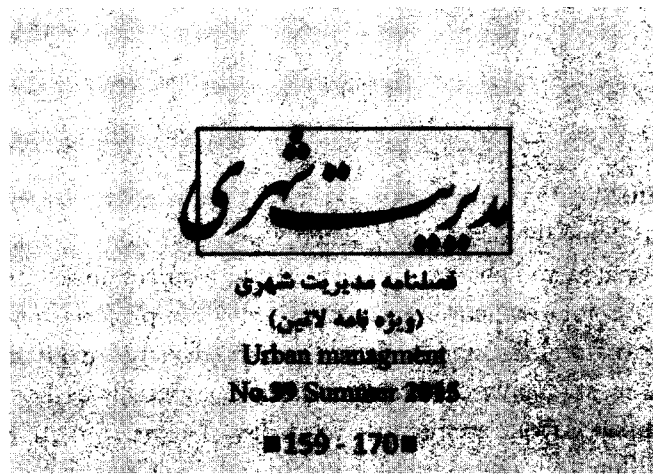
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Received 19 Oct 2014; Accepted 13 Jan 2015

Analysis of Passive Defense in Plants and Equipment in Rasht

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Abstract

Metropolitan city of Rasht as the largest nucleus of population density in Gilan province place most of the manpower, investment, economic and infrastructure projects. The same subject make necessary to study the main arteries and land usage of Rasht city of in terms of passive defense. Passive defense as a set of preventive measures cause to increases deterrence, reducing vulnerability, sustain essential activities, promote national stability and easing crisis Management against the threat and military, natural and human action. According to research that deals with the vital arteries of the Rasht city in terms of passive defense, at first it was necessary to predicted threat scenarios for demand centers (centers vulnerable to threats). Therefore, the future threats that may be suffered were identified in Rasht. Then due to the type of threat, risk-taking, damage radius, impact intensity, importance and priority, different area of Rasht (study area) valuated using experts and pundits and using AHP model. In this process, the risk place of Rasht in three areas (high risk, medium risk, low risk) was identified in GIS medium. Finally, the position of each demand center associated with critical artery, area risk, supply centers (aid in crisis) and arrangement manner, access, distribution, and proximity to Main Street were examined. The study showed that in current condition, the main artery and branches in Rasht due to stars pattern of the city and nearby land use, accordance with the standards and considerations of passive defense, are not in direction to suitable respond to possible crises.

Key words: *Metropolitan city of Rasht, passive defense, vital arteries, Risk area*

1. Introduction

Cities, due to being the densely populated, the diversity of spaces and channels, facilities and equipment are intertwined human disasters such as wars, natural disasters such as floods, fire and ... well, are highly vulnerable to earthquakes, compact layout elements Urban diverse and different needs assistance in times of crisis, the movement of cars, fire, medical assistance, rescue the injured, transportation, food and drinking water, heating and cooling equipment, sending reinforcements, equipment, temporary housing, toiletries, transportation of the deceased and so are included. Therefore, one of the most important roads in increasing and decreasing the vulnerability of a city that could be blocking the crisis into a disaster. Aside from the logical layout and distribution of basic elements in urban and resort to the event, the number of access routes, optimal peripheral equipment, materials and street smart, fit, and the relationship between the hierarchy of urban streets and bridges resistance are effective in reducing damages. Passive defense as a set of preventive measures that increase deterrence, reducing vulnerability, sustaining activities necessary, improving national defense and facilitating crisis management in the face of threats and military, natural and human action (Majmae Tashkhise Maslahate Nezam, 1386) in the planning, management and implementation of development policies in a certain place, and now the Master Plan has become passive defense as a need for major cities. On the other hand, the most important component of the city is the roads connecting spaces and urban lands together (Bastiye, 1377, p. 56), associated with urban land use and locating them. If deciding locations is accurate and based on understanding the present and future conditions, access problems are be reduced significantly because the need for access to land and even type directly on the physical characteristics of the network (latitude cavalry, infantry and fastening system) effects (Gharib, 1387, p. 50).

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Rasht, the largest metropolitan core population density, the highest level of human resources, investment, economic and infrastructure projects in its place and cause of excessive density, layout inappropriate land uses risky especially as Fossil fuel stations, airports, etc. Failure to comply with accessibility standards (buildings fit lamps), there are several bridges (including bridges and bridge overpass and underpass bridges river), lack of privacy rivers, according low to climatic factors such as prevailing winds, precipitation in construction, even non-compliance balance between access and distribution of standard facilities such as hospitals and fire and rescue ... the city was threatened and caused heavy damages that could be increasing pressure on the artery of communication in times of crisis bring. Therefore, comprehensive evaluation of arteries and use of Rasht, in terms of passive defense is greater than ever.

2- Reviewing the Researches Literature

Rasht, the largest metropolitan core population density, the highest level of human resources, investment, economic and infrastructure projects in its place and cause of excessive density, layout inappropriate land uses risky especially as Fossil fuel stations, airports, etc. Failure to comply with accessibility standards (buildings fit lamps), there are several bridges (including bridges and bridge overpass and underpass bridges river), lack of privacy rivers, according low to climatic factors such as prevailing winds, precipitation in construction, even non-compliance balance between access and distribution of standard facilities such as hospitals and fire and rescue ... the city was threatened and caused heavy damages that could be increasing pressure on the artery of communication in times of crisis bring. Therefore, comprehensive evaluation of arteries and use of Rasht, in terms of passive defense is greater than ever. Passive defense, in fact, reduce financial losses and physical injuries inflicted on civilians in war or natural disasters such as the flood, earthquakes, hurricanes, volcanoes, fires

and drought (Nouraie et al., 1390).

Unarmed any action that reduces the vulnerability of human resources, buildings, facilities, equipment, documentation and man-made threats against the nation's arteries is called passive defense, civil defense basic principles of camouflage, concealment, cover, deception, decentralization and dispersion, hardening, strength, and with risk. One of the important goals of civil defense, reducing vulnerability, loss and damage facilities, equipment and manpower vital centers, sensitive and important country against threats and incidents is abnormal (Dezfooli race et al., 1391).

Factors that threaten the city can be divided into three main groups:

- Floods, earthquakes, tornadoes, hurricanes, fires;
- Enemy weapons by damage to the city.
- The fifth column (Ziyari, 1386, p. 31)

3- The Main Question of the Research

Is the current situation in Rasht major and minor arteries due to adjacent land uses, in accordance with the standards and considerations of passive defense in order to respond appropriately to the crisis is possible?

4. Assumptions

1. The communication channels and accessibility of Rasht (hierarchical way and the road) is not in accordance with considerations of passive defense.

2. Business risk and aid in connection with access routes Rasht not logical.

5. Materials and Methods

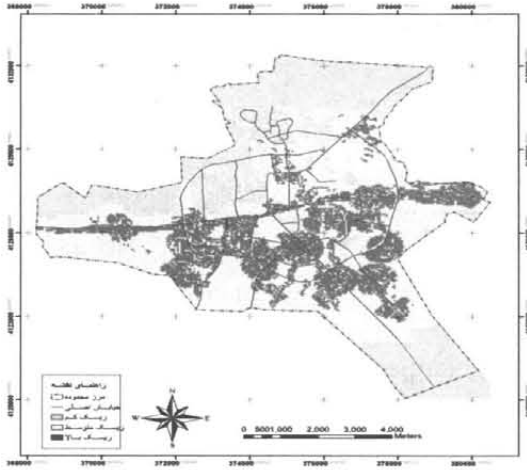
The method of the purpose and terms of method, a combination of descriptive and analytic, analysis using GIS software and EC has been done. In this regard, the threat scenarios for demand centers (centers vulnerable to the threats) were actually anticipating future threats that may be suffered in Rasht were identified in the field by use of library studies, interviews with experts and specialists and review records, significant threat to the city of Rasht, both natural and human, which were classified as follows:

1. Earthquake;
2. Snow;
3. Flood;
4. Fire;
5. War;
6. The urban disturbances.

Then, according to the risk threatening the city of Rasht and the radius of destruction, intensity of the impact, importance and priorities, different aspects of Rasht (area of study) with the opinions of 60 experts and using AHP model in vitro GIS was valued. Threats mentioned include the vulnerable areas, in addition to the important point of this range may in some cases affect the entire city allowing damage of the crisis spreading to other parts of the city, and perhaps the entire city to be affected:

1. *The limits of human density;*
2. *The density limits;*
3. *The adjacent fault zones;*
4. *riverside areas;*
5. *centers on CNG and petrol station;*
6. *limits on the bridge (flyover and river), terminals and airports, transportation centers and intersections;*
7. *Zones around facilities and urban infrastructure (such as electricity, water, gas, etc.);*
8. *On the media and political institutions (such as radio and television, governors, etc.);*

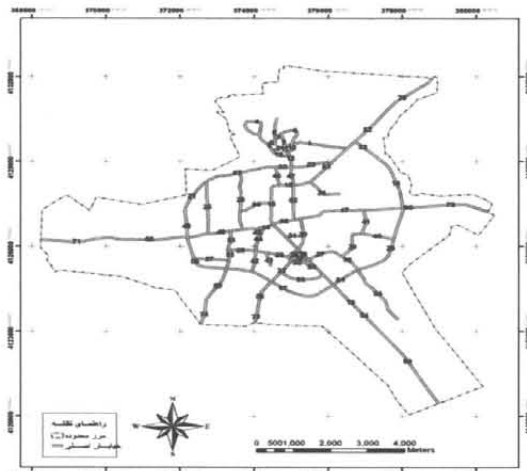
Finally, in the area of venture Rasht (high risk, medium risk, low risk) were identified. Then the position of each of the centers of demand lifelines first layer and then layer overlapping risks are and how to layout, access, distribution, proximity to main thoroughfares of the studied and recommendations are based on principles of passive defense, such as transport, the strength of , concealment, deception, concealment, cover, distribution, awareness, culture, etc. were given. In this study it was necessary to locate, and the efficiency of the offer (in disaster relief centers) as well as configuration, distribution, and proximity to main thoroughfares of the city of Rasht and alternative spaces, temporary housing, Helipad and evaluated. Therefore, the offer includes hos-



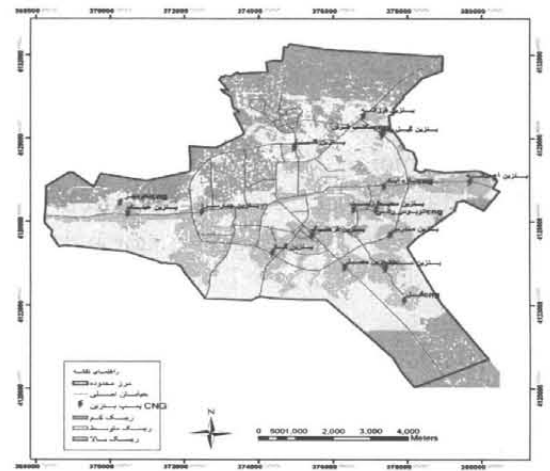
▲ Map 1. The Risk Places of Rasht City



▲ Map 3. Rasht Fault Overlap with the Range Of Risk



▲ Map 2. Urban Area and Main Streets of Rasht City



▲ Map 4. The Risk Range Overlap with Fire Station Departments of Rasht City

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pitals, firefighters, administrative centers, open spaces and others were analyzed.

The main objective of this study was passive defense lifelines from the perspective of a systematic point of view, the city is considered as a living being that all its components are interdependent, so any threat in any part of the city, the whole system will be effective.

6. Findings

6-1 Examining the Fault of Rasht in Connection with Passages

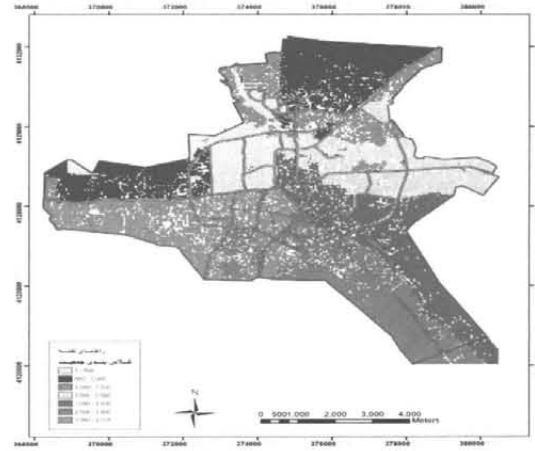
Fault in Rasht in east-west direction it has been established and a strike-slip type, and blow not normal, as shown in the map (3) there are approximately the fault, passes through the city of Rasht arrangement that divides the city into

two parts, north and south, the faults in their way of entry into the city of Rasht from the LAHIJAN through and after the central areas of the city on the other side (West) towards the outside is appreciable in parallel and adjacent to the Fault Besides two flyover old texture traditional veterans and ice that are newly located.

Today, with the increase in population and increasing human density, activities, buildings, etc. in major cities witnessed a dangerous centers routed to the outside, but it is not observed in Rasht, the number of the cartography CNG All stations is nearly 4 and some gas stations have been built in recent years in the city of Rasht, these stations also inconsistent



▲ Map 5: Texture of Rasht City



▲ Map 6: Class Population of the City of Rasht on Human Density Urban Parts

with the principles of passive defense as a potential bomb in the heart of the action. And in air attacks and fires can be very dangerous and disastrous. Establishment and CNG gas stations right near the main thoroughfares of the city of Rasht, in addition to this application compatibility with adjacent land uses are not respected and sometimes cause heavy or local traffic, they lack enough natural surrounding space.

6-3 Examining the Vulnerable Tissue in Relation to Roads and Possible Threats in Rasht

Rasht Central texture of old, traditional city with narrow streets and crowded streets at the heart of it, almost in the center of the map (5) of the tissue around it, surrounded by medium density residential, high density residential areas patches for the glaring moderate density, low density residential areas approximately around suburban established. This map also shows a historical development in new contexts exist around the old city, and the split of the center of the city in the first place and then form a belt in recent years, the star of the uneven pattern has given the city of Rasht. Since everything going on around the side of increased building density and correspondingly increased vulnerability and the other main thoroughfares, all ends of preventive and predictive therefore, necessary action in line with

the principles of passive defense and a readiness to deal with the possible crisis (both natural, such as earthquakes, snow, human, such as war, chaos and fire) for centrifugal and deploy carried around for any possible incident will cause the closing passages. Therefore, in such a model of the city, projections and construction of multi-purpose shelter or land outside must be located out of the city.

6-4 Population Spectrum of Rasht

Map number (6) classification based on population and labor force living in urban parts that this classification shows that the number of people moving from the north to the south living in urban parts increases. In other words, the human population increases, so in case of inclusive urban parts of the city, the southern part of the city will be vulnerable. So it is necessary to take any decision in accordance with this would be a way for health and potential hazards to human resource compression ratio to be established.

6-5 Arrangement of Streets in the City of Rasht

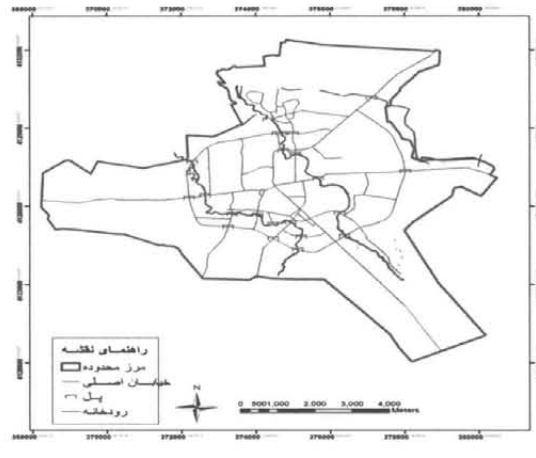
This case also shows that the presence of traditional (now aging) is in this range, an alert is also a warning to the restoration and badly in need of tissue, because the strength and enhancing its resistance is one of the basic principles of passive defense. The civil affairs authorities can provide incentive policies such

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▲ Map 7. Non-geometric Alleys of Central Texture and Geometric Alleys of New Texture



▲ Map 8. Overlapping layer by layer bridge critical risk of Rasht City

as low-interest loans to rebuild, encourage density, tax relief, exemption of urban tax, etc. and help to achieve this and encourage more citizens.

6-6-Studying Rivers and Ravines in Rasht

Rasht has two main river is called Zaejoob and Gahrood coming from the southeast to the northwest of the legislations remain, despite the beauty of the river for any city can be a tourist attraction in the city of Rasht for a variety of reasons, but the beauty and attraction to repulsion has become, arguably the biggest factor, high density of human and sewage mixing with water because of the high subsurface water, wastewater, groundwater and river trip can easily enter the drainage acts, on the other hand, upstream of RIC The river has many factories in the rivers and water sheds, small urban wastewater, hospital wastewater, sewage and other neighboring houses also exacerbate this issue, many parts of the territory of the river in informal dwellings occupied old and still not release, the risk of natural hazards such as floods far greater environmental river and river flooding

6-7 Examining Non-level and River Bridges of the Main Thoroughfares in Rasht

Road bridges, including bridges River Interchange and strategic importance are the main arteries, as well as the importance of a point, in times of crisis will be effective in all areas and

functional area of the bridges may be exposed to different threats, such as non-coplanar bridges in bombings and River bridges aerial bombardment and bombing and air strikes may in addition to flooding, erosion, tableland, the fall of man and the car in this way and are thus strength, camouflage when necessary, permanent monitoring and taking alternative routes it is necessary to cover possible disorders; A total of 22 bridges in the city of Rasht, such that the 6 of which are non-level and 16 of which are river.

8-6 Position in Relation to the Main Thoroughfares Airport

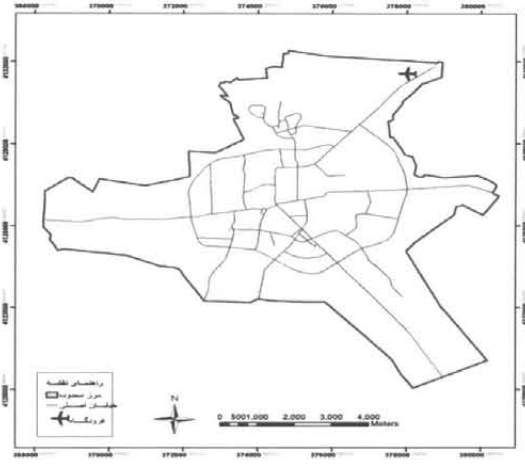
Rasht Airport is the only airport in the city of Rasht in Gilan province and the strategic importance of political, business and social fortunately, this points to the province outside the city of Rasht and Anzali in the way the city is still completely surrounding urban fabric not around. The airport's privacy and distance from residential areas in the field of passive defense is one of the strengths of the city. The airport itself may be one of the missile attacks and terrorist purposes. Therefore, due to the strategic importance of the protection and care it is necessary, in the context of threats to ground it covered with appropriate protective frame, but in the area of attacks Possible guided remotely, it is essential to deception and concealment measures that must be met

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▲ Map 9. Vital Bridge in Rasht City



▲ Map 10. Location Rasht Airport



▲ Map 11. Administrative and Political Centers of the Media Situation in Rasht City



▲ Map 12. Overlapping Risk Layer with Installation and Equipment Layers of Rasht City

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in terms of deception, such as construction of a replica of the screen, such as the creation or development of nests hidden by vegetation and tree cover will be very useful in this regard according to the plan number (10) The site is located northeast of and contiguous with the main route Rasht-Anzali, this airport for landing helicopters physical space in times of crisis as well as stimulus packages to ease the main roads to all parts of the city is transferable.

6-9 Positions of Political and Media Centers in Relation to the Main Thoroughfares of the City of Rasht

Political and media centers such as governors and state organizations and institutions are more important in terms of internal threats, map number (11) shows the location of these

centers in Rasht city centers or urban unrest may in time of national turmoil in the spotlight be it in terms of external threats and natural conditions are similar to other spaces and areas. The principles of passive defense in this context, strongly protective measures such as strengthening the inspection gates, to defend, circulation and Complicated at the time of the emergency among which Complicated somewhat needs preparation and physical hardware.

6-10 City Facilities and Equipment Associated with the Main Thoroughfares of the City of Rasht

Key elements of urban infrastructure and basic services to citizens are daily how to assemble the parts in the city of Rasht in the map



▲ Map 13. Overlapping Medical Centers in Rasht Risk Map

number (12) is given. Most of these centers in the outer rings of the city center are extensive. Overlapping layers of urban infrastructure with a layer of risk-taking, we find that most of these places are located within high risk, and is required in addition to planning for alternatives and support in times of crisis for the centers, as appropriate, the vulnerability could be reduced.

6-11 Evaluating Hospitals and Clinics Associated with the Passages in Rasht

Hospitals, clinics and health centers of the most important parts of a relief when the threat of the crisis if we are requested by an overlap between Rasht risk classification is based on studies and have a layer of supply, we realize that the two layers are almost overlap. Map number (13) is debatable in this case there are two aspects to the threats and risks that the state is not extensive local and neighborhood health centers in the relief positions venture will accelerate in the second stage of the local threats are not adverse and comprehensive It covers a range of aerial bombardment of such hazards such as earthquakes and exposure to the crisis could be a danger in the area. Therefore, it is essential to the future development of these centers, the new ventures get located outside the boundaries of risky sites.

6-12 Study Stations and Rescue in Connection with Risk Limits and Passages in Rasht

Fire stations, including critical crisis centers have an important role in ensuring the safety and welfare of citizens. Obviously, timely service, above all, requires the establishment of fire stations in suitable locations that can meet as soon as possible and without barriers and limitations of their environment and aid to the scene to carry out. The traditional locations of these stations have the additional function of land ownership and management and so on has been tastes; Elements such as fire stations and emergency services applications where critical role in protecting the lives and property against fire, particularly with different events. According to international standards, covering a radius of 2 km for fire stations in the city is considered as long as there is one station for every 50 thousand people. According to the map (14) What about Rasht true that these existing stations, the coverage radius, high-risk area to cover, but in terms of the estimated population of 700 thousand standard, 14 stations are needed in Rasht only 5 stations are available. Its stations, with the main thoroughfares, it seems appropriate. But due to the high population density, businesses, buildings, traffic and more importantly worn tissue surrounding and lack of support and relief for this issue will be challenged.

7. Checking the Assumptions

Of the road network in the city of Rasht for irregular star is in this form that the town has a main center and its network of branches are important. The network of transport facilities to the city center efficiency is high, but high performance by increasing the population of the city and cross the threshold limit is gone. This network does not provide suitable facilities for the development of the city and the city expands and becomes further from the center than is necessary during the journey. Reducing risk of civil defense requires coverage for different purposes Location different, different options exist alternatives (alternative route commissioning mobilize far), while the uneven pattern of stars in the center of town where

all the main routes and has consequently end applications, due to the multitude of attractions around this network facilities have been established since then has reached the saturation limit this possibility to do civil defense planners. There are 16 main street intersection points with the river route linking the city is vulnerable to this threat with the retrofit can be turned into opportunities. The east-west fault divides in half the correct city in western port city on the east fault In the vicinity of the bridge than the level. Downtown streets Switchback slender tissue right at the first ring of the radial pattern is also clearly in critical situations can cause network failure. Therefore the first hypothesis is confirmed. The major risk businesses within the city of Rasht station and CNG fuel station can Bashd.tbq research studies expert opinion stations increased risk urban area is within the inner city main roads are. Relief supply centers as well as hospitals. Fire is completely within and adjacent to the main streets with high-risk localized threats If it were to be in a good place, but if by exposure to high-risk area, self concern for the city are facing a crisis, they can fire. Quite similar situation with hospitals, with the difference that the existing fire station with good distribution radius can be ideal performance, enough for the city's population of 700 thousand. The second hypothesis is confirmed.

8. Conclusion

The results indicated that the current situation in Rasht major and minor arteries due to adjacent land uses, in accordance with the standards and considerations of passive defense in order to respond to the crisis are not possible. Although the city's main arteries are balanced spread across the city, but the star of the pattern of expansion joints and the main routes to the center without proper grinding wheels, exhaustion of non-geometric texture, the streets in the central area, the traffic density Most of the day, a high density of human tissue, street intersection great river, the city has been increasing because of the vulnerability of

the city to respond to possible threats. It requires a series of infrastructure.

Recommendations

1. Open spaces existing Rasht in times of crisis can be made according to the type and multi-functional spaces threats as tasks, multi-functional spaces, while having a function and its main use, in times of crisis and threat as a backup area for shelter, temporary housing citizens or groups to establish a rescue, helicopter landing and so on that can be cited in this context almost balanced distribution of these spaces in the city of Rasht, despite the limited extent of the city in terms of population uniform distribution in the city proper access to main arteries, the remedy would be highly efficient civil defense.
2. Having regard to the risk of the outcome of this study is necessary to support basic installations, such as relief facilities mobilize far in high-risk areas, but not the establishment of low-risk limits established city or outside the city.
3. The estimated population of 700 thousand people, 14 fire stations need to be available in Rasht only 5 stations. In addition, it is necessary to make healthcare initiatives where they can be equipped as an ambulance should be provided in place of the city.
4. Special Lines that can help the police rescue without encountering traffic to reach the scene of the needs of the city based on the principles of civil defense is predictable and rapid response.
5. In the design and construction of vital structures of civil defense in accordance with the principle of strength is required as much as possible the establishment of the city in the vicinity of the fault should be avoided.
6. The construction of fueling stations more points in the city to prevent the gradual emergence of the suburban necessary to even be in compliance with the standard in order to reduce the risk of natural buffers exist around these stations.

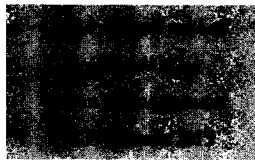
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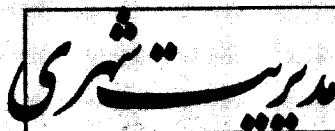
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فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 171 - 182 ■

Received 1 Dec 2014; Accepted 24 Jan 2015

Evaluation Indicators of Good Urban Governance; Case Study: The Central Area of Region 10 of Tehran Metropolitan

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Abstract

With forecasting the settlement of more than 66 percent of the population of the world in cities over the next 10 years, the world is becoming a global city. So many problems would be involved in the future of urban management. Researchers presume good governance as the best solution for their management problems of metropolitans; therefore, considering the components of the theory of good governance, urban management will benefit from it in the planning. The goal of this article is evaluating the indicators of good urban governance in the central area of region 10 of Tehran metropolitan. In order to achieve this goal, we've used theoretical concepts, theories, frameworks, guidelines, recommendations, and different indicators related to good urban governance and its components in the urban environment that have been studied in the beginning. To evaluate the urban governance, eight primary factors including integrity participation, satisfaction, training and high efficiency, control and monitoring, accountability, participation, clarity, actualize, feasibility, quality and desirability of environment have been considered, and sub-criteria have been developed for each factor. Data were collected using a questionnaire. Afterwards, by the preparation of the database and making use of factor analysis in SPSS, indicators were classified. Using linear regression analysis, the relation between factors with overall satisfaction was assessed. Furthermore, to improve governance in the central area of region 10 of Tehran, prioritizing and ranking indicators for organizing the study area have been investigated.

Key Words: *Evaluation, Indicators, Good urban governance, Region 10 of Tehran.*

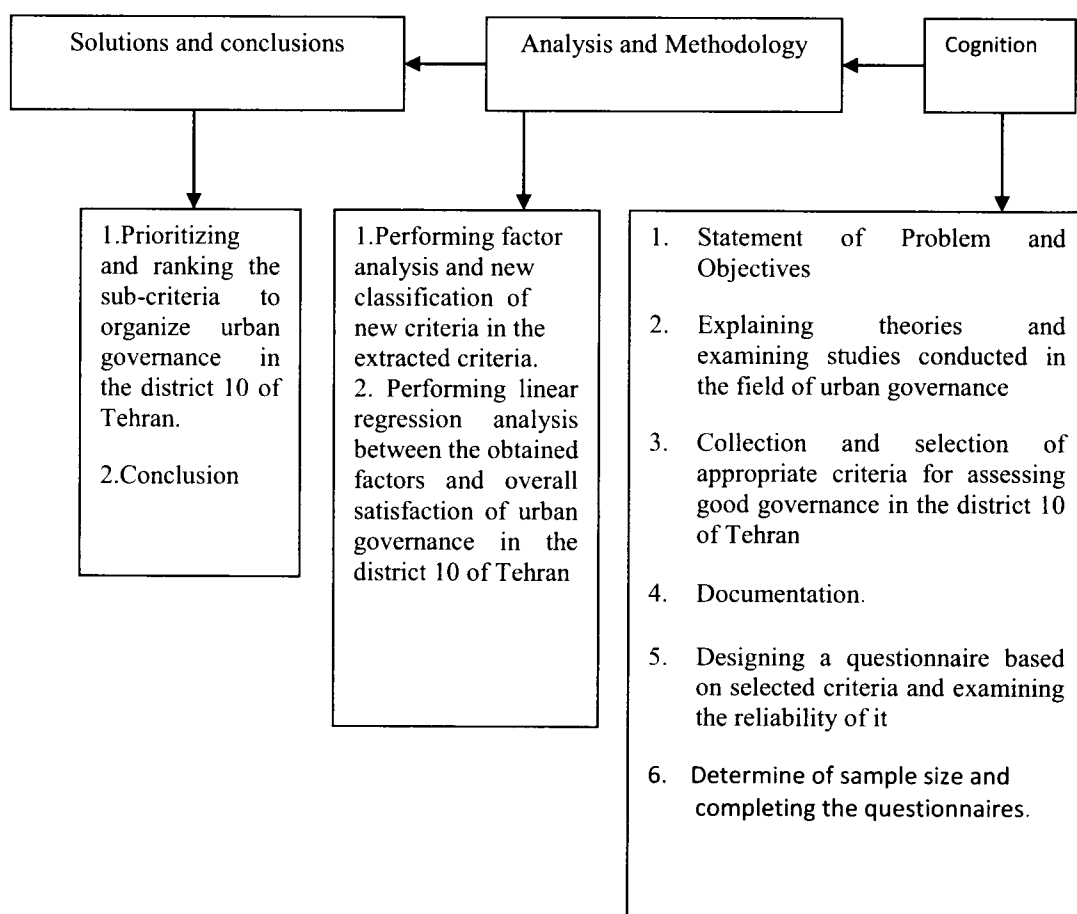
1. Introduction

The world today is faced with challenges arising from changes of advances in science, technology and new organizational system and social needs. Today, the role of government has also been changed, and its responsibilities are different, thus governments can't meet the new requirements by itself. It is necessary that the government itself increase the possibility of responding new needs, by enhancing the capabilities through supporting public institutes (kazemyan, 1383). In recent years, governance has become the issue of the day in public management and this is due to the essential role the governance plays in determining public safety. It is also the most significant factor in eradicating poverty, furthermore, causing growth and development. The first reliable

authority having opened discussions on urban governance was World Bank. In a report in 1989, it's defined as an efficient public service, reliable and responsive administration. World Bank coined the term governance, and expanded its concept (Athari, 1383). Urban governance model is a new form of governing a city that meets the need for a multilateral balance between the elements and the forces affecting the development and stability of citizens (kazemyan, 1383). And using this model helps with finding a new combination of co-operation among the government, civil society and the private sector in order to provide better public services.

2- Research Methodology

This study aims at identifying indicators for good urban governance as a new model of



▲ Figure 1. The research process

urban governance and evaluation of these indicators in the central area of the region 10 of municipality of Tehran. This study is considered to be in the branch of applied researches and it tries to provide the possibility for understanding and determining some aspects of urban issues by using the theoretical foundations. In this study using a documentary study method, theoretical concepts, theories, frameworks, guidelines and recommendations and standards related to good urban governance have been examined. And, using concepts and definitions, the basic framework has been developed. Then, using the survey method, data within the mentioned area were collected by using a questionnaire. Consequently, the indicators were classified by preparing the database and using factor analysis. Then, eight major factors affecting good governance in the studied area were obtained. Therefore, using linear regression analysis, the relation between factors with the overall satisfaction was evaluated. At the second stage, good governance factors of the studied area were analyzed and prioritized according to the results of the preceding stages and the average of satisfaction. Finally, strategies for developing the condition were presented (figure1).

3- Previous studies in good urban governance

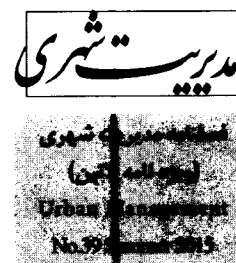
Many studies have been done related to good urban governance in European and American countries. Among these studies, the Gani and Duncan's article titled "Measuring good governance using time series data" can be pointed. McCall and Don in an article entitled "GIS tools for participatory spatial planning: completing Indexes for (good governance), have discussed five principles of sustainability of the "good governance", that is, to be arithmetic and logical, in addition to respectability, equality and competition. Magl and Wehrmann indicate how the incorporation of norms of governance including: Sustainability, equity, efficiency, transparency and accountability, citizen engagement and citizen

security and urban land management suggest ways to improve the current situation. In another study called "Designing indicators of good governance: the importance of citizen participation and its evaluation in Vancouver" published by Stewart (2006), the challenges of making indicators were mentioned. Another study (2010, Rumi), has determined local governments as a solution for some urban problems, and tries to use some strategies to improve the role of local activities in the government. In an article entitled "city-Region governance of Tehran: Challenges and Trends" conducted by Akhundee, Barak Pour and colleagues (1385), various aspects of the political division as the biggest challenge facing official systems and governance of metropolitans were analyzed. Parhizgaran and Kazemyan (1384: 29, 48) determine the form and content of the governing in Tehran metropolitan, and explain the requirements of establishing good governance patterns. Among the other researches having considered the issue of governance, is Barakpor thesis (1387: 491- 517) entitled "the transition from urban governance to urban sovereignty in Tehran" in which he explains the requirements of establishing good governance patterns. Basirat (1385) also in his article titled "Global experiences of governing metropolitan districts", provides useful instructions to stablish principles of good urban governance through regions in Iran, according to international experiences in successful governance system in metropolitan areas.

4- Research Literature

4-1- Definitions and concepts of good urban governance

Friedman argues that governance, a term that has recently been described in the literature of urban management, refers to the process by which public policy decisions has been adopted and performed. He emphasizes how the three main parts to which it is concerned, including national, regional and urban governments, civil society and the investors play role



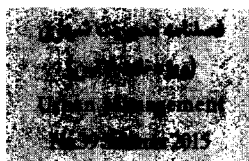
Good urban governance indexes	
Tolerance oriented and receptive of diverse approaches	Participatory
Capable of mobilizing resources for social purposes	Permanent
Practice of law	Legitimate and acceptable
To Strengthen indigenous and local mechanisms	clear
Efficiency and effectiveness in the use of resources	To raise Justice and Equality to new heights
Facilitation oriented and empowering	Service-oriented
Regulators and controllers	Able in developing resources and governance techniques
Capable of dealing with case by case issues	To raise sexual equality and balance to new heights

▲ Table 1. Indicators of good urban governance

in the context of governing the community. To measure urban governance and organizing it, he also emphasizes three indicators including: assessing the performance of cities, the government and the management and city incomes (Friedman, 2001). He believes that in this framework, the three indicators have their origin in an underlying premise that all human beings have right to seek their evolution through the full enjoyment of the inherent, intellectual, physical and spiritual potentialities in a wider community (Asgari, 1378). World Bank has defined Governance as “the manner based on which the economic management of a country and its social resources are exerted force, in order to develop. The other definitions discussed in the context of urban governance are: urban governance is a multilateral process between formal officials of the city on the one hand, and informal civil activists on the other hand, that their multilateral interactions can lead to the adaptability of diverse interests between activists. What the concept implies is, indeed, entering the civil society and the private sector in the planning process and Governance (Urban). This is, while the government is a set of legal and formal institutions, accompanied by

legal power (Barak poor, 1386). As Kaufman (2004) put it, governance refers to the processes and institutions by which authority is applied in a country. Governance encompasses mechanisms, processes and institutions through which, citizens and groups express their interests, and resolve their discrepancies. According to the definition of UN ecology, urban governance is defined as all the ways of public planning and management of the city on behalf of individuals, public and private institutions. It's an ongoing process through which, conflicting interests accompany with one another, and a cooperative action can be taken. Nevertheless, urban management is the effect of all impressive elements of a city on urban management, with all mechanisms to move towards excellence for the citizens. Not to overrule public and private arenas, nor the governmental arena have the full authority. It's also a model to provide bases for a permanent and human-centered development of metropolitans and an efficient spatial-physical organization based this framework, through absorbing participation and collaboration of all functional and geographical levels and replacing convergence by segregation and divergence (Kazemyan, 1383).

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4-2- Elements of good urban governance

In contrast to the concept of governance in general, good urban governance should possess the characteristics that explain its utility. United Nations Development Program (UNDP) introduces its set of desired characteristics of good urban governance as given in Table 1 (Asgari, 1378).

In the second UN Conference on Human Settlements (UN-HABITAT), indicators such as: accountability, inclusiveness, participatory, lawfulness and transparency were introduced as characteristics of good governance.

4-3- Good urban governance over time

Since the governance in a simple term, is the process of decision-making and the process by which decisions are implemented, it can be considered as old as human civilization (Farzinpak, 1383); Although the application of the concept of urban governance backs to late 1980 in Africa, but "MacLalyn" is the first theorist who has remarked it in 1973 (Zibaei, 1387). He believes people in cities ask the government to be more 'responsive' toward changes in cities, its actions are: more appropriate" considering the issues and evolution of cities, "more responsible: toward community and act better as a part of learning system. Finally, play a significant role in predicting, detecting, and welcoming the future. To fulfill these demands, he considers it necessary to communicate with the community and by doing so; the governance is known as a process comprising an interconnected system consisted of both "state" and "society". Afterwards other people like McKinley (McKinlay) and "Atkinson: has opened this dissection. In the late 1980s, after a decade of economic structural adjustment policies in many African countries, the World Bank (Word Bank) concluded that the governance is a significant issue in the development strategy of countries that perform poorly. In other words, the World Bank in its study in 1989 found that governance- techniques of managing and governing the country or the relation-

ship between citizens and governors- is the central subject of development. After that, the United Nations Conference on Human Settlements (UN-HABITAT), Istanbul in 1996, set his slogan "Global action for good urban governance". It also stressed that cities around the world should step towards the establishment of urban governance (Barakpoor, 1385). This topic was also discussed in the annual report of 1997 under a new subject, that is, policy of empowering the government by enjoying the fruits of governing, as was the main topic of policy development. Then, In general, the new concept of good governance has been studied in numerous seminars and conferences. Consistently, from 2000 on, the World Bank has been published report on the bank's activities and cooperation with various countries, headlined "reforming public institutions and strengthening governance" (Arabshahi, 1383).

4-4- Documentation of good urban governance standards

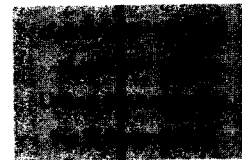
According to the criteria approved by reputable organizations and individuals in the field of urban governance, Table 2 can be presented.

According to it, the parameters needed for research and questionnaire have been extracted:

4-5- Factor Analysis and Regression

Factor analysis is a multivariate statistical technique which establishes a special relationship between the frequencies of a set of seemingly unrelated variables under a theoretical model. It is particular for subjects having large amount of data, because the classic statistical method to analyze a large number of tables that have been studied before isn't simple. To analyze such data, factor analysis is applied, which is able to analyze mass data (Mansorfar, 1387: 254). Basic assumption in factor analysis is that the underlying variables can be used to explain complex phenomena and correlations between variables, is the result of their participation in these factors (Afandizadeh, 1389: 2). A fundamental assumption in underlying fac-

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Row	The Criteria	Sub-Criteria	H.Magel & B.Wchrmann	Albritton, Bareekul(2009)	Barakpoor (1384)	Mecall & Dunn(2012)	UNCHS(2000)	Word Bank(2006)	UN-HABITAT(2005)	UNDP(2006)
1	Efficiency and effectiveness	The application of modern management techniques to manage the neighborhood.						✓		✓
2		Right foresight and allocation of funds to local projects.	✓			✓		✓	✓	
3		Performance standards in urban plans.	✓				✓			✓
4		Privatization of municipal services.						✓		✓
5		Training municipal staff in order to increase their efficiency.				✓		✓		✓
6		Educating citizens to raise their awareness.						✓		
7		Considering the development based on researches and public comments.						✓	✓	
8	Justice	Percentage of women members in boards and councils.	✓			✓	✓	✓	✓	✓
9		Applying pricing policies in interest of the poor.	✓	✓	✓	✓	✓	✓	✓	✓
10		Incentives to support private businesses.			✓	✓		✓	✓	
11		Inclusiveness and non-discrimination among citizens.	✓	✓				✓	✓	✓
12	Participation	Participation of civil society in the preparation and implementation of programs.	✓		✓		✓			
13		Participation of private sector in the development and implementation of programs.	✓				✓		✓	✓
14		Planning of the municipality for active participation of society.	✓				✓			✓
15		Observance of the principle of centralization by municipality.			✓			✓		✓
16		Participation in the election of members of the City Council.			✓			✓		✓
17		Performance of the dispute resolution council.	✓	✓				✓	✓	
18	Accountability and clarity	Having a mechanism to deal with public needs and complaints .		✓				✓	✓	
19		Quality of streets, pedestrian routes and public transport in the neighborhood.				✓				✓
20		Clarity of contracts and reports of financial invoices.	✓	✓						
21		Having a commission to fight financial corruption.	✓	✓				✓		
22	Security and the Rule of Law	Action against violence (especially against women).	✓					✓	✓	✓
23		Policies to combat the urban crimes.	✓					✓	✓	✓
24		Providing police services.	✓	✓				✓	✓	✓
25		Policies to combat HIV.						✓	✓	
26	Consensus-oriented	Establishing joint activities among municipalities, NGOs and civil society.	✓	✓			✓	✓		✓
27	Strategic Insights	Statement of the perspective		✓					✓	✓
28		Having strategies to reduce poverty.							✓	✓

▲ Table 2: documentation of criteria considered for evaluating good urban governance

tor analysis is that the variables can be used to explain complex phenomena and correlation among variables is the result of their subscription in this factor.

Factor, is a new variable which is calculated by a linear combination of the original scores of observed variables according to Equation 1:

$$F_j = W_{j1}X_1 + W_{j2}X_2 + W_{j3}X_3 + \dots + W_{jp}X_p = \sum_{i=1}^p W_{ji}X_i$$

Where:

W represents the coefficients of the variables, and P represents the number of variables.

Mathematical Foundations of factor analysis are different according to the quantity and type of the variance of each variable $J(X_j)$ justified by existing factors in the model (Afanizadeh, 1389: 3).

Regression analysis techniques and statistical techniques are to examine the relationship between variables. Regression in all fields, including engineering, physics, economics, management, biology and social sciences are needed to estimate and predict. It is also one of the most applicable statistical methods (Rezaei and et al). The regression equation is as follows:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \dots$$

Where X_s are parameters used in prediction, and B_s are determined so that to calculate the criterion of the least squares. The obtained

value for B_0 represents the predicted values of Y with X values remained constant. For example, B_2 represents the predicted values with the other X_2 if X is constant. Moreover, the priority and impact of each factor is determined by comparing the coefficients of B to each other. For example, if B_3 have the largest size, then the impact of X_3 on the dependent variable is the most. Also, the score of multiplications influence on the variability of coefficients. For example, if the score of B_2 is negative, indicates that the dependent variable is reduced with increasing X_2 ; the final prioritization of criteria for promoting good governance in the mentioned district.

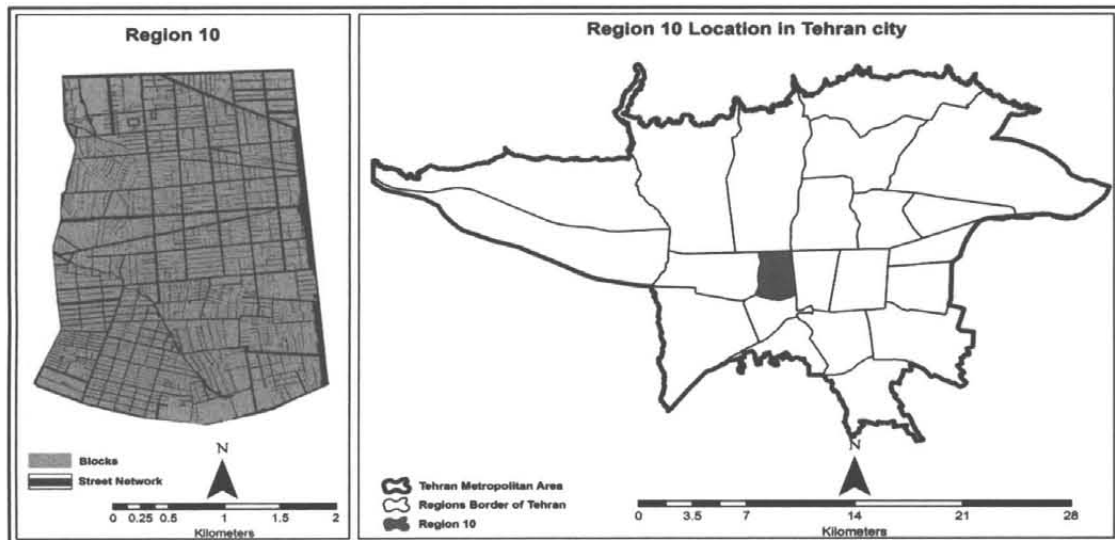
5-Introduction the area studied in this research

The district 10 of Municipality of Tehran with 817 hectares is considered to be the smallest district in Tehran after that of 17th municipal district is. It consists of 3 regions and 10 councils. It has a population surpassing 320 thousand, which in this case, is among the most crowded areas of all 22 districts of Tehran and its population is four times larger than the standard rate, and twice the average density of population in Tehran. This area, having a history of more than eighty years, is restricted in the geographical location from the North to Azadi Street, from the South

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▲ Map 1. The study area

to Qazvin Avenue, from the East to Navab Highway and from the West to Jihon military bases. Most of the land in this area belongs to residential users (57%). Residential users, compressed pattern of streets and blocks particularly in the central regions, small service uses adjacent the narrow streets, imposes high volume of daily traffic to the area. This area also has problems including old houses, overcrowding, inappropriate transportation and other insufficient services (Regional Development Model of district10, 1384: 15-2). Map 1 shows the location of the district 10 of municipality and the city of Tehran, limited to the Dampezhski Street on the north, to Rudaki Street on the East, to Camille Avenue on the south, and to Jihon Street on the west. Middle and lower classes are residing in this region. The share of employees in the private sector in the city is higher than average, and this is one of the factors in reducing the average income of households in the region and cultural indicators of the region such as literacy rates and a highly educated population are lower than the average of Tehran.

6-Using the theoretical patterns in the realm of Research

In order to assess the governance criteria of the region in relation to the criteria listed in the table of documentation, a questionnaire was prepared in accordance with these criteria. Validity and reliability of the mentioned questioner was examined by survey method of Cronbach's alpha coefficient (0.809). 150 questionnaires (based on the Likert rating) were filled by people from all classes and ages. After entering data into the SPSS software, using factor analysis, the matrix of data entered into factor analysis, using principal component analysis (PCA), in order that the correlation matrix is formed. According Table 3 and the components of Bartlett's test, variables are determined correlated and able to be examined by factor analysis. By examining the number of Kaiser-Meyer-Olkin measure of sampling (KMO), which is more than 5.0, the

matrix is determined not to possess the multiple linear or linear regressions, thus, data are suitable for further analyses.

After viewing the Matrix of preliminary calculations, it is observed that the percentage of cumulative variance of given factors is 67.389 percent acceptable (Table 4).

To achieve the best set of factors and finding criterion with highest factor loading in each factor, the orthogonal transformation (Varimax) was used. After eight iterations, the weights for each factor were established against criteria. At this stage, factors were named according to their nature by examining criteria in each set (a subset of a factor). The name of each factor, identifying criteria of each factor and their factor loadings are visible in Table 5.

7- The final prioritization of good governance criteria in the district

To achieve the most effective criteria among eight obtained factors, relation and impact of each factor on overall satisfaction was examined by means of factor analysis using a linear regression on factor component scores. Its lack of correlation between variables was determined by the number 1.60 Durbin-Watson test. In this way, question 25 (overall satisfaction) was considered the dependent variable and the eight factors were considered independent variables. Due to obtained tables and examining the column "Beta", the amount of dependence of factors upon governance of the district was observed. This dependence upon the fourth and seventh factors according to the value of t and the low "Beta" are lower than that of the others (Table 6).

By multiplying the "Beta" and each factor, and factor loadings for each criterion within the specified factor and the level of satisfaction, the criteria for consideration and action were rated (Table 7). Criteria that acquire larger numbers are considered the criteria of high priority for consideration. As can be seen in Table 7, the existence of a mechanism in order to address the needs and complaints has

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Kaiser-Meyer-Olkin		0.719
Bartlett's test	Chi-square value	1230.356
	Degree of freedom	276
	Significant	.000

▲ Table 3. KMO and Bartlett's Test

Parameter	1	2	3	4	5	6	7	8	
Rotation Sums of Squared Loadings	Total	2.768	2.273	2.264	2.190	1.987	1.668	1.598	1.435
	Percent of variance	11.532	9.470	9.434	9.125	8.243	6.951	6.656	5.978
	Cumulative percentage	11.532	21.001	30.435	39.560	47.803	54.755	61.411	67.389

▲ Table 4. Total variance

Row	Criteria	Factors (sub-criteria) with their factor loadings
1	Comprehensiveness and participation	Planning of the municipality for the active participation of society (0.775), Observance of the principle of centralization by the municipality (0.701), Percentage of women members in boards and councils (.552), Comprehensiveness and non-discrimination among citizens (0.501), Applying policies to combat HIV (0.476), applying pricing policies in interest of the poor (0.413).
2	Satisfaction	Having a mechanism to deal with public needs and complaints (0.711), The application of modern management techniques to manage urban neighborhood (0.669); Right foresight and allocation of funds to local projects (0.644).
3	Education and increasing efficiency	Educating citizens to raise their awareness (.743), Training municipal staff in order to increase their efficiency (0.739), Incentives to support private businesses (0.657), Participation of civil society in the preparation and implementation of programs (0.536).
4	Control and Monitoring	Providing police services (0.747), Action against violence (especially against women) (0.702), Policies to combat the urban crimes (0.649).
5	Accountability and participation	Performance of dispute resolution councils (0.812), Participation in the election of members of the city council (0.803).
6	Actualize	Performance standards in urban plans (0.776), Privatization of utilities (0.607).
7	Clarity	Clarity of contracts and reports of financial invoices (0.791).
8	Quality and environmental compliance	Quality of streets, pedestrian routes and public transport in the neighborhood (0.854); Considering the development based on researches and public comments (.451).

▲ Table 5. Naming and classification of variables based on the maximum factor loading

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Factor	1	2	3	4	5	6	7	8	Fixed
Beta	0.328	0.385	0.275	0.017	0.147	0.112	0.064	0.027	
T-Test	5.227	6.133	4.374	0.263	2.233	1.768	1.014	4.290	39.000
Significant	0.000	0.000	0.000	0.793	0.021	0.076	0.312	0.000	0.000

▲ Table 6. Coefficients of linear regression analysis

Row	Criteria	Average of satisfaction	Beta coefficients for each factor	Loadings of each Criteria	Ranking coefficient for solutions
2	Having a mechanism to deal with public needs and complaints.	2.1	0.385	0.711	1.067
2	Right foresight and allocation of funds to local projects.	2	0.385	0.664	0.992
2	The application of modern management techniques to manage the neighborhood.	2.2	0.385	0.669	0.979
1	Planning of the municipality for the active participation of society Or The active participation of the local community in the municipality.	2.3	0.328	0.775	0.974
8	Quality of streets, pedestrian routes and public transport in the neighborhood.	2	0.270	0.854	0.922
1	Observance of the principle of centralization by the municipality.	2.5	0.328	0.701	0.805
3	Educating citizens to raise their awareness.	2.3	0.275	0.743	0.756
3	Training municipal staff in order to increase their efficiency.	2.3	0.275	0.739	0.759
1	Percentage of women members in boards and councils.	2.3	0.328	0.552	0.669
1	Inclusiveness and non-discrimination among citizens.	2.1	0.328	0.501	0.641
3	Incentives to support private businesses.	2.5	0.275	0.675	0.632

▲ Table 7. Ranking the most important criteria in the purpose of determining the priorities of organizing the district in order to promote good urban governance

assigned the highest rating to itself. It reflects the lack of attention to demands and problems that citizens face in this area. Furthermore, the necessity of prognosis and proper allocation of funds to local projects is considered the next priority, which adds to the dissatisfaction with the district. Now we can present an appropriate priority to plan, im-

prove and promote the governance condition of the district. In addition, according to Table 7, the procedures should be followed.

8-Conclusions

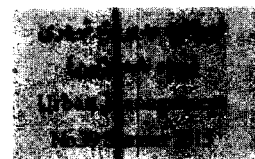
In this article, indicators of good urban governance were assessed. Considering that the collection, reviewing, classification, and putting criteria into specified categories are the

main steps in achieving complete checklists for examining urban governance conditions, using factor analysis seems a safe and clear way to obtain reliable measures for decision making. As shown, this method can be used to measure the urban governance and by ranking criteria as well as finding the main criteria of weakness and dissatisfaction with the district, further activities were offered in order to promote the governance and management of the district. In fact, in such studies, different regions of the city can be classified in accordance with quality and efficiency by collecting data through field research. The main priorities were calculated by multiplying specified parameters in Table 7, then, the highest score assigned to the existence of a mechanism for addressing public needs and complaints. This indicates that the axis has no dynamic mechanism to address the problems and demands of citizens, leading to dissatisfaction with the citizens from the management and governance of the district. Making a detailed plan to use modern management techniques, applicable to conditions of the considered district takes the next priority. If being left out of consideration, it causes underdevelopment and conflict between urban management and global systems. On the whole, lack of required basis in order to absorb participation of citizens and stakeholders is one of the essential causes of failure and dissatisfaction with management. Another important factor is the quality of streets, pedestrian routes and public transport that enough attention is not paid to them. Sequential examination of strategies proportioned with obtained priorities from table 7 can set a continuous process toward promoting the quality of governance in order to improve the efficiency of governance of the district. The quality of good governance in different urban areas can be measured by this method. Furthermore, by ranking criteria as well as finding the main factor of weakness, activities can be planned and implemented to promote good governance in the district.

9-Resources

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فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 183 - 196 ■

Received 17 Nov 2014; Accepted 20 Jan 2015

Factors affecting the explanation of Tehran's spatial structure: Case of Region 3 of Tehran

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Abstract

The term “physical development and land use” was primarily raised in the Western countries so that governments could monitor the way the land is used and to maintain property rights. However, with rapid growth of urbanization and development of urban and regional planning; the dimensions and the contents of the concept have expanded day by day. The central and practical core of urban planning is the land use planning not only is categorized as a type of functional planning but also serves as a guide to direct urban development programs. Urban land use planning refers to an organizing plan to arrange urban activities in order to achieve specific objectives and it plays a determinant role in physical development. The process of preparing the urban development plans is essentially reviewed and explained in a form of macro-planning process. Accordingly, given the centrality of the issue in line with the analysis of physical development in the Region 3 in Tehran, by recognizing the current opportunity and analyzing the characteristics and structure of the region under study, the present study tried to explain the issue and ultimately to explain the production in this area. The main goal of the present study is to recognize spatial structure of the Region 3 of Tehran in order to extract the potential problems and finally to devise the intended plan.

Key Words: *spatial structure, Tehran region, explanation.*

1. Introduction

1.1. Statement of the Problem

Physical development and urban land use planning refers basically to the spatial organizations of urban activities and functions based on the urban community's demands and needs. Such planning is, in practice, the core of urban planning and categorizes various types of development and land use (Chapian, 1970: 47). An analysis of the physical development and the way urban land is used reflect a clear picture of the urban perspective and how the urban space is allocated to different uses needed by a city over time to achieve urban development objectives. Physical construction of cities has under gone dramatic changes in different historical eras as a result of dynamic and growing nature of urban areas. Such development and changes have led to a number of consequences in the contemporary period such as unfavorable outcomes associated with unplanned urban development. Such problems can be seen almost in all developing countries and are considered as a general urbanization phenomenon. Despite the fact that developed countries have long ago started to deal with unfavorable urbanization difficulties, such problems have plagued developing countries because of various reasons such as people's extensive migration to urban areas and highly accelerating physical developments of cities.

As such, the recognition of urban development plans and the use of novel approaches to prepare such plans in recent decades by institutions such as the World Bank have received much attention. The use spatial structures and appropriate planning for urban areas as an action beyond physical aspects gives a special weight to economic and social factors when making policies and decisions for urban areas. Concerning the comprehensive urban development plans, it should be noted that such plans are totally different from the balanced development approach at different urban levels in terms of the position they take and the

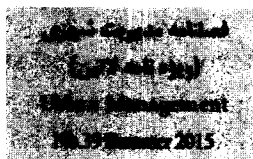
final products they offer. Physical development planning is prepared purposefully by urban managers and decision-makers as a planning tool to provide a strategic framework to achieve homogenous urban growth and sustainable development. One of the common types of urban planning to solve such tensions is the top-down hierarchical system. However, the application of this system to set policies and control aside from the private sector and relevant processes has brought about some disadvantages: This approach makes strategic management processes in the public sector possible and satisfactory. As such, the spatial planning system needs a type of capacity to line these issues based on a framework which recognizes differences and conflicts that arise between various groups in order to implement some changes in urban areas. Therefore, planning can be regarded as an attempt for the total management of common concerns about environmental and spatial qualities in shared milieus that emphasis the coordination among conflictual actions and the relationship between policy and action.

1.2. Significance of the Study

Definitions and concepts of the physical divisions of a city are emphasized mainly in this study. Accordingly, the physical divisions and the quality of its dimensions and hierarchies are among the major issues of the urban planning that are directly related to the way the land is used, the distribution of activities, and determining urban capitations. In fact, distribution of uses and setting the urban standards and capitations are based on urban physical and spatial divisions (Pars Vista Consulting Engineers, 2001: 70).

Physical division of a city refers to how a city is divided physically in terms of the hierarchical division of urban services (Razavian, 2002: 24). Therefore, in total urban planning, a city is divided into several regions. Then each region is divided into a number of quarters, each in turn being divided into several districts. Each district will be divided then into some neigh-

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neighborhood units. Finally, each neighborhood covers several residential units. To deliver services properly across the city and make them optimally accessible to the citizens, the physical divisions must be done in the form of a hierarchy including the city, its regions, quarters, districts, neighborhoods, and residential units in a descending order (Ziari, 2005: 43).

The aim of the horizontal construction of the system is the optimal combination of systematic elements or urban components beyond which the system optimization decreases or its naked element increases and thus the system is turned into a disintegrated assembly. Accordingly, a living system can perform its functions optimally in which its microelements (residential units) and its macro-elements (the city) are organized according to a given hierarchy and based on obvious physical divisions. Besides, the city elements are of especial importance when designing spaces between these elements.

1.3. Objectives of the Study

The main objective of the present study is to eliminate problems and complexities faced when designing and implementing plans and making them independent of management changes and participating in the planning process for the Region 3 in Tehran. Besides, the specific objectives are achieved by formulating executive measures.

The specific objectives of the study are as follows:

1. *Achieving comprehensive development strategies with an emphasis on the physical structure of Region 3 of Tehran*
2. *Improving the urban management and the public participation in preparing the development planning of the Region 3 in Teheran.*
3. *Devising prospects, strategies, policies, plans, and executive projects in terms of the physical, socioeconomic, and managerial structure of the region under study with a focus on the sustainable development.*
4. *Using a selective approach to elements under study based on the initial perspective and*

problems existing in the region under study.

1.4. Literature Review

Traditionally, the boundaries of each physical element of a city were influenced by a number of factors such as the city's current position, its function, area, population, and historical, political, cultural, and social features. The boundary of traditional districts of cities was determined based on ethnical, tribal, economic, and social relations. Besides, traditional cities always had a traditional hierarchical system including the residential unit, alleys, passages, marketplaces, neighborhoods, and the city (Ziari, 2005: 43). The main drawback of the physical-spatial organization of modern cities is that such organization is not compatible with citizens' social organizations and group affiliations. The negative outcomes of this opportunity are a decline in social solidarity, lower quality of public spaces, uniformity and lack of identity, interference with relational and service hierarchy, less on-foot movements, lack of aesthetic aspects, and so on (Pars Vista Consulting Engineers, 2001: 72).

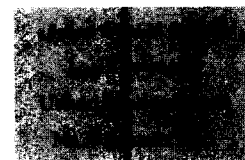
1.5. Research Questions and Hypotheses

A. Research Questions

The main problem in this study is whether it is possible to analyze the physical structure of the Region 3 in Tehran using modern tools and approaches. Besides, the study seek to determine the most appropriate strategic planning for the region under study as one of 22 regions of the Tehran Municipality to solve the potential problems in the region in question. Accordingly, the main questions addressed in this study are as follows:

- Do socioeconomic factors affect the physical development and the optimal land use in the Region 3 of the Tehran Municipality?
- What are the comprehensive development strategies (whether managerial, economic, social, and environmental) with a focus on the structure under study?
- What is the role of city managers and public groups in the physical development of the region under study?

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Research Hypotheses

1. *The recognition and the appropriate analysis of the physical structure of the Region 3 of Tehran seems to provide a good solution to a major part of the economic and social problems faced by the region and to bridge the gaps in the comprehensive urban planning in partial treatment of urban functions.*

2. *The role played by city managers and public groups in the physical development of cities and formulating urban development planning seems undeniable. Besides, the land use for the physical development in the region under study is not appropriate in terms of levels, capitations, and the utility principles.*

3. *It seems that the physical development in the region under study has not happened in recent years based on information auditing, formation of the data banks, goals consistency analysis, and goals achievement matrix as common practices used in this study.*

1.6. Method

Planning design methods used in the Region 3 in Tehran were analyzed in this study. After analyzing the existing techniques using methods such as the decision optimization, linear planning, potential levels analysis, scenario development, SWOT, and AIDA; the two methods, SWOT and AIDA were selected as the preferred selection techniques. Besides, SWOT was chosen as the final method of planning. To do so, the generalities of both methods were explored and finally SWOT and its applications in preparing strategic planning was discussed (DaneshParar, 2008: 20).

1.7 Research variables and indices

Two types of variables were used in this study: a) independent variables and b) dependent variables. Independent variables are those whose values are determined as the model inputs by the researcher. In addition, the dependent variables such as earnings, costs, income, production, sales, construction, and time are included in the target function. The most important variables manipulated in this study are physical and general properties of the differ-

ent parts in the region under study and relatively stable impacts that are imposed on the region from outside the region such as other regions located at Tehran and more generally other regions in the country. Phenomena, processes, reactions, and functions associated with the issue at hand are so various and extended that cannot be explored in this study. Different indices were explored in this study such as the location of constructions in the region under study such as residential, recreational, and educational buildings and the way they have been distributed in the region, the existence of service constructions such as streets, locations, service equipment and machines, and the quantity and the quality of their responsiveness. However, planning formulae can be mentioned as linking factors for these variables. Of these factors, the linear planning model deals with a dependent variable that is linked to a set of independent variables.

1.8. The Location and Boundary of the Region under Study

Region 3 is one of 22 regions of the Tehran Municipality with an area of over 2945 hectares in the north and northeast of Tehran. The boundaries of the region are as follows:

A. The northern boundary: The northeast part of ShahidChamran Highway, the northern part of Moderes Highway (Vey Park), and the western part of Sadr Highway.

B. The eastern boundary: Pasdaran Street and Shariati Street

C. The southern boundary: Resalat Highway, ShahidHaqani Highway, and ShahidHemat Highway

D. The western boundary: Chamran Greenway

It should be also noted that the region under study is neighboring Region 1 in the north, Region 4 in the east, Region 2 in the west, and is bordering the regions 6 and 7 in the south (SharmandConsulting Engineers, 2006).

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2. Concepts and Theoretical Framework

2.1. Concepts

The ancient history and the significance of cities and urbanization accompanied by the attention of the holders of power have made the thinkers of all ages to ponder upon different physical and spiritual aspects of cities and try to understand the rule-governed nature of the urban life. Based on their observations, they attempted to discover the urban planning and solve the problems with cities and urbanization (Piran, 1990: 64).

2.2 Theoretical Framework

The urbanization process is accompanied by an increase in the number and the size of cities in developing countries. The number of large cities with a population of over one million persons has increased considerably in the second half of the 20th century. Accordingly, the number of large cities form 80 cities in 1950 has been estimated to amount to 365 cities in 2000 and this trend is still on the rise. Of course, it should be noted that the growing number of large cities can mainly be observed in developing countries in the sense that the number of large cities in such countries has seen a significant increase from 31 cities in 1950 to 250 cities in 2010 (UNCHS, 1999).

Over the last two decades, the number of large cities has been increased two times as in the past. Furthermore, the size of these cities is rapidly growing. In 1950 New York was considered as the only metropolitan city in the world with a population of 10 million persons. The number of the metropolitan cities reached to 5 cities in 1975, 3 of which were located at developing countries. In the late 20th century, of 19 metropolitan cities in the world, 15 were found in the developing countries (United Nation Population Fund [UNFPA], 2000:6). It is expected that these metropolitan cities grow much more quickly in developing countries than in developed countries. In the post-war years (1950-1980), the implementation of the large-scale projects financed by the World Bank given rise to

the emergence of the urban infrastructures for industrial economies. The development projects performed in cities included the establishment of health and water supply systems, electronic systems, road, plant, warehouse construction projects, facilities, and the construction of governance structures such as parliaments and courts. Although a great number of rural development projects such as the construction of dams and highways have been established in recent years, a huge volume of loans and investment activities have been focused on urban areas. Higher levels of the primate city phenomenon in most developing countries reinforce the growth of the selected urban centers which mainly results in the migration of residents of large villages to cities. For those living in rural areas, cities are seen as places with economic opportunities and since most of rural areas lack water, electricity, and health, cities are represented as the favorite places to live in for rural people. In most developing countries, the unexpected population growth has exceeded the cities' "actual capacity". In fact, such cities have been overwhelmed with many emigrants from rural areas and thus they have been suffering from the lack of sufficient housing, schools, and health services for them. For instance, according to estimations in the 1070s and the 1980s, about 300000 persons have been annually added into the Mexico City's population (Mexico's capital). The provision of housing and healthcare services for the additional 300000 persons per year cannot be afford by any city. As a result, most cities in the developing countries have developed informally, characterized by suburban and slum settlements (Benton-Shorthand Short, 2008).

Undoubtedly, providing a comprehensive definition of the city is impossible due to interrelated economic, social, and political characteristics of city. Gordon Child in the 1940s presented the theory of city growth. This theory is known as the urban revolution and today is used in developing countries. How-

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ever, recently researchers have made some criticisms against it. According to this theory, ten characteristics of the primary cities are as follows:

A. The early urban settlements were large and populous.

B. Cities used to support full-time artisans and professional jobs.

C. Farmers produced agricultural surplus and this surplus was controlled by rulers.

D. Public and historical buildings could be seen in the cities.

E. The agricultural surplus was controlled by the ruling elite and clerics within cities.

F. The cities were the centers of developing and recording ideas.

G. The cities were centers of art.

H. The cities were centers for prophecy and augury.

I. The organization of cities was based on their residence and population.

J. The cities dealt with exports and imports in the sense that most of the residents were in the business of buying and selling merchandise.

According to Fredrich Von Rieschtfen, a city is a community of people at a given location whose living is provided through non-agricultural activities, particularly through commerce and industry (Farid, 1996: 1). In other words, the city is defined as a geographical fact that includes spatial, physical, and finally natural concepts (Fokuhi, 2004: 32).

Lewis Mamford stated that the physical concept of a city refers to a fixed location, a permanent shelter, and permanent facilities in order for people to gather, exchange, and store. Besides, the social meaning of the city refers to social division of labor that not only addresses services and issues contributing to the excellence and advancement of humans' economic life, but also facilitates the cultural processes as well. A city its full meaning is a geographical network, an economic organization, an industrial process, and an embodiment of the social practice, and an aesthetic symbol of

collective unity. The city fosters the art and is art by itself. It is in the city that artistic activities of human beings and human communities are focused and reach their culmination (Zebardast, 2003: 5-6).

3. Discussion

3.1. Analysis of Region 3 of Tehran

3.1.1. The history of changes of the boundary and physical development of Region 3

The physical and geographical development of the region under study based on a general and simple approach can be evaluated in 4 historical periods as follows:

First Period: The formation of early centers of residence in rural areas. Several rural areas have historically existed in the region under study such as rural areas between Ray and Tehran (Old Tehran) and other areas such as Tajrish and Shemiran. Other districts and villages included Vanak, Abbas Abad, Za'feranieh, and Qeitarieh. These villages were the main suppliers of agricultural products and daily necessities of the inhabitants of Ray and Old Tehran.

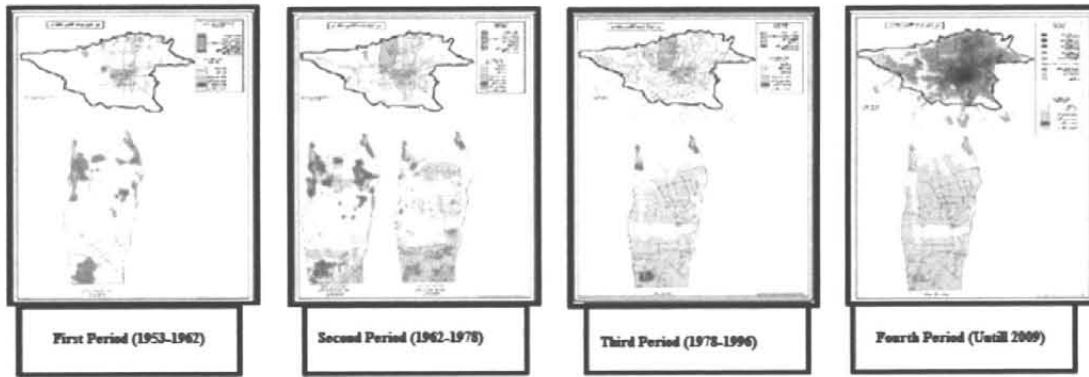
Second Period: The beginning of the dense textural development in the central parts. This period began around the late 1950s. At that time, Tehran was stretching towards Shamiran and Tajrish because of the favorable weather conditions. On the other hand, town building operations was being conducted within the region; Besides, the construction of multiple paths connecting Tehran to Shemiran facilitated this process.

Third Period: At this time, the previous continued dense development was approaching the northern regions as the extension of the second period. The period started from the 1960s until the occurrence of the Islamic Revolution in 1978.

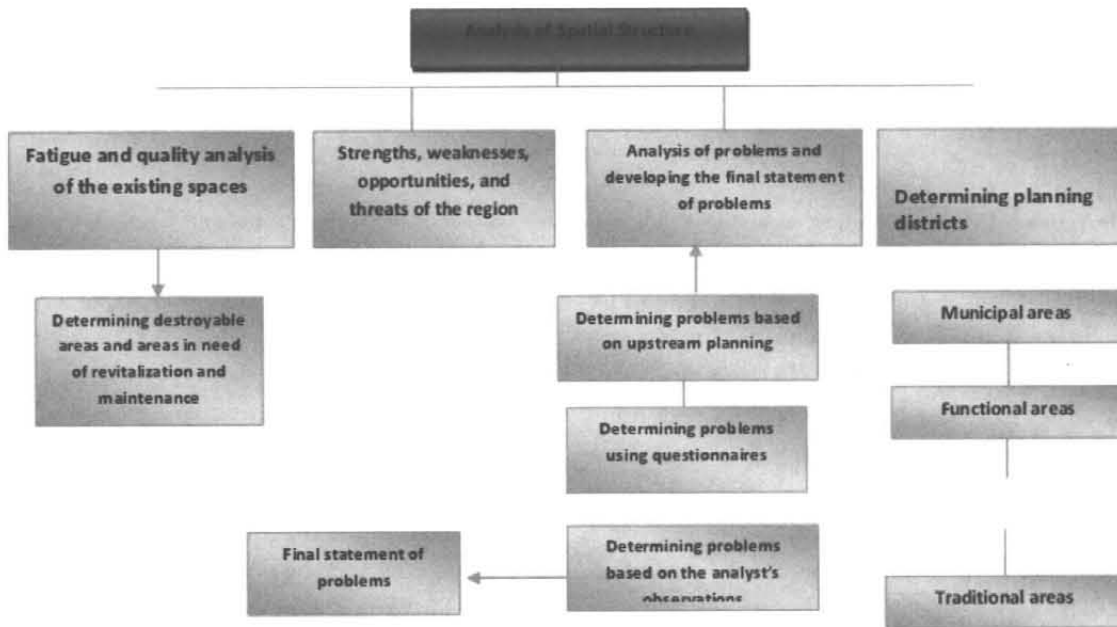
Fourth Period: Excessive and unsustainable development in rural areas and their conversion into worn-out and problematic rural-urban textures. This process started since the Islamic Revolution and still continues. In this period, many of the orchards, farmlands, and

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▲ Figure 1. Historical development of the Region 3 in Tehran (Sharan Consulting Engineers, 2007)



▲ Figure 2. Spatial structure analysis (Source: The web-sites of the Tehran Central Municipality and the Municipality of Region 3)

natural areas in the region were destroyed.

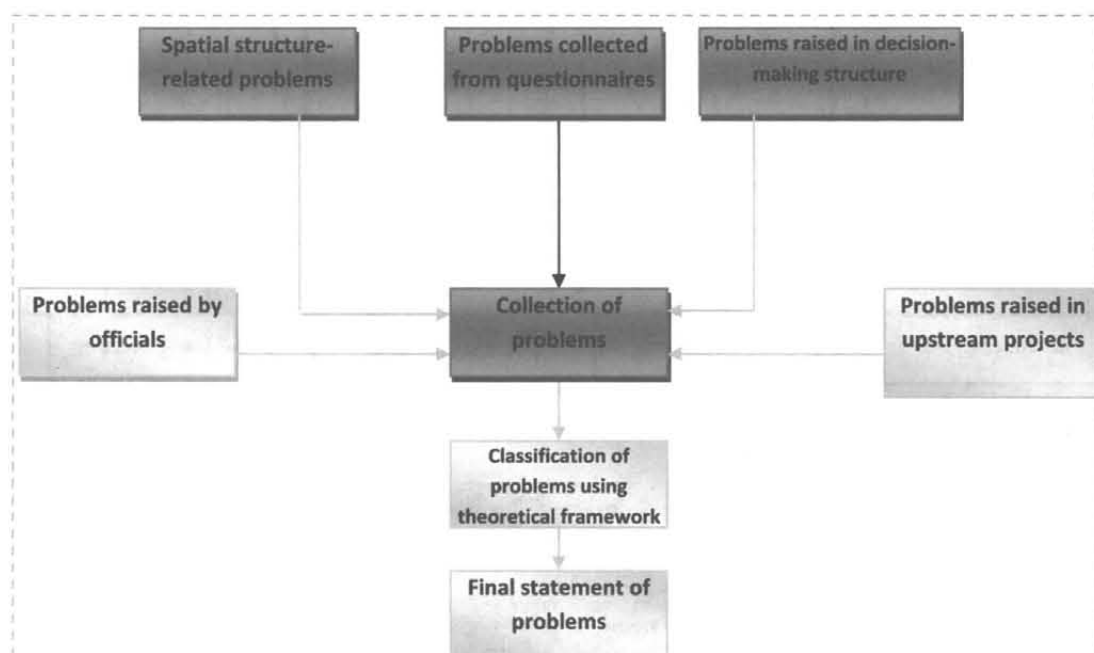
3.1.2. Analysis of the spatial structure of Region 3

This section analyzes the spatial structure of the region in question based on the previous studies and the recognition of current conditions. The purpose of this analysis is to analyze the spatial structure of the region and to identify planning districts to meet the challenges of planning for the region. To analyze the spatial structure of the Region 3, first based on the regional classifications such as official and traditional neighborhoods, the regional planning is determined and then the

problems at each neighborhood are analyzed through the problem diagnosis process to formulate final problem statement. Besides, the strengths, weaknesses, opportunities, and threats of the region are analyzed. Finally, the quality analysis of the existing spaces and the fatigue analysis are performed to determine destroyable areas and areas in need of revitalization and maintenance (See the figure below):

3.1.3. Analysis of planning problems in the region under study

Awareness of the problems is one of the most important stages of the planning process.



▲ Figure 3. Identification problems in Region 3 (Source: The web-sites of the Tehran Central Municipality and the Municipality of Region 3)

Such awareness makes the planning thinking is directed at solving the planning problems in the future and preventing their reoccurrence. In order to come up with a full understanding of problems, we need to explore all areas connected with the planning process. Upon the recognition of the problems, they are classified based on a clear theoretical framework. Then, it is necessary to determine an effective way to resolve the problems arise when activities done. This section aims to achieve the final statement of problems faced in the physical development of the Region 3. In this section, the problems that have been stated by people in the questionnaires as well as the difficulties and problems raised by the officials interviewed concerning the projects implemented in the region, then the problems are classified in the theoretical framework of the activities. Finally, the problems are summed up and the final statement of the problems is formulated in change planning of the region under study (See Figure 3):

3.1.4. Theoretical framework used to identify the planning problems

Planning problems in a problem diagnosis process or a description of the current oppor-

tunity and the ways to change this opportunity (a set of activities) are introduced. Besides, a sequence of activities (plans) is obtained by describing the desired opportunities (goals). This may direct the current opportunities towards the desired opportunities. Therefore, the first step in the diagnosis process of planning problems and the determination of planning and urban problems is to understand the nature of such problems.

The process of diagnosing problems begins with understanding the current opportunity and the expected opportunity in the future. The problem is, in fact, a question that should either be resolved or be decided. If a problem is detected it means that there is a goal or at least an acceptable opportunity that impliedly refers to the existence of a goal. Therefore, the problem can be defined as the distance between reality and the goals and finally the goals can be developed to detect the problems. In other words, the stage of goal setting can be performed simultaneously and in parallel with the problem detection process.

When introducing a problem or a set of problems, a number of questions can be posed such as: Why is there a problem? And how

it can be change into an opportunity (from the point of view of the possible causes of the problem and its impact). Besides, another question can be raised to determine the influence of the opportunity on the environment and the society in question (Who). Finally, there are two general approaches to detecting problems. First, problems are determined in advance by the employer and are placed at the planning agenda. Second, the detection of one's own problems is placed at the agenda.

Basically, in the detection and analysis problems, which eventually leads to the formulation of goals, evaluation and understanding of the relationships between the planner, the community under planning, decision-makers, and program implementers are of great importance. Because in the light of the relationship between the planner and the community under planning (i.e. the people), the planner can detect the problems of the community in the way they are expressed by people not as they way they are perceived by the planner himself. Besides, the planner can benefit from the decision-makers' and implementers' opinions about the problems when formulating the final statement of problems.

3.1.5. Problem detection and analysis/ Problem-finding in Region 3

This section presents a partial analysis of the problems in the Region 3; To do so, the problems in the existing documents are discussed to formulate the final statement of problems.

3.1.6. Evaluation and classification of problems based on existing documents

The problems discussed for the development projects in the Region 3 are classified in the four main areas: residential structures, municipal services, transport and traffic related problems, and environmental problems. These problems are classified based on the theoretical framework of activities.

4. Formulating planning goals in the Region 3 of Tehran

The most important step in the designing phase of the conduction system is urban plan-

ning and control. Activities done in the field of urban planning are looking for appropriate methods for the proposed options. The final stage of the change process in the region under study is planning/prescription stage. After choosing one of the planning methods/techniques, the inputs needed for the chosen method are derived from principles, presumptions, goals, and general frameworks under study obtained from previous planning stages. Finally, this stage addresses planning solutions including strategies, policies, and proposals. The entry into the operational realm and more detailed planning stages are followed by producing projects and their combinations lead to the production of plans.

Here the goal-setting techniques in urban planning are reviewed. Then the goals derived from the final statement of problems are summarized and the statement is offered. The aim of the strategic planning stage of the region under study is to produce some planning solutions, including strategies, policies followed by more detailed stages of producing plans and projects for the urban spaces available in the region under study.

4.1. Definition of goals

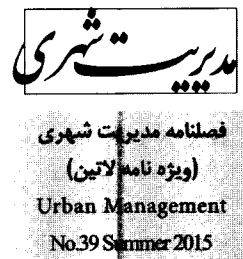
Goals can be divided into two categories of macro and micro goals defined as follows:

A.Macro goals: A macro- objective is a long-term, qualitative, vague, and general ideal derived from the community's values and aspirations. There is an intention in a macro objective towards which the planning is directed and is moving.

B.Micro goals: A micro objective is a means to achieve macro goals and the end point of an action at which planning attempts are formed and directed to achieve it. Therefore, the micro goals which are derived from macro goals are more detailed, clearer, shorter, and are mainly quantitative. Refining the macro goals begins by setting specific micro goals and ultimately leads to very clear suggestions.

4.2. Methods of setting planning goals

Goal setting in planning is performed by two



Thematic classification	Activities	Development planning goals
Intra-spatial	Residential	Protection of housing structures in all regional centers Restoration of housing structures in districts and neighborhoods withhold and worn-out structures Providing suitable housing for families living in areas under development with different income levels
	Service	Scattered and focused administrative and commercial centers, consistent and appropriate access to residential areas (in terms of walking distance and types of transportation)
	Public welfare	Providing public welfare proportional to the number of people living in areas under development Providing social security in all parts of the region under development
	Travel and movement	Population living in areas under development should have easily accessible and convenient public transport.
Inter-spatial	Energy transfer	All families living in areas under development should enjoy appropriate infrastructures All areas that are exposed to new residential development plans should have equal and consistent access to needed infrastructures

▲ Table 1. Development planning goals in the region under study; (Source: Research findings based on the data from development plan in the region under study: Technical and Civil Planning Office of the Interior Ministry)

general methods. Of course, there is a third method which is in fact a combination of these two methods.

4.3. Inferring goals from values

This is done through the following successive steps:

1. Determining planning clients;
2. Setting values and distributing them among planning clients;
3. Inferring goals from planning clients' values;
4. Setting macro goals based on hierarchical thematic priorities;
5. Setting standards for each macro objective;
6. Setting micro goals from macro goals;
7. Determining and deciding on the final series of micro objective (or series of options);
8. Tools needed to achieve micro goals: planning;
9. Assessment of tools used to achieve micro goals.

4.3. Inferring goals from problems

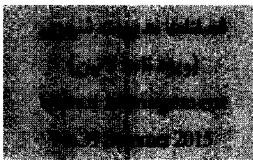
This involves the following steps:

1. Problem detection and analysis;
2. Determining macro and micro goals;
3. Formulating action strategies;

4.4. Formulating physical development planning goals in the region under study

Setting the development goals requires a new theoretical framework to create a new environment using problems and planning goals in Tehran as well as the goals set in previous planning stages. The theoretical framework used to set the development goals in the region under study is based on inter- and intra-spatial classification and the classification of micro-activities. The aim of such classifications is to determine categories, elements, and applications of spaces needed for the supplied lands. In these classifications, intra-spatial activities include residential, productive, and service activities plus public welfare. In addition,

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inter-spatial activities include travel and movement between locations and energy transfer.

5. Conclusion

The rapid and incessant growth of Tehran during the past 50 years has made it as the largest and most populous city in Iran. Today, Tehran is a city with two totally different aspects: On one hand, it is a city with considerable potentials and facilities of development and attracting more investments in all fields. On the other hand, it is facing complicated and wide-ranging problems due to the expansion of urban functions. Based on the field work done in the form of questionnaires and interviews with residents as well as the data collected on the urban development programs in Tehran, it can be concluded that the most important way to achieve identity-giving elements concerning the physical deviltment is information and awareness. Besides, it was noted that the citizen are familiar with the concept of space and interpret it in different ways. The previous studies show that the inclusion of all factors contributing to the control and management of the Tehran's physical structure should be done in a way that the low-income people can benefit most. In addition, the economic growth of the region under study must occur based on the recognition, assignment, and provision of these factors in the current context. Accordingly, the main questions addressed in this study are as follows:

-Do socioeconomic factors affect the physical development and the optimal land use in the Region 3 of the Tehran Municipality?

-What are the comprehensive development strategies (whether managerial, economic, social, and environmental) with a focus on the structure under study?

-What is the role of city managers and public groups in the physical development of the region under study?

Given the centrality of issues such as the increasing development and poverty reduction, the present study tried to address the establishment of social justice in the spatial-oper-

ational structures and distribution of services in the region under study. Concerning the strategic development planning in Tehran and its connection with the main development activities taken in this regard, this study has attempted to address the relevant prospects by coming up to a correct understanding of the planning domain. Besides, it aimed to develop and offer the related strategic programs based on the desired perspectives with a focus on monitoring operations. Therefore, the integrated and up-to-date management of the physical development of Region 3 can be introduced and utilized as an efficient tool in the urban planning.

The prospect for the future development of the Region 3 is in the need of scrutinizing the available capacities and then determining the physical development programs with emphasis on the spatial-operational structure of the region. And this is not possible without an integrated and unified management system. Improving the quality of urban environment is one of the important missions of urban planners and designers as shown in this study. The creation of legible, beautiful, diverse, safe, lively, vibrant, and creative physical spaces in which citizens perform their activities and enjoy a high quality life has been defined as an ideal prospect in this study. The availability of such spaces is a necessary condition for a thrived economic and social life, the rational use of resources, and the growth of social culture. What's more, Region 3 of Tehran is an area that must move towards the realization of the following objectives:

-Improvement of an excellent service role

-Development of tourism in the region at a larger urban scale

-Establishment of stable residence

6. Suggestions

The development of strategic and basic planning has attracted much attention in recent years and many activities have been performed in this regard. However, this line of activities has not come up to a final result as

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there are further grounds for much development and improvement. Accordingly, the first potential area in this regard is the preparation of databanks in all structural fields for the region under study and its related and neighboring regions. As such, the data and instructions needed must be provided for the municipality of the region and other relevant organizations and departments so that the needed actions be taken and optimal outcomes are obtained. Finally, it should be noted that other issues that must taken into account in order to enhance the development capacities in Tehran and especially in the region under study include the improvement of activities and advertising efficiency in the national and international arenas, the announcement of capacities and potentials available in the region in order to attract the investors' attention and also to pave the way for the further participation of the private sector in the provision of facilities and services needed.

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فصلنامه مدیریت شهری
(روزنامه شهر)
Urban Management
No.39 summer 2015



فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 197 - 208 ■

Received 29 Nov 2014; Accepted 3 Jan 2014

Identification and design of factors influencing nationalist of consumer by protection approach from small and medium enterprises (SMEs)

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Abstract

Supporting production and consumption of domestic goods is always a top priority in our country's economic and trade policy and a common approach in this regard, political and legal support and encourage the consumption of domestic goods by utilizing and stimulate patriotic feelings and pushing these feelings to use domestic goods and establish business of entrepreneurs. On this basis, the main problem of this study is to identify the components of the nationalist of consumer culture in support of small and medium enterprises. In this regard, and to respond to the problem mentioned the aim of this study is to take advantage from the research literature and referring to the opinions of experts, a model for nationalist of consumer culture in support of small and medium enterprises design. For achieve to purpose mentioned the Delphi method was used. Present results of Delphi, seven factors influencing nationalist consumer in supporting small and medium enterprises to include programing in the national media, teaching religious teaching to youth raising the social value of Iranian products, banning the propaganda of foreign products, requiring executive agencies to the use of domestic goods, enhance the functional value of Iranian products and enhance the emotional value of Iranian products detected.

Key words: *Small and medium enterprises, making culture, nationalist of consumer*

Introduction

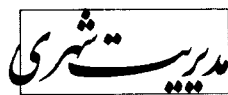
Small and medium enterprises (SMES) major supplier innovation and entrepreneurship and Jiu an, 1989) (king large and vital part of the global economy (Oliver Halers, 2013; IFERA, 2003) and are an important part of large corporate growth (3G E learning FZLIC, 2014). A survey conducted of 76 countries shows, the amount of helping SMES to the Gross National Product in underdeveloped countries 16 precents, in developing countries 39 precents and in developed countries is 51% (Ayyagari, et al., 2003, 26). In Iran, the share of small and medium businesses in the economy is very impressive way that 99.4 precents of existing business constitutes to SMES and more than 60 precents of the private-sector workforce in place and the share of value added of them in the economy are estimated at 34 precents (Seyed Amiri, 2014). Despite the importance of irrefutable SMES in economic development, but have common problems that performance and their survival to endanger (Lee et al., 2012) as from the every three companies launched, in 1980, only one of them up to year of 2000 has been remained (Seyed Amiri, 2014). In our country, also according to the latest official reports, 88 thousand industrial units of the country, 81 thousand of them are small and medium industrial units of that number, 27.683 units (82%) are active and 9,726 units with a capacity of less than 50%, 9,596 units with a capacity of between 50 to 70 percent and 8,360 units with a capacity of more than 70% are active. In other words, nearly half of them are closed or semi-closed and only less than a quarter of the units in a relatively acceptable conditions (producing more than 70% of nominal capacity) are active. Morris (2006), the most important barriers of their growth can be divided into two categories: internal and external factors (Morrison, 2006, 118). External factors include: competition (Lind, 2009), economic and political crises of governments (Per Lnid, 2012), access to the financial resources (Schleuwagen and Goed-

huys, 2002) and corruption (Padayachee, 2010) are. Internal factors include: competence of management (Macpherson and Holt, 2007; Barrat-Pugh, 2005; Tannock, et al., 2002; APO, 2001), lack of inhibition of workforce (Schleuwagen and Goedhuys, 2002; Holden, et al., 2007; APO, 2001; OSMEP, 2007b) marketing (Brush, et al., 2009; OSMEP, 2009; APO, 2001), technology (OSMEP, 2007b) and change managing (Heracleous, 2003; Porter, 1997) is. Marketing and market management is often the main problem SMES owners are faced with it, Also this factor as the most critical issue of all business activity, an integral part of survival, growth and development of small and medium companies is seen (Carson, 2010). In our country, Supporting production and consumption of domestic goods is always a top priority in economic and trade policy Has been located And a common approach in this regard, political and legal support and encourage the consumption of domestic goods by utilizing and stimulate patriotic feelings and emotions to the pushing the consumption of domestic goods and the creation of business entrepreneurs. Therefore, this study attempts to comprehensive and practical model of the factors affecting consumer nationalist with the approach of supporting small and medium enterprises, provide. To achieve this goal, order of article includes an introduction and expression of the problem, the theoretical and research background, research objectives, methodology, process research, form and composition of the panel Delphi, Delphi implementation process, a discussion of the results of the Delphi method, design the conceptual model, conclusions and references are.

Theoretical Principles and research background

The concept of making culture

Making culture can be considered process that caused mass content, structural, partial reforms and social participation through community engagement provides the subjectivism (Encyclopedia Britannica, 2002, Vol. 16).



Making culture through factors such as family, workplace community, academia and the media is created (Boonghee Yoo and Naveen Donthu, 2005). And changing the mindsets, beliefs, ideologies and impart information and ways of life are in the process of matching people with the environment (Bennet, 1973). Making culture in two ways of acculturation and cultureless done. (Carlson, et al, 2008; Adorno, 1993; Lull, 2000)

Consumer nationalist

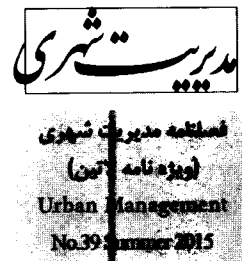
Nationalist, simply, the process of categories the people In terms of national or ethnic origin is (Joardar, et al., 2013). But in term of economic to consumer beliefs about to be suitability and to be morality of buying the created products over foreign products (Shimp and Sharma 1987, p. 280). In nationalist the values of the host country is used as a standard by which the people less familiar domestic products to the foreign products prefer (Kaynak and Kara 2004; Suh and Kwon 2002; Supphellen and Rittenburg 2001; Yu and Albaum 2002). Because they believe that the purchase of foreign products to businesses and the local economy hurts. So one of the big challenges in the today global environment is the reluctance of consumers to buy domestic products. (Donthu and Boonghee Yoo, 2005) this reluctance from a consumer to other a consumer within a country is different, as studies have shown that patriotism among the elderly, women, people with low education and low-income people, as well as those with psychological factors such as cultural insight closed high patriotism, strong nationalism, high conservatism and high pluralism is more (Balabanis and Diamantopoulos 2004); (Sharma, Shimp, and Shin 1995). Bias against imports also among people with positive attitudes toward their host country is greater (Durvasula, Andrews, and Netemeyer 1997; Netemeyer, Durvasula, and Lichtenstein 1991). In this basis, a consumer nationalist is product of making culture. (Boonghee Yoo and Naveen Donthu, 2005) Therefore, understanding the role that cultural orientation in

shaping consumer attitudes and behavior towards domestic and foreign products plays is important (Kluckhohn and Strodtbeck 1961; Rokeach 1973); (Wallendorf and Reilly 1983). In fact making culture, as the individual values that cause people prefer a certain style from affairs to other affairs. (Hofstede 1980, p. 19) making culture as a result of personal learning that through interaction with the social environment, such as family, workplace community, host country, and the media is created (Boonghee Yoo and Naveen Donthu, 2005) Since the making culture cannot be inherited from the past, must through factors such as experience with the target group, personality, family, friends, television, books, and schools that help to shape the nationalist consumer modeling. (Fishbein 1996) Accordingly, the making culture, a system of standards and societal norms that are shared by large groups of populations and in experimentally standards and values by scholars like (Hofstede, 2001; Schwartz, 1994; House et al., 2002; Inglehart and welzel, 2005) was identified and experimentally shown that between nationalist and cultural aspects of consumer relations, there is a significant and important. (Steenkamp, et al., 2002; Kale and Barnes 1992) Background and reference of measures, nationalist consumer In order to identify factors affecting consumer nationalist in support of Small and medium enterprises, the research literature was reviewed. Table (1) factors affecting consumer nationalist in support of Small and medium enterprises from the perspective of researchers has been shown.

Research Objectives

Some of the most important objectives of this study are as follows:

1. Identify the components of the nationalist consumer making culture in support of Small and medium enterprises from the perspective of the research literature;
2. Identify the components of the nationalist consumer making culture from the perspective of experts and activists in support of Small



Effective factors	Author and year	Title
Programming in the national media	Motamed Nejad, 1996, Sarrami: 2001 Ayatollah Khamenei, 2011 Morteza Tavakol, 2014 Tahereh Hasani shure, 2012 Grossberg and others, 1992 Brdiv, 1990 Purayeh, 2007 Carlson et al., 2008 Dehshiri, 2005 Bednarts, 2005 Bourne, 2000 Bong-Hee Yoo et al., 2005 Kosari, M. 1998	Media functions on the concept of entrepreneurship Pathology of entrepreneurial culture in the media making culture, to use domestic goods making culture, the most important way of support of the national production making culture in the model of national production and consumption Media and making culture modeling and innovation behavior Media and changes in consumer trends
Teaching religious doctrinal to youth	Schein, 2004, p. 173.	The characteristics of culture of entrepreneurship to youth making culture for consumption of domestic goods The role of the teacher in the making culture of domestic consumption making culture and cultural reform proposal
Enhance the functional value of Iranian goods	Ayatollah Khamenei, 2012	Culture and youth entrepreneurship making culture in the model of the national consumption and production Key aspects model of value from the perspective of customer value from the perspective of customer
Enhancing the emotional value of Iranian products	Tahereh Hasani shure, 2012	Culture and youth entrepreneurship Key aspects model of value from the perspective of customer value from the perspective of customer
Family and modify consumption patterns	Afgheh, Seyed Morteza. 2003,	making culture for consumption of domestic goods making culture in the model of the national consumption and production
Requiring executive agencies to use of domestic products	(Tip verse of 74 and verse repentance of 122 and Maryam, verse of 42 and 45), poets, verse of 214	making culture for consumption of domestic goods making culture in the model of the national consumption and production
banning the advertising of foreign products	Bong-Hee Yoo et al., 2005	The role of the teacher in the making culture for domestic consumption
Enhancing the social value of Iranian products	Fish bin, 1996	making culture in the model of the national consumption and production Key aspects model of value from the perspective of customer value from the perspective of customer

▲ Table 1. Factors affecting consumer nationalist in support of Small and medium enterprises

and medium enterprises, small and medium business;

3. The combination of theoretical and practical components influencing nationalist consumer making culture in support of Small and medium enterprises.

Research Methodology

Choosing research method, one of the most important and most technical steps that a researcher should follow it with a special sensitivity, as the choosing research method, is by the research objectives, therefore, a researcher must choose the way that this method, while having the maximum benefits and at least disadvantages, to achieve the research objectives Guarantee. In this study with the help of Delphi method, components of nationalist consumer making culture in support of Small and medium enterprises in the form of a comprehensive conceptual model is presented.

Process of doing research

In Figure (1) the process of doing research is based on Delphi method, has been shown. As in Figure 1 can be seen, In the process of doing research is divided into two parallel sections The first part of the process of doing research, it is clear that the right of Figure 1, the research literature in order to identify components of nationalist consumer making culture in support of Small and medium enterprises is used. The second part of doing research, it is clear that the left side of Figure 1 has been shown how to identify and formation of Delphi panel. After the formation of the Working Group of Delphi And 4 rounds of Delphi model of nationalist consumer making culture is designed to support of Small and medium enterprises.

The formation and composition of panel

Delphi method is carried out with the participation of people with knowledge and expertise in their subject. These people are known as the Delphi panel. Selection of members eligible for Delphi panel of the most important steps of this method is considered, because the validity of the results depends on

the competence and knowledge of this device. These people, contrary to what in quantitative surveys is common, are not elected on the basis of random sampling. Because this method is group mechanism for decision-making and the need for highly-qualified specialists who have had deep understanding and knowledge of research' subject, although the number of members of panel in different studies is vary, but when there is congruence between panel members, about 10 to 20 members is recommended. Accordingly, the number of members of Delphi panel for this study 22 people for non-random sampling and a combination of objective methods or judgment were selected. These people eligible one or more of the following features were:

A. Faculty members and experts in the field of management and marketing

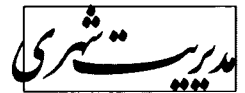
B. Manager, expert and owner of Small and medium enterprises

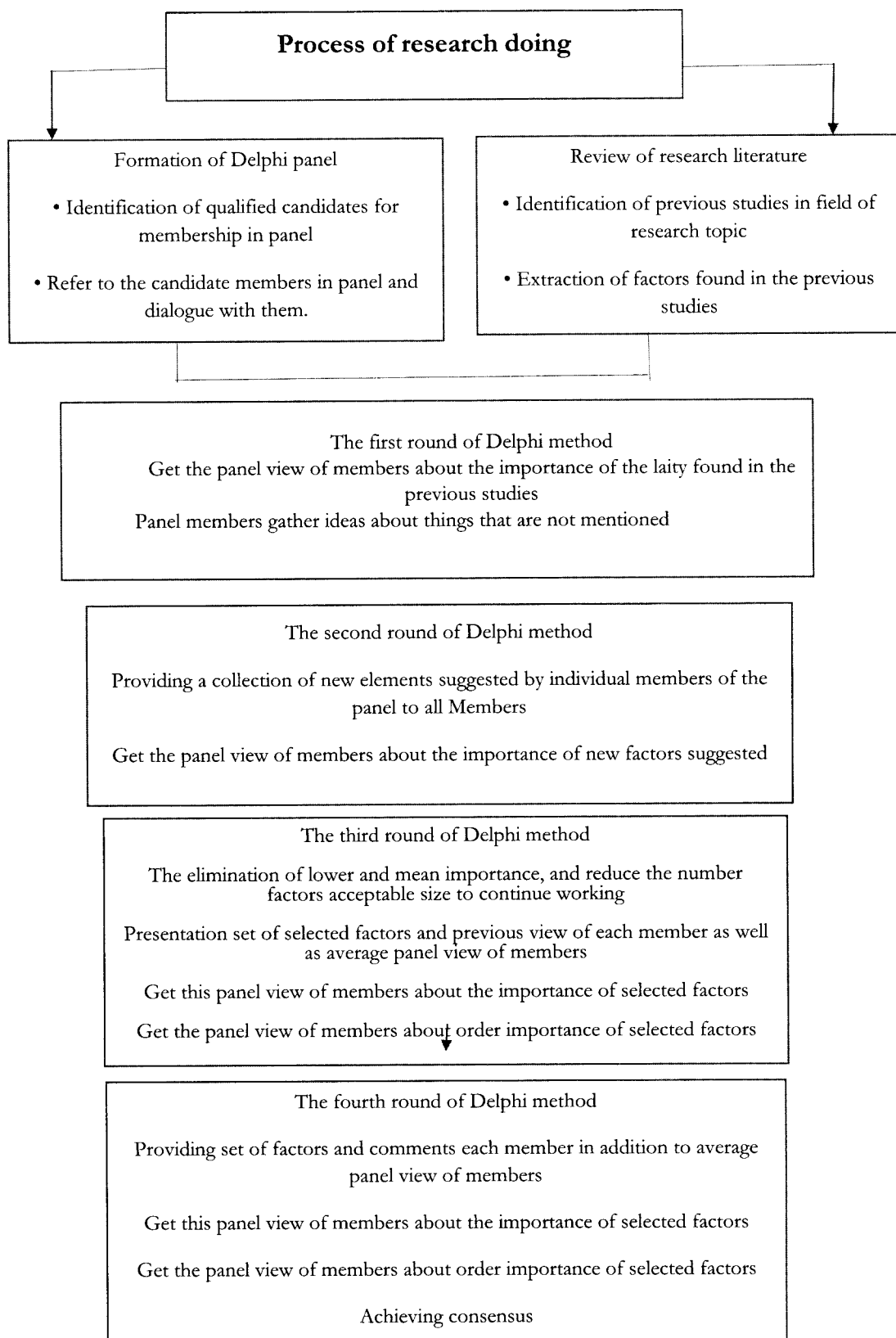
Process of implementing the Delphi method

In this study, the Delphi method was performed in a total of four rounds. In the first round, a list of nationalism consumer making culture components in support of small and medium enterprises that were derived from previous studies (factors listed in Table 1), To determine the importance of them to the members were. In addition, they were requested who their ideas about the factors that are not present in the list. In the second round, complex factors that were suggested in the first round, was to determine level of importance to them. In the third and fourth period, opinions of members about the factors that in the first period and the second had been diagnosed, again received. After the fourth round of the Delphi Method and achieve to the desired consensus ended. In Tables 2 to 5 are shown the results of the implementation of the 4 rounds of Delphi.

Discussion of the results of the Delphi method

The results of the four rounds of the Delphi





nationalism consumer components	Number of Replies	Average of Replies	Standard deviation of Replies	Kendall coefficient	Order of importance (based on average)
Family and modify consumption patterns	22	3.90	1.10	0.01	7
Teaching religious doctrine to youth	22	4.41	0.73	0.31	1
Programming in the national media	22	4.27	0.70	0.00	3
Enhancing the social value of Iranian products	22	4.32	0.71	0.09	2
Banning the advertising of foreign products	22	4.27	0.70	0.03	3
Requiring executive agencies to use domestic products	22	4.09	0.75	0.01	6
Enhance the functional value of Iranian goods	22	4.23	0.81	0.19	5
Enhancing the emotional value of Iranian products	22	4.23	0.75	0.00	4

▲ Table 2. The results of the first round of the Delphi method of execution nationalism of consumer making culture components in support of SMEs

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nationalism consumer components	Number of Replies	Average of Replies	Standard deviation of Replies	Kendall coefficient	Order of importance (based on average)
Family and modify consumption patterns	22	3.72	0.88	0.38	7
Teaching religious doctrine to youth	22	4.32	0.64	0.23	1
Programming in the national media	22	4.23	0.81	0.03	5
Enhancing the social value of Iranian products	22	4.32	0.71	0.15	2
Banning the advertising of foreign products	22	4.32	0.64	0.15	1
Requiring executive agencies to use domestic products	22	4.14	0.77	0.00	6
Enhance the functional value of Iranian goods	22	4.24	0.76	0.15	4
Enhancing the emotional value of Iranian products	22	4.27	0.76	0.08	3

▲ Table 3. the results of the second round of the Delphi method of execution nationalism of consumer making culture components in support of SMEs

nationalism consumer components	Number of Replies	Average of Replies	Standard deviation of Replies	Kendall coefficient	Order of importance (based on average)
Teaching religious doctrine to youth	22	4.36	0.65	0.015	1
Programming in the national media	22	4.27	0.82	0.01	4
Enhancing the social value of Iranian products	22	4.36	0.72	0.08	2
Banning the advertising of foreign products	22	4.36	0.65	0.08	1
Requiring executive agencies to use domestic products	22	4.23	0.75	0.01	6
Enhance the functional value of Iranian goods	22	4.24	0.76	0.03	5
Enhancing the emotional value of Iranian products	22	4.32	0.78	0.03	3

▲ Table 4. The results of the third round of the Delphi method of execution nationalism of consumer making culture components in support of SMEs

nationalism consumer components	Number of Replies	Average of Replies	Standard deviation of Replies	Kendall coefficient	Order of importance (based on average)
Teaching religious doctrine to youth	22	4.36	0.65	0.15	1
Programming in the national media	22	4.27	0.82	0.01	4
Enhancing the social value of Iranian products	22	4.36	0.72	0.08	2
Banning the advertising of foreign products	22	4.36	0.65	0.08	1
Requiring executive agencies to use domestic products	22	4.23	0.75	0.01	6
Enhance the functional value of Iranian goods	22	4.24	0.76	0.03	5
Enhancing the emotional value of Iranian products	22	4.32	0.78	0.03	3

▲ Table 5. The results of the fourth round of the Delphi method of execution nationalism of consumer making culture components in support of SMEs

method show the following reasons: Consensus was reached among the members of the panel and can be ended repetition of periods: mean of Comments panel members 4 to up is and this represents very much and great deal among them. In the first round of Delphi, variables that have the lowest average re-

sponses (less than 3.50) were we have removed and went to the second round of Delphi. Delphi also repeated in the second round Variables that have the lowest average responses (less than 3.80) were we have removed and we went to the third round of Delphi. In the third round of Delphi Considering that aver-

age responses was from 4 to above, none of the variables have not removed, and we went to the fourth round. In the fourth round of Delphi Also Repeat the average score of the third round and the reliability of results and reduces the standard deviation of replies of the Members from 1.10 in the first and second period to 0.88 in the fourth round, consensus was reached among members of the panel as a result of repeated rounds of Delphi stopped and Results in Table (5) is given.

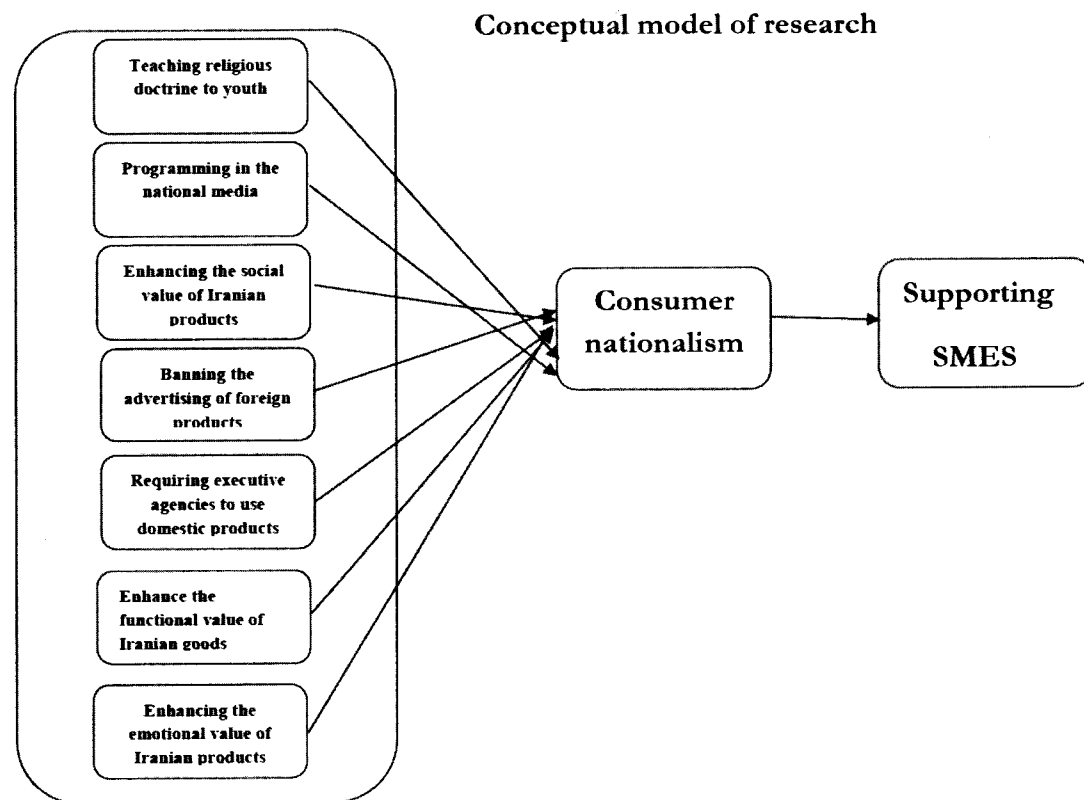
The design of conceptual model of research

The conceptual model of research is an analytical tool by help it study variables and the relationship between them is determined. In this study, by combining elements of nationalism consumer making culture in support of small and medium enterprises that were obtained through the Delphi method, as listed in the conceptual model of research is shown below.

Conclusion

To check model fitting and examine the relationship between variables Partial least squares methods of structural equation modeling approach of software Smart PLS is used.

The results of factor loadings coefficients components as Table 6 has been shown the proper amount of factor loadings coefficients, which are more 0.40 (Hulland, 1999). So model was appropriate in terms of reliability. And to determine the significant means Is between nationalism consumer making culture by supporting small and medium enterprises there is a positive interface T significant coefficient was used that its value for this structure was equal to 22.971 because it is more than 1.96 95 at confidence interval percent, meaningful of it was confirmed, and in terms of order importance of factors as you can see in Table, banning religious education to youth and pro-



▲ Digram 1. Factors affecting consumer nationalism

nationalism components	consumer	Factor loadings	Order of importance (based on average)
Teaching religious doctrine to youth		0.84	1
Programming in the national media		0.72	4
Enhancing the social value of Iranian products		0.82	2
Banning the advertising of foreign products		0.71	1
Requiring executive agencies to use domestic products		0.84	6
Enhance the functional value of Iranian goods		0.88	5
Enhancing the emotional value of Iranian products		0.085	3

▲ Table 6. Factor loadings coefficients of Effective factors on consumer nationalism

mote foreign products with each other have the highest average so have the greatest impact on the consumer nationalism.

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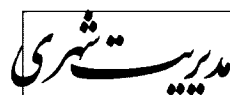
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Urban management

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Received 28 Oct 2014; Accepted 17 Jan 2015

Analysis of architectural structure and urban design (mosque - shrine) of Khwaja Abu Nasr Parsa in Timurid period of Iran in Balkh, Afghanistan

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Abstract

The shrines are monument of the deceased person which are constructed for respecting and honoring the memory of the deceased person and rely on spiritual concepts such as eternity, death etc. In this paper, attempt has been made to analyze architectural structure of Khwaja Abu Nasr Parsa in Balkh, Afghanistan which was part of Iran in the Timurids period and Khorasan (one province in Iran) region. This period is one of the most important periods for application of the shrine monuments. This shrine is one of the most important shrines in the Timurids period and probably is one of the known historical monuments of Balkh and also plays role of mosque which is called a kind of shrine mosque. Research method of this paper is historical documentary and its analysis method is descriptive –analytical. So, all types of decorations and architectural physical elements of this monument are studied and results from magnificence are given.

Keywords: *shrine, Abu Nasr Parsa, Balkh, Timurids period, Iran, Afghanistan*

Introduction

Shrine monument for the Iranian great men has been considered more than other Islamic countries because the Iranians respected for their saints and great men and sanctified them and constructed shrines for eternizing names of these great men, humanitarians and famous people. Many of these shrines remained in different periods in Iran and one of the factors of their survival is respect for the great men and the past generations (Hatam, 2000: 102).

Shrine is the building in which one or more religious or political persons were buried. These buildings can be divided into two groups of religious (pilgrimage) shrines and non-religious shrines. Religious shrines have been known as Imamzadeh (Shrine of Imam's children) in most cities and villages and have special credit compared with other Islamic monuments (except for mosques). Shrine monuments have been developed over time and have been converted from an ordinary shrine into very splendid complexes like Mashhad, Qom, Bastam and Sheikh Safi monuments. Only in Islamic period of Iran, construction of shrines has such long history, unique architectural characteristics and splendid decorations. Such buildings have been known as tower, dome, tomb and shrine (Shateryian, 2011: 363). Shrine construction art reached its highest point in centuries 14 and 15. Century 15 shrines indicate continuous searches for new forms while the most noticeable innovation of Timurids period was conversion of the shrine into the main element in an architectural complex (Puganchenkova, 2008: 86&88).

One of the important old monuments in Afghanistan is Khwaja Abu Nasr Parsa or Green Mosque which is located in Balkh old city. This monument provided the last opportunity for emergence of Gūr-e Amīr Tomb. This architecture is spectacular, explicit and frank. It is unimaginable in artifices, innovation and appearance of disproportionate forms in south and west of Iran. Such condition shows

end of renaissance period of the Timurids period (Pope, 1999: 1958).

Tombs in Timurid period

The tradition of respecting Gnostics and Sufis was a problem which was aggravated by Timurids' special respect for their shrines and prevented him from committing all of his crimes to some extent was strong in post Islamic period of Iran all the time and continued in 9th century and his tombs were competing with Sultan's tombs from the viewpoint of majesty and glory (Pope, Ackerman, 2008:1358).

Tombs construction art culminated during 15th and 16th centuries. Architects were competing with each other in building these unique grave buildings. Separate graves which were prevalent before were almost rare in Timurid era. One of the separate tombs of Timurid period was Rokh Abad tomb which was built in A.D. 1480 for Sheykh Borhan Addin Sagharchi in Samarkand. In this period, tomb with its unique saloon which has usually dome and pre-vault (Arch in front) was considered as a part of grave or religious complex buildings including mosque, school and monastery. Shah Zende complex is the most interesting example of these buildings. A general change occurred in this era in the shape of these buildings. Shape and size of dome were changed with cubic base: simple spherical – conical domes were replaced by two-layered domes. Its bowl was placed on a tholobate which is a type of long stem with flat or cylindrical angle. Vault and tholobate view was increasingly interesting and ornaments faced similar change. 15th century tombs indicate continuous search for new forms. Some of them were octagonal, some of them had an arch in front pre-vault and others were pyramidal with an arch in front party (Puganchenkova, 2008:86, 87).

In late 15th century in Khorasan, tomb found more complex geometric plan which was as accurate as previous ones. Square and octagonal complex allowed access to concave and convex shapes, examples of which are Sheykh





▲ Figure 1. Iran in the Timurids period (<http://historum.com>)

Zadeh Abdollah tomb in Herat and Mumu Sharifan shrine in Ghazneh (a city in Afghanistan). Timurid period architects competed with each other in building more complex graves which sometimes consisted of tens of cells with different shapes and applications. Cheshme Ayyub Monument in Bokhara is apparently one of the first samples of these buildings. Complicated tombs of Timurid time took wider dimensions. For example, Darossyadat in Shahre Sabz (a city in Afghanistan) was built as tomb for Timur and his sons and Ahmad Yastavi's (A Gnostic poet) grave located in north of Central Asia in Turkistan which was respected by people. These buildings are in elongated rectangular form having a long pre-vault in their entrance and one or more domes above of them. The most drastic innovation of Timurid period was change of tombs to a

main element in an architectural complex (Puganchenkova, 2008: 88, 89).

The Timurids period in Iran

Geographic location of the tomb

Balkh is one of the most ancient center of history and religion and human policy and the first place of Arian immigrants (Vaez Balkhi, 1971: 21). In Islamic sources, it is known as Omo-al-balad, Omo-al-Ghara and Dar-al-ejtihad and Dar-al-faghahe. Its gates are always open to civilization world and this city has been the meeting place of scientific and religious thoughts and views (Mashayekh Faridani, 1997:7). Importance of Balkh was due to its centrality. It means that it is located in western, eastern, northern and southern borders and eastern civilized part and culture of Iran. Balkh is one of the most ancient large cities of Amudarya basin (Meftah, 1997: 100).

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▲ Picture 2. today's Afghanistan in Timurid period of Iran (<http://mediaevalmusings.wordpress.com>)



▲ Picture 3. position of Balkh in today's Afghanistan (<http://www.lib.utexas.edu>)

Balkh was the governor's court in long periods. The presence of the strong enclosure of Balkh confirms this claim. At that time, Balkh was not the governor's court but it was sometimes center of provisional government (Meftah, 1997: 121). Dar-al-emareh of Khorasan remained from Akasareh to the late Taherian period in Balkh and Merv (a city in Afghanistan)(Mostufi, 1997: 182).

The sacred shrines and places are abundant in Balkh. Muslims call tomb of the sacred and religious persons "Mazar" (shrine). These shrines sometimes had building and some shrines lacked such building. According to writings of seventy sheikhs, many sheikhs were buried in Balkh but shrines of some of them are not specified. Balkh tombs and shrines were located not only inside the city but also out of the city which was near gates of the cities in distance of 100 m to some km from the walls (Meftah, 1997: 182).

Khwaja Abu Nasr Parsa

Mohammad ebne Mohammad Hafezi Balkhari is one of the Sufis of Naghsh Bandieh Dynasty in Balkh. He was known as Burhanuddin, Hafezeddin and Nasreddin. Abu Nasr Parsa is son and pupil of the scholar and Sufi of Bokhara, Mohammad Parsa who was known as science and practice (Ligabue, Salvatori, 1990:189). His father was Khwaja Mohammad Parsa Bokharaee was one of the leaders of the disciples and substitutes of Khwaja Abu Nasr

Parsa, whose Persian works have been left up to now. Although Abu Nasr reached his own father in religious and mystical path, he didn't show his condition and capability. He held narration course sessions and one of his works which is a Persian thesis is available in Toshkent Oriental Institute. He died in 865 A.H. in Balkh (some of the researchers of The Center for the Great Islamic Encyclopedia, 1994: 317).

Khwaja Abu Nasr Parsa Mosque-Shrine

Khwaja Abu Nasr Parsa shrine is located in center of the city and is regarded as one of the great mosques of Balkh and is highly reputable. Khwaja Abu Nasr Parsa shrine is adjacent to this mosque. This mosque is one of the splendid mosques which was renovated and reconstructed in 1005 A.H. and beautiful tiling along with vaulting and the best paints and designs are available in it. Dome and its surrounding walls with porticos and chambers have been tiled and its higher stories and walls have been destroyed over time. Style of this building and its decoration related to Timurids period architecture (Ligabue, Salvatori, 1990: 189). The mosque had a large saloon which had some gates, altar and podium. Long dome, good decoration, paintings and inscription astonish the spectator though its design and decoration were performed after its construction. It seems that Khwaja Abu Nasr Parsa mosque or Green Mosque has been constructed after



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▲ Figure 4. (Right hand)- Khwaja Abu Nasr Parsa shrine (view from the eastern side), source (<http://tobecontinued.persianblog.ir>)



▲ Figure 5 (left hand) Khwaja Abu Nasr Parsa shrine (view from the northern side), source (<http://Archnet.org>)



▲ Figure 6. (Right hand)- Khwaja Abu Nasr Parsa shrine (view from north), source (<http://kufic.info/architecture/balkh/parsa>)



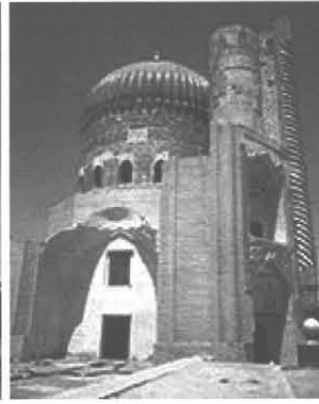
▲ Figure 7 (left hand) - Khwaja Abu Nasr Parsa shrine (view from the front park), source (<http://www.farsnews.com> , Nour Mohammad Jamali)



▲ Figure 8 (right hand) Khwaja Abu Nasr Parsa shrine (view from east), source ([http:// Archnet .org](http://Archnet.org))



▲ Figure 9 (middle)- Khwaja Abu Nasr Parsa shrine (view from northeast, vault and entrance part), source (<http:// Archnet .org>)



▲ Figure 10 (left hand)- Khwaja Abu Nasr Parsa shrine (view from the east), source (<http:// Archnet .org>)

his death (Mokhtaref, 1993: 61). Other evidences show that this building is a monumental shrine which is constructed not on tomb of Abu Nasr but on the back of it. According to local narration, an unspecified tomb is located in the precinct in front of Abu Nasr's tomb (Wilber, Golombek, 1995: 406). This mosque was repaired first by command of Mir Farid Arghoon in 867 A.H. and the subsequent repairs have been done in 1005 A.H. (Mokhtarof, 1993: 61).

Studying the entire decorations

All materials and decorations are given briefly in Table1.

Types of decorations

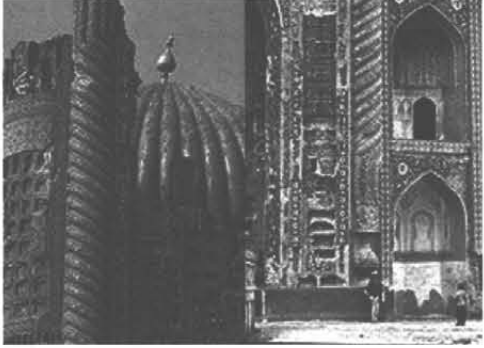
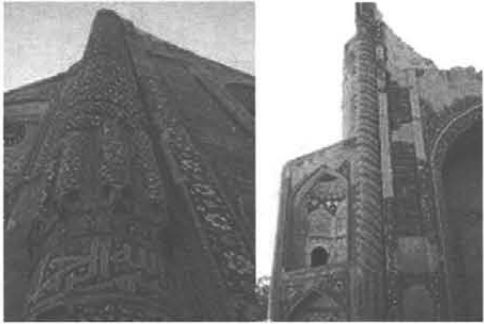
Abu Nasr Parsa shrine-mosque has different decorations. Types of these decorations and where they have been applied are dealt with in Table2 and their pictures are studied.

Physical elements of mosque –shrine

Physical elements and the distinguished elements which have been applied in architecture of this building, their application, materials etc and also the horizontal and vertical sections are studied in Table3.

Conclusion

Importance of this mosque-shrine has been written in some books. This shrine is one of the important buildings in Timurids period in Balkh as details of decorations, physical elements and their architecture were studied. All are based on architectural specifications of Timurids period. According to the conducted studies, this building has some unique specifications, for example, connection of tiling decorations inside the building. Type of the building location is such that because kiblrah direction in this city is in southwest, the build-

The entire materials and decorations	Pictures of the materials and decorations
External walls, tholobate, dome: beautiful mosaics with brick and tile.	 
Walls: white	
Dome, side rooms and vaults: decorative paint (Puganchankova , 2008: 222)	
Inside altar: tile work.	
In decorations, there are geometrical designs as thousand- texture style (Wilber, Golombek, 1995: 407)	
In some parts of the shrine b, there are engravings, paintings, designs and Arabic calligraphies (Mokhtaref, 1993: 61).	
Paints and tiling style are different from what is found in other places. Special skill has been applied in tile work. Large planes have been assembled on a brick skeleton. It appears that this skill is not found in another place but Balkh.	
Spiral columns which limit main façade are covered with tile work which is silvery blue (Pope, 1999: 1337).	
Vertexes of eight meshy windows and eight closed false arcs have been filled with cornices and are repeated alternatively. They are combined with a cross arcs followed by vaulted instrumentation.	

▲ Figure 11,12,13,14. Images
Source: <http://Archnet.org>

▲ Table 1. study of the entire decorations and materials applied in Khwaja Abu Nasr Parsa shrine-mosque, source: Author.

ing has leaned to the kiblah direction. This building has many wonders since the pre-Islamic period. Its material manifestations have spiritual beauty in addition to apparent beauty which originates from Islamic architecture. Islamic architecture has higher meaning and includes elevation and divinity. At the end, general study of this building and its manifestations shows that all of them anticipate these specifications in mind:

- Order and delicacy in decorations;
- Excessive use of geometrical designs in tile work;
- Use of many inscriptions in praising God;
- Extensive use of plasterwork and brickwork;
- Use of paint in embossing designs;






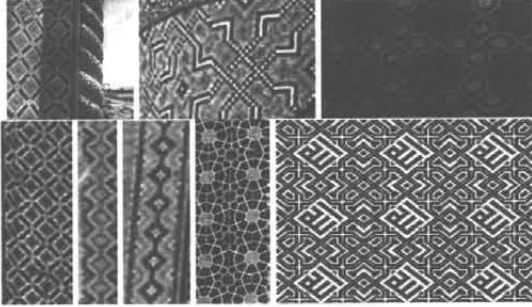
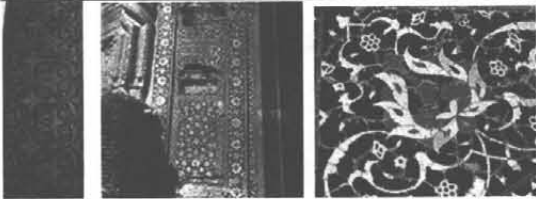

- Excessive use of blue color which was favorable to the Timurids and it is greenish in this building.

- Excessive use of false dome inside and outside the building and the internal false arcs are deep.






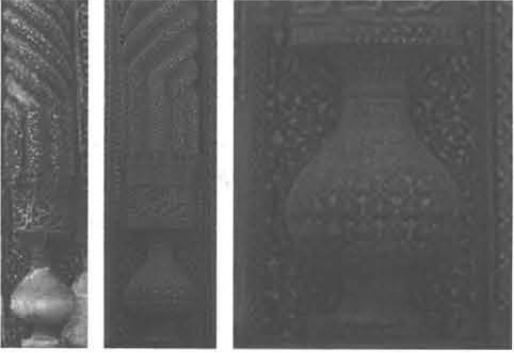
- Use of axial and central symmetry in the plan which has been converted into cross with deep false arcs;

- Use of entrance portal and splendid dome.



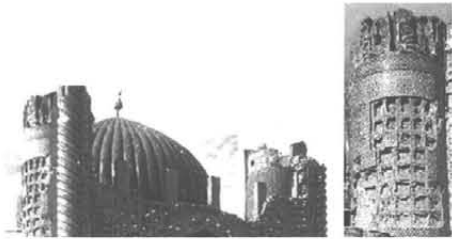
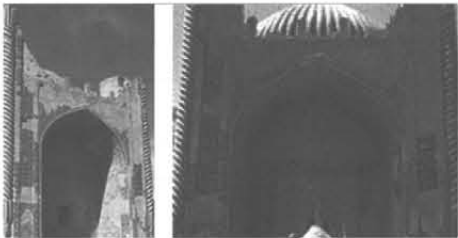
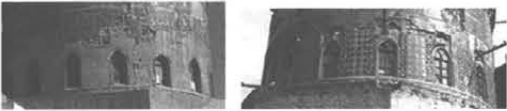
These specifications have gathered in this building beautifully and created one of the splendid and reputable buildings of Timurids period.

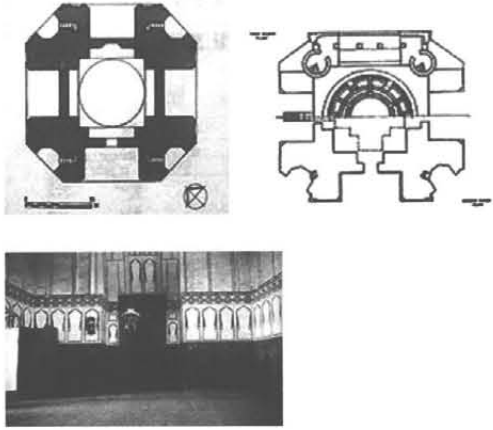
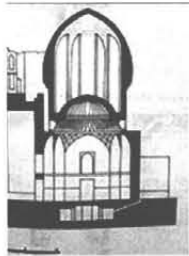

Types of decorations	Symbol and place	Pictures	
Tile work	As inscription	 Around the portal and entrance door	 On two minarets behind the arc or entrance portal
		 On Tholobate	 On the wall on the right hand of the patio and entrance portal
		 In lower parts of the helical columns around the portal	
	It is found as geometrical designs almost in most of the decorated façade.		
It is found as Islamic designs and floral designs almost in most of the decorated façade.			
It has been hidden as insulating materials of the dome with small laminated ceramics which are blue colored.			

▲ Table 2. study of all decorations in Khwaja Abu Nasr Parsa shrine-mosque, source: Author; Images Source: <http://Archnet.org>, <http://www.kufic.info>, <http://Web.comhem.se>, and others arranged by Author.

Brickwork	Other façades than main façade are made from simple brick.	
Plasterwork	In false arcs available in front façade in internal walls and below the dome inside the building.	
Decorative paint		
Vaulting	In false arcs available in front façade below the dome inside the internal false arcs.	
Cornice	Grooves of the dome are located on the vaulted patkins.	
	Cornices below the helical columns (rope-like)	
helical columns	Helical columns around the portal on onion bases.	

▲ Table 2. study of all decorations in Khwaja Abu Nasr Parsa shrine-mosque, source: Author; Images Source: <http://Archnet.org>, <http://www.kufic.info>, Web.comhem.se, and others arranged by Author.

Physical elements	Pictures
<p>Dome: the grooved dome with 48 concave spoon cracks is completed as Roman pearl method.</p> <ul style="list-style-type: none"> •The grooved onion dome is 27 m high. •Two-shelled dome • Its internal coat has been decorated with the beautiful earrings in which some openings have been embedded. 	
<p>Long and circular tholobate</p>	
<p>Minarets There are two volumetric towers which include a stair inside the building.</p>	
<p>Portal or the front arch Southeastern patio which is the main entrance has been decorated with the portal which has been higher than the dome and converted into a splendid portal.</p>	
<p>Pores on the tholobate The interesting difference has distinguished between the inner side of tholobate and the external part. The inner part has only eight pores. They seem to be 16 pores half of which have been hidden behind the meshes. Even another one third is blind. Real pores are lower than what they meshes show so that the internal dome doesn't interfere with them. they bring light through deep steep pores to the building.</p>	

<p>Internal spaces and plan (horizontal section): four sides are connected to four alternate directions and two of them climb two stories and are located in portal of the tomb and forms screen –considering the obtuse angles which reach façade of the portal –around front side of the façade (Pope, 1999: 1337).</p> <ul style="list-style-type: none"> - the plan with axial and central symmetry - octagonal plan and ground floor section based on cross in square - Octagonal plan has been made with dimensions of 30.25 ×25 and total height of the building is 27 m. <p>There is square in the middle of dome. This central dome has an altar made from tile.</p> <p>There are low-depth false domes in the middle of the sides of the dome house. These false domes are related to four axial patios which are opened to the external part.</p>	
<p>Vertical sections</p> <ul style="list-style-type: none"> •External dome has been held by poppies on the internal dome. • Base of the dome is located on a three-corner point in the middle of eight arcs (four wall arcs and four arcs in width of angles). 	
<p>Catacomb</p> <p>Catacomb entrance is from southwest. In catacomb is a short dome which has solidified a series of cross arcs and three prismatic corners starting with the false domes.</p> <ul style="list-style-type: none"> • Crucial catacomb • Catacomb with cross false domes inside the buildings 	

▲ Table 3. Study of physical elements in Khwaja Abu Nasr Parsa shrine-mosque, source: Author. Images Source: <http://Archnet.org>. (Wilber, Golombek, 1995), <http://asiacentrale.revues.org/6001> and others arranged by Author.

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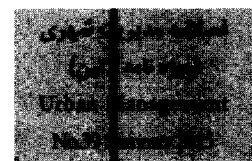
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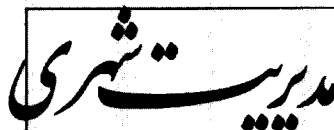
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فصلنامه مدیریت شهری

(ویژه نامه لاتین)

Urban management

No.39 Summer 2015

■ 221 - 236 ■

Received 26 Nov 2014; Accepted 17 Feb 2015

Examine the Relationship between the Process-Oriented Organizations by Strategy Formation as a Formal Process

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Abstract

This article examines the role of management in business processes in relation to the process-oriented organization and strategy formation as a formal process (strategic planning). A questionnaire designed to measure these variables after the validity and reliability among a sample of 183 managers, officials and experts in working systems, information technology and strategic planning in major firms of Iran Khodro Industrial Group distributed. The method of research is cross-correlation and path analysis used to test research hypotheses. The results showed that process-oriented organization through management in business processes the pattern of the process of managing business processes involved on strategy formation as a formal process. Finally, to enhance the process maturity and effective strategic planning proposals have presented to managers.

Key words: *process-oriented organization, business process management, school planning*

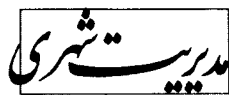
Introduction

Recent evidence shows that in an unstable environment gradual planning and formal planning applied. On the other hand, formal planning because of the methods and models and the framework as well as the relationship between strategic management with organizational performance and strategic decision-making in the organization, has an important place in business (Heracleous, 1998). Many scholars believed that many factors are effective in shaping the strategic planning process in the organization that the most important organization structures, is business processes that follow business processes (Anglo, Alessandro, Massimo & Davide 2010). Empirical research in strategic planning systems focused on two basis of the impact of strategic planning on the company's performance as well as their role in strategic making decisions in organizations and recently organizational processes as the main causes of the formation of the strategy are proposed (Acur & Bitittici, 2004). It seems that a better understanding of business processes can affect the effectiveness of strategic planning. Iran Khodro Company, the largest car company in the Middle East in the field of strategic management framework and implementation plan to develop and evaluate strategies and subsidiaries companies created. For example, at the beginning of each year macroeconomic policies and policies of the company for other group companies and other companies obliged communicated operational plans, policies and strategies in line with the policies of the parent company presented. Approval, verification and validation of the operational programs development proposed, especially in the major strategies such as reducing costs is indicative of the formation of the formal planning in the company Iran Khodro. Given the importance of business processes and their impact on the formal strategic planning is fundamental issue raised in the research that process oriented business and its realization methods such as reengineering and man-

agement of business processes, how could pave the way for a formal strategic planning. The purpose of this study is examining the effects of process-oriented organization on the formal planning and the effect of business process management in this regard reviewed.

Statement of the Problem

One of the challenges in organizations with different strategic business units (holding) is the synergy through value chain. This results one of non-financial performance evaluation factors of strategic business units is maturity level of business in the organization (internal value chain) and its relationship with its external value chain. Process-oriented is one business trend that has important effects on organizational structure, shaping strategies, management policies and implementation of supply chain (Chen, Tian & Daugherty, 2009). Adoption of business process oriented thinking and methods established in the organization, such as reengineering and business process management is a process of transformation that takes place in the functionalist paradigm (Iqbal, 2012). The process oriented creates a formal and positivist approach in the organization (Rao, Mansingh & Osei-Bryson, 2012). Mintzberg et al (1999) also point out that the normative vision in the shaping strategy is appropriate with official organization field, in the most important school of the planning and strategies are shaped in the form of a formal process (Flashaw & Glaster, 2006). This study deals with this issue organizations in the face of constant change in environment turn business trends such as process oriented, on other hand, in a process of a process-oriented organization, official and strategies following business processes: does process oriented trend lead to shaping strategy in the form of a formal process? Two aim of this study expected that the recognition of the size and components of the process-oriented organization, business process management and formal strategic is in the form of planning process and the second objective of this



study was examine the effect of process-oriented organization on the shaping of strategy as a formal process (planning school) through business process management.

Literature and theoretical foundations

Process-oriented organization

Process-oriented organization, the organization defined as the organizational pyramid contrast, around concepts such as process oriented, customer orientation and consequentialism organized. Therefore, the process-oriented organization is organization its processes to improve customer satisfaction, plan, manage improved (Hernaus, 2007). The process-oriented organization is not only a concept, but it is better as a family of organizations with different maturity levels of organizational processes such as Process-Focused Organization, Process-Based Organization and process-oriented organization described (Anglo, Alessandro, Massimo & Davide 2010). The process-oriented organization is next stage of the process-oriented concept can imagined that process thought developed in the organization and responsibilities of managers at lower levels of the determined (Vos, Chalmers, Duckers, Groenewegen, Wagner & Merode 2011). Between two the concept of process oriented and process based organization must distinguish because process oriented as a wider concept of the process-oriented organization, because the process-oriented organization can achieve some degree of process maturity (, 2007 Hernaus, Škrinjar & Štemberger). In other words, process-oriented organization, organization design business processes and implementation activities through business process and evaluate business processes known from other organizations (Vanhaberbeke, 1998). In an operational definition, process-oriented aspects of the organization, includes a focus on goals and strategies, flexible structure, performance-based culture, information technology and performance-based system. (Gruchman, 2009) In another study component according to the changing environment, information

technology, management by business processes and process structure for the process-based organization confirmed (Lin, Yang & Chang, 2002) In other words, it was found that the process-oriented organization is organization in which the process based attitude is established (Dean, Daly, Dowdle & Stevens, 2008). In an evaluation model proposed for the process-oriented organization, seven main aspects were considered, including the design and documentation of business processes, top management commitment, the owner of the process, evaluating process performance, process culture, process vision, continual improvement methods in the process.

Kiraka & Manning, the design and documentation of business processes requires a management in process-oriented organizations that understand the business processes of the organization and shows that the business processes how to deal with interact. Edwards et al pointed the commitment of senior management and believed that this shows to what extent the managers of organization support the process programs. Hammer and Stanton the owner of process distinguishes process-oriented organizations. The aspect assesses the process owner's role of the administrative activities of organization. The aspect extent the process performance of the organization measured and assessed. Armistead & Machin considered culture fit an important subject because the people and processes involved in the production output. This aspect of organizational culture in terms of teamwork, willingness to change and customer orientation, individual accountability and participatory leadership style evaluated. Gaitanidis (2007) states, process-oriented organization states process perspective in terms of structure that this view based on the principle that the structure followed formation process. Finally, organization in term of use of methods and continuous improvement in processes and the presence of professionals and skilled workers in the fields of redesign, project management

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and change management evaluated (Kohlbacher & Gruenwald, 2011).

Management of business processes

Business process management is a structured approach to analysis and continuous improvement of key activities such as production, marketing, communications and other important factors in the organization's activities (Zairi, 1997). Association of Business Process Management Professionals (ABPMP) business processes management know a series of managerial that emphasized organizational processes and for the realization as a systematic approach in the organization, six step planning, analysis, design and modeling, performance, governance and strengthen the operation of the means represented (Segatto, Dallvalle & Martinelli, 2013). In other words, the management of business processes is an ongoing activity that was associated with the evaluation of performance and alignment of business operations associated with the organization's strategy (Brocke, Schmiedel, Recker, Trkman, Mertens, and Viaene, 2014). Lee and Dale also believe that business process management is a branch of views focused on the process that the process as the main asset of the organization considered (Lee & Dale, 1998).

Garvin (1995) argues that business process management is different approach from total quality management and Hammer and Champy (1993) separate it from business process re-engineering (Chi-Kuang & Chang, 2008). Determining the key success factors in implementing practice of business process management is very important. Because focusing on one of the key factors, such as business processes, regardless of other factors such as technology or project management in the implementation of business processes will lead to partial optimization (Trkman, 2010).

Trkman using exploration factors analysis of five critical success factors for managing business processes with titles, strategic alignment, performance measurement, organizational

change, empowerment and support of information systems and staff training identified. Bandara et al (2007) believe that the purpose of strategic alignment, alignment process goals with organizational goals, the active involvement of senior management and the consensus in the use of business process management, and most importantly, employees' perceptions of the alignment as the executive procedures is necessary in the organization. Kumar et al (2008) also believed that the purpose of performance measurement, ensure process-centric alignment with organizational objectives. The organization shall for the purposes of indexing and monitoring continuous process and evaluating the effectiveness of the processes. Hammer (2007) stated that the purpose of the organizational change is organizations do not need the process-based structure replace the traditional structure. However, should recognize how to combine specialization and structure expertise, adaptability and accountability of the process-oriented functional structure. Groznik & Maslaric (2010) believed that the development of management information systems based on business processes and the ability of the system to provide appropriate information to management efficiency of business processes and use of information technology tools is necessary to understand the needs of customers from critical success procedures. Indulska et al (2009) know empowering and training a prerequisite to the success of business process management (Skrinjar & Trkman, 2013). Armistead & Machin (1997), management and improvement of business processes as a routine operation and running of the organization considered that an important indicator of organizational performance. Batista (2008) argued that this approach encounter the concept of customer-oriented business processes (Skrinjar, Bosilj-Vuksic & Stemberger, 2013).

Strategy as a formal planning (planning school)

Mintzberg et al (1999) in defining the planning school pay this point that shaping strategy in a formal process. Therefore, a strategy, plans that breaks down programs that are more specific is the result of formal planning procedures (Cherp, Watt & Vinichenko, 2007). In fact, strategic planning is focusing on the company's guidance and the necessary measures to improve its performance. Strategic planning is process that through its strategies created that enable them to anticipate and respond to dynamic environment variables are appropriate. Two important aspects of the strategic planning process in terms of content and the content of the concept of separate elements differ from company to company and refer to the process as a mechanism for creating and sequencing strategies in the implementation and evaluation (Ghobadian, 2008).

The strategic planning process is so important that many of the research in this process consider as an alternative measures to strategy. Most definitions of formal strategic planning process after a long time to develop implement, evaluate strategies referred, and argue that in any business activities with environmental organizations must made to fit, because of reduced threats and opportunities optimally exploited (O'Regan & Ghobadian, 2002). To analyze the effects of planning on organizational performance need to adopt a multidimensional approach to strategic planning structures so the four dimensions of formality, comprehensiveness, sophistication and the length of planning horizon for the structures had operational definition (Boyd, 1999). Formalizing the strategic planning process refers to the means predetermined that includes methods, techniques and methods in a systematic way, to facilitate the achievement of specific objectives. It must formalizing in the official program, including the development strategy means clear objectives and processes necessary to achieve the objectives described

(O'Regan & Ghobadian, 2002). Formalizing the strategic planning process means that the strategies codified form and orientation is predetermined goals. From this definition, it pointed out to the hierarchy of objectives, in an organization strategic objectives, such as vision, strategic results and definition of objectives and in terms of business sub-objectives, measures, targets and operational objectives are broken business processes, thus, in the hierarchy of objectives at different levels, we have to achieve these goals requires appropriate budgeting (Steensen, 2013). Aspects of the strategic planning process, including the characteristics of the external environment, internal environment, functional integration, analytical techniques, resource allocation in step execution, creativity and focus on control systems and their ability (Baraldi, Bernna, Harrison, Tunisini, Zolkiewski, 2013).

However, from the perspective of academic strategic planning to strategic thinking had less important but the plan action in a formal process not only plays a dominant role in business, but using a method strategies is increasing. One reason for the popularity of this method in comparison with strategic thinking, in practice, a systematic and tool views in creating a strategy that enables its use in organizations. Heracleous (1998) argues that the most important aspect of strategic planning, is use of guidelines, models, models of planning that caused this tendency of managers in the use of this method is the formal planning in the organization. Referring to the models offered in various studies, although these models stated in the functionalist paradigm fit, but the realization of strategic thinking offer creative programs (Heracleous, 1998). Many researchers, the most important difference between the two schools of planning and positioning unlimited planning strategies of the school of knows that the paired comparisons between internal and external factors that is contrary to the Generic pattern of positioning schools (Ocasio & Joseph, 2008).

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Hart & Banbury (1994), four strategic cases were re-approaching a concept of strategic planning. According to them symbolic planning means vision and mission, organizational and strategic intent. Rational planning by formulating strategic goals and higher levels of the organization and programs more specific and practical steps to break down and then the program through administrative controls and budget implemented.

Transactive Planning, so that programs based on current practice, in duplicate form, concerned. Forming is basis of information obtained from market monitoring, feedback and continuous adjustment, meaning that they need to change and modify the program after the implementation of felt. In addition, planning its productive aspect of the program concentrates on innovation in products and services and encourages innovation in the development of the internal processes and Hart does not know it out of space planning (Purohit, 2007 & Brews).

Literature

The relationship between process-oriented organization and management of business processes

The process-oriented organization is a multi-dimensional structure that can enhance the management of business processes, organizational dynamics, reduce conflict and promote cooperation among units of organizations (Tange, Pee & Lijim, 2013). There are business processes in an organization that is not a reason for the improved performance. Therefore, a process-oriented organization using process-based management cycle would ensure retention and organizational maturity process-oriented. Doodle et al (2005) using three regular model (a conceptual framework shows organizations how to choice procedures, tools and innovative programs and business model and macro strategies and support the company's management philosophy). Organization assessment model is process-based management (framework for performance assessment

business processes in an organization which creates and shows good process and which processes are weak and need for corrective measures). and process continuum model (a conceptual model that identifies and develops properties of process-oriented organization) show the management of business processes is the next step of creating a process-oriented organization and had positive effect on sustainable performance (Dean, Daly, Dowdle & Stevens, 2008).

The process-oriented organization by Ostroff (1999) as a horizontal organization, Hammer (1996) as the process centered organization, Hammer and Stanton (1999) as the process enterprise, Gardner (2004) as a process-focused organization, Osterloh & Frost (2006) as the process organization. Generally, the process-oriented organization by every title is organization that comprehensively business processes management (Kohlbacher, 2010). Process-oriented organization is organization used business processes management to improve customer service. They showed that there is a significant positive correlation between the implementation of business processes management and enhance customer service (Armistead & Machin, 1998).

Management of business in the process-oriented organization, to not only discover, design, implementation of operation by business processes, but also deals with the interaction, control, analysis and optimization of processes is considered. Hinterhuber (1995) stated that the effect of business process-oriented on the process oriented organization in choosing business processes management, increase quality of products, increase customer satisfaction inside and outside the organization, optimize processes and improve productivity and increase value added and steps of the value chain by outsourcing non-core activities and focus on its core competencies (Reijers, 2006).

However, a comparative study on the effect of re-engineering and business process manage-

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ment in process-oriented organization don't conducted, but Garvin (1995) stated that business process re-engineering only deals with process radical design. He believes that although business process re-engineering is an important step in the creation of process-oriented organization, but the result is business processes, such as unrelated islands. The success of the process-oriented organization depends on the problem how can be found and manage the interaction between processes. He pointed to the fact that the development of business processes is not in itself guarantee the success of the process-oriented organization and it should be noted that the management of business processes created by the reengineering (Kohlbacher & Gruenwald, 2011).

The use of business process management in process-oriented organization can lead to reduced costs, reduced production cycle, respond better to the requirements and demands of customers, improve the quality and reduce delivery time (Bronzo, Vilela de Resende, Valadares de Oliveira, McCormack, Renato de Sousa & Ferreira, 2013).

Business process-oriented through business process management resulted in improved quality, improved productivity and operational effectiveness. Process-oriented organization by business process management to a high rate of customer satisfaction, reduce production cycle time, increased quality in products and production processes and to reduce costs, increase sales and increase profitability and increase corporate value achieved (Kumar, Miri -Lavassani, Movahedi & Kumar, 2011). Skrinjar and Trkman (2013) argued that the assessment and control of the effect of business process management on organizational performance is difficult. They claim that some practices business processes management, improve profitability, while others have little impact on financial performance. The performance evaluation of an organization quickly changed. Therefore, they believe that performance at different organizational levels cannot be good represents

to measure management success based on the process; they used a mediator variable as focus on business process to evaluate the effectiveness of business processes management on organizational performance.

The results showed that proper implementation of the management of business processes directly affect focus on business processes and since the company has different levels of focus on business processes as their maturity level, a direct relationship between maturity level focus on business processes and organizational performance confirmed. In other words, higher levels of maturity focus on business processes leads to better performance of the company. The important point in this research is vital methods to point out that, known specific techniques of business processes management and significant positive effect on improving the focus on business processes (Skrinjar & Trkman, 2013). Zairi (1997) states that the business process has a significant positive correlation on adoption of business process management. He in a drug manufacturer and health industries shows that the function of business process management is providing business process map, documentation, and performance measurement and achieves a consistent and repeatable performance in the organization. He states that adopt business management over several years (at least 5 years), which is leading to a process-oriented organization become to a mature process organization (Zairi, 1997).

Relationship between process-oriented organization and formal strategic planning

Acur & Bitittici (2003) in an experimental study the effectiveness of business processes in process-oriented organization on shaping a strategy confirmed and show the effectiveness of the organization's strategy to adopt attitudes based on improved process. In a process-oriented organization, objectives of strategic business unit using operational measures and targets to achieve business processes are broken and this leads to operational programs for

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the business process (Acur & Bitittici, 2003). By studying the three companies from different industries (steel sheet production in the UK, semiconductor production in the Swiss and Construction Company in Scotland), the impact of business processes on the shaping of strategy, strategies management, and ultimately the effectiveness of strategies in achieving the goals of each company, confirmed. They concluded that adopting a process-based approach to the management of strategy to integrate market-oriented approach that is the company's market (environment and competitive forces) and resource-based approach, the company's resources (competencies and capabilities), which this, in fact, leads to the shaping of strategy in a formal template and offering improvements plan in the organization (Acur & Bitittici, 2004). Separation of the organization's overall goals to partial goals every single business in the strategy map enables administrators to past performance, current and future, each business unit with each other in terms of profitability, competitive position, product life cycle and the strengths with the weakness compared. They stated that the business process-oriented as a moderating variable by dimensions, such as assessing and evaluating business processes, integration of functional areas, customer orientation, staff innovation, strengthening the relationship between strategic planning program in and financial and non-financial performance (Acur & Englyst, 2006).

Tinnila et al (1995) there is three attitudes to business processes. They state that in view of operations, operational processes with an emphasis on products, customer needs and technology as an enabler of organizational structures, defined that target for operational level processes in organization lead to the functional level strategies of production and operation. In view of organizational business processes is not limited to manufacturing operations and provide services to customers, including other organizational tasks such as task unit's tasks,

from suppliers to customers, considered and defined. Supporting processes such as marketing, purchasing, human and financial resources defined as business processes that goals of the level lead to the functions strategies such as marketing, purchasing, human resources and tax. In view of strategic business processes as part of the value chain taken into consideration and discussion of strategic alignment presented the interaction between business processes and operational and supporting lead to the creation of the strategy of the organization. They conclude that there is a significant relationship between the business processes of strategy formation for each type of attitude (Tinnila, 1995).

Relationship management business processes and official strategic planning

There are two mechanical and organic approaches in business process management that mechanical approach on strategy, structure and systems emphasized and leading to improved organizational processes and strongly on the individual organic approach, purpose and process and lead to improved management system. In the organic approach, the objectives of each process, based planning initiatives program to achieve the desired goal is that it extends to the entire organization. Palmberg Clara (2009) shows the relationship between process management and organizational performance through the development of effective planning (Palmberg, 2009).

Business process management is a management approach to various aspects of the organization in line with the needs and demands of its customers. Therefore, many researchers believed that in a process-oriented organization, business process management is a comprehensive approach to enhance the effectiveness and efficiency of business processes handled. They said that various studies the relationship between business process management with innovation, flexibility and integration of information technology emphasized. In an experimental study showed that business process

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management had meaningful positive effect on strategic planning aspects such as mission, strategic objectives, strategies, resources and competitive advantages (Balanesu, Soare, Bleiciu & Alpopi, 2013).

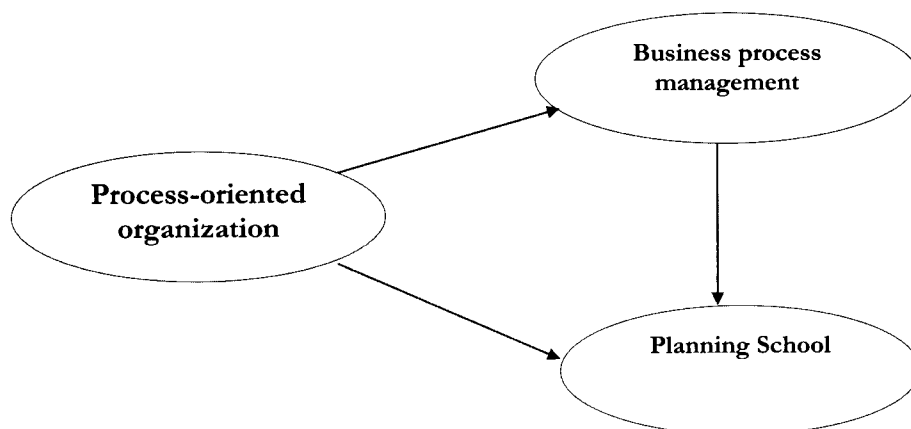
Theoretical framework and conceptual model

Study of theoretical literature and the literature shows that many researchers to study the effects of process-oriented organization, business process management and planning school (official planning system) focused on organizational results. Previous research focuses on the study effects of each of the above structures on the financial and non-financial performance of organizations. In this study, researchers using research aims at determining the effects of process-oriented organization and business process management in the formation of strategies have been through a formal process. According to a study by Michael Hammer, main activity of the process-oriented organization in establishment of business process management outlined and knew the planning as management and utilization of process improvement opportunities (Love, Gunasekaran & Li, 1998). Therefore, business process management described management approach that thinking and practice in the process-oriented organization in order to enhance the process maturity of the organization and maintain it over time directed (Zairi, 1997).

Concepts such as business process management in the areas of process change attitudes classified in the organization, because the attitude of process change through mutation and continuous improvement related to organizational performance, fits in the paradigm of functionalist (Iqbal, 2012). Ontology of formal process-oriented organization is positivist. Despite knowledge maps, knowledge structure, process maps and key control and monitoring of process purposes in accordance with the ontology is formal (Rao, Mansingh & Osei-Bryson, 2012). In this type of ontology, strategy prescriptive schools such as planning schools, positioning arise. Research shows that, in the process-oriented organization, strategies followed process and determine objectives for business processes lead to develop a strategy in the form of a formal process or in other words better strategic planning (Tinnila, 1998). Figure 1 shows final statement in the form of conceptual model.

Conceptual model

The present study suggests that process-oriented organization as follows to maintain the business process management that seem this type of management lead to the formation of strategy based on a formal process. The important point in this research is that the effect of each structure in the desired transposition period and less on the impact of the structural aspects discussed.



▲ Figure 1. conceptual model

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Hypotheses

First hypothesis: there is a significant relationship between process-oriented organization and business process management.

The second hypothesis: there is a significant relationship between process-oriented organization and planning school.

The third hypothesis: there is a significant relationship between business process management and planning school.

Methodology

this research in term of purpose is applied and the method of data collection, correlation analysis based on operational data collection. The research population consisted of managers, directors general, managers and experts working in systems and methods, information technology and strategic planning in major firms of Iran Khodro industrial group with 323 members, which used Krejcie and Morgan table, a sample size of 175 calculated. Due to the large number of questions in the questionnaire to ensure, more 230 questionnaires distributed randomly among people that ultimately, data analysis on 183 questionnaires was completed. In this study, researchers used standardized questionnaires to collect data. To measure process-oriented organization, including senior management commitment, processes culture, improve processes, process structure, processes performance measurement, process owner, design and processes documentation, Kohlbacher and Gruenwald questionnaire in 2011 used. To measure the dimensions of business processes management, which includes strategic alignment, performance measurement, process transformation in the organization, management information systems support, education and empowerment of staff Trkman and Skrinjar questionnaire 2013 used. Moreover, to assess aspects of planning school, including symbolic planning, rational planning, interactive planning and productive and creative planning Brews and Purohit questionnaire 2007 used.

To measure the content validity the assessment

tool of 25 experts asked their opinion about dimensions of every structure declare that their comments considered in the final questionnaire. To determine the reliability of questionnaire Cronbach's alpha coefficient method, using SPSS, ultimate reliability of questionnaire for each structure to determine the results of which are shown in Table 1 for each structure. Reliability of scale through Cronbach's alpha coefficient was performed as per the structure values obtained are as follows: the process-oriented organization (Cronbach's alpha 0.825), business process management (Cronbach's alpha 0.782) and planning school (Cronbach's alpha, 0.779), the results indicate that the questionnaire is reliable and relatively high. in assessing the validity of factor (correlation factors research with latent structures or research structures), the pattern of measuring confirmatory factor analysis methods in structural modeling approach using LISREL version 8.5 is used. The principal component of the process-oriented organization structures, business process management and planning school, based on the factor loading and t-test using confirmatory factor analysis evaluated that the results of which shown in Table 3. As seen values of t_0 , all of the research is more than 1.96 at the level of 0.05 percent. Therefore, all components of the research confirmed.

Findings

Research Structural model (Path Analysis)

Examining the relationships between the components and indicator variables and latent variables using confirmatory factor analysis (see table), in the section of path analysis used to test hypotheses. Path and numbers coefficients between research structures and latent variable in the structural model were significant and standard mode using LISREL, presented in Figure 2 and 3.

Test hypotheses and path analysis

The results and conclusions of research hypotheses regarding the path between research structures, measurement model in standard and significant mode is as Table 2.

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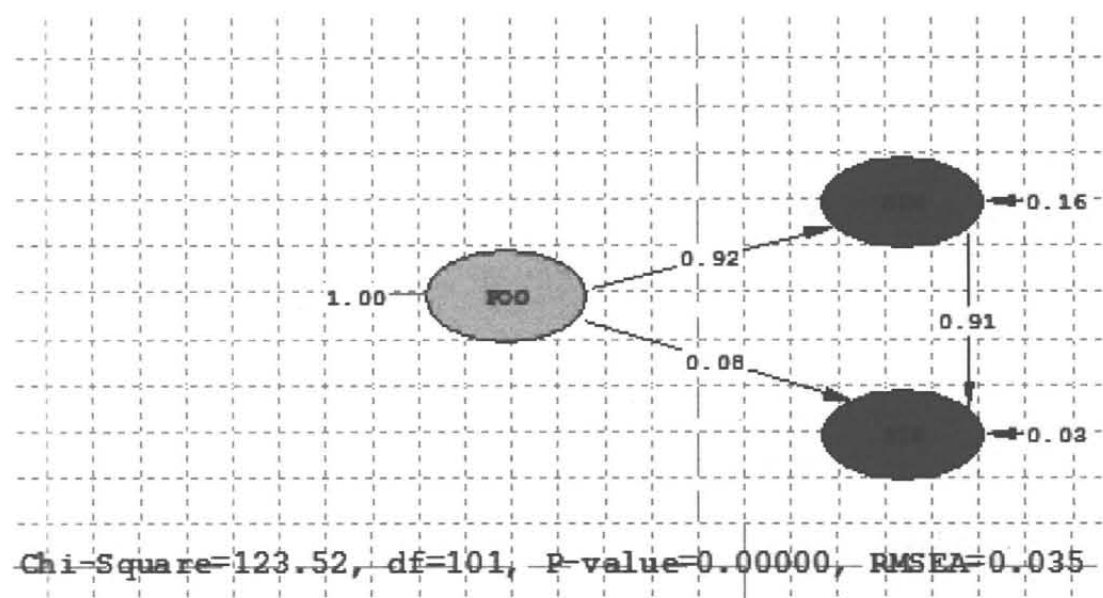


Research Structures	Cronbach's alpha	main components	Cronbach's alpha	Factor Load	value t	Test result
process-oriented organization	0.825	Senior management commitment	0.837	0.47	2.66	Confirmed
		Process Culture	0.834	0.77	4.95	Confirmed
		Methods to improve processes	0.818	0.45	2.54	Confirmed
		Measurement of process performance	0.798	0.50	2.89	Confirmed
		Process structure	0.812	0.87	5.93	Confirmed
		Process owner	0.816	0.99	7.45	Confirmed
		Design and documentation processes	0.826	0.85	5.69	Confirmed
business process management	0.782	Strategic Alignment	0.784	0.92	6.54	Confirmed
		Performance evaluation	0.777	0.75	4.77	Confirmed
		Development of process	0.789	0.73	4.57	Confirmed
		Support for information systems	0.764	0.82	5.40	Confirmed
		Education and Empowerment of staff	0.783	0.73	4.54	Confirmed
	0.778	Symbolic Planning	0.788	0.81	5.32	Confirmed
		Rational planning	0.785	0.95	6.92	Confirmed
		Interactive planning	0.772	0.90	6.28	Confirmed
		Productive and creative planning	0.776	0.92	6.50	Confirmed

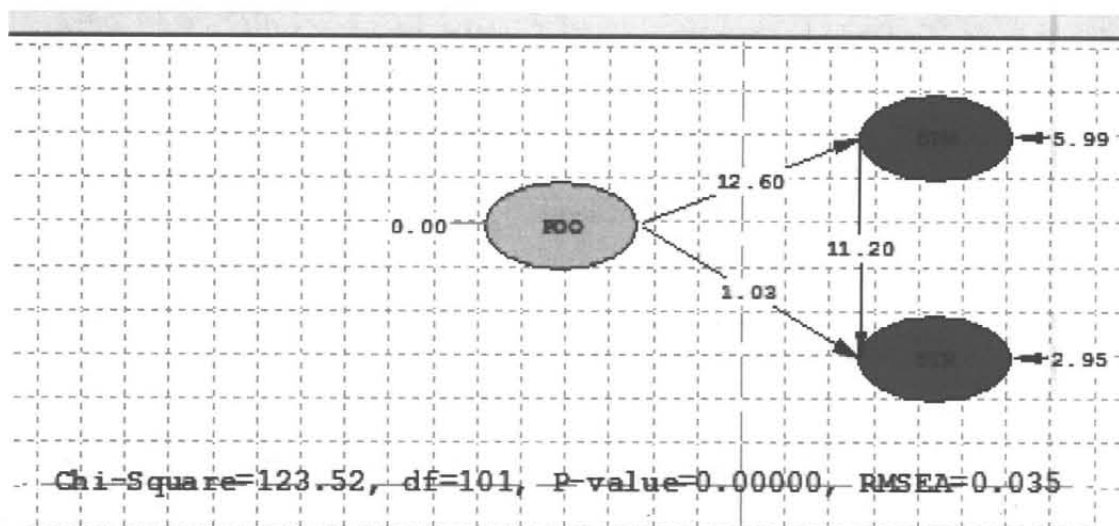
▲ Table 1. Main component Test based on factor loadings and values t0

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▲ Figure 2. Structural model in the significant state



▲ Figure 3. Structural model in standard mode

Hypotheses test of the study (study of the relationship between latent variables)	Path coefficients	Values	Test result
Relationship between process-oriented organizations with business process management	0.92	12.60	Confirmed
Relationship between process-oriented organizations with the planning school	0.08	1.03	Rejected
Relationship between business process management and planning school	0.49	11.20	Confirmed

▲ Table 2. The main research hypotheses test based on the path coefficient and t0 values (significant numbers)

Fit index	standard value	statistics value	results of the model
χ^2/df	Less than 3	1.25	Perfect fit
RMSEA	Less than 0.05	0.037	Perfect fit
GFI	Between zero and one	0.88	Perfect fit
AGFI	Between zero and one	0.90	Perfect fit

▲ Table 3. The Model fitness index

The table shows the relationship between research main variables and suggests that the relationship between process-oriented organization and business process management and relationship between business process management and planning school approved and the relationship between process-oriented organization and the planning school rejected.

The model fitness test

The purpose of assessing the fit of the model is to determine to what extent the model with experimental data used are compatibility and agreement. Model fitness index in this study, including chi-square statistics about the degree of freedom, Root Mean Square Error of Approximation (RMSEA), Goodness of Fit In-

dex)GFI(and Adjusted Good of Fit Index) AGFI) and its values and standard values given in Table 3.

According to the aforementioned fitness index and results, it concluded that the level model of research structures fitted perfectly.

Conclusions and recommendations related to research

In this study, the effect of process-oriented organization on business process management and planning school and as well as the effect of business process management on the planning school is evaluated. The results show that in a process-oriented organization, making management of business processes with the aim of maintaining the organization occurs over time, which can affect the development of strategies in the form of a formal process in the organization. The first hypothesis is a positive relationship between process-oriented organization and business process management and results indicate that there is a significant relationship between process-oriented organization and business process management. This result is consistent with findings Dowdle (2005) and Kohlbacher (2010). It recommended that business processes through business process re-engineering design and development and by methods of business process management administered.

The second hypothesis is a positive relationship between the process-oriented organization and planning school states that the results of this study do not confirm the existence of such a relationship. However, this is contrary to the findings of the investigation Acur and Bititci (2003), Acur and Englyst 2006. This implies that the design of the process-oriented organization in response to environment changes and in such circumstances cannot be strategic formations in the form of a formal process, because there is still a hierarchy of objectives. The third hypothesis is the relationship between business process management and planning school states, and the results of the research confirmed the relationship

between business process management and planning school. This result is consistent with findings Balanescu et al. (2013) and Palmberg (2009). It recommended that a strategic planning process in an organization are recognized and classified in category management processes.

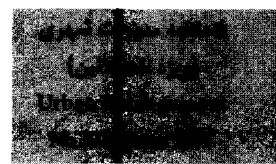
Practical suggestions

According to the results, it could be the following suggestions for improving the process maturity and effectiveness of the organization's strategic planning:

For the creation and maintenance of the two-phase process, design and development of business processes (re-engineering methods) and business process management considered. The most important step in managing business processes, process design and mapping business processes across the organization to place business units in this process and draw functional processes and their relationships in the organizations holding the business units strategic business processes in the value chain must be determined and these units in line with the parent company's value chain.

In the process, it is necessary first to determine the organization's goals and objectives, business processes, business units and sub-objectives, goals determine the functional processes. Then to achieve the objectives, strategy and organizational levels, to achieve secondary objectives, business processes and goals of the business units that are part of the objectives, business processes, business strategies, level of development and functional processes within the business units and the strategies to be operational level. In general, it noted that, according to Wes et al (2013) in a process-oriented organization processes follow a strategy. This study shows that the strategies developed these concepts and processes of the organization will follow different organizational levels. Development of business strategies with business processes sub objectives for the purposes of business units and functional strategies with respect to the objectives of functional

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processes within the business units done.

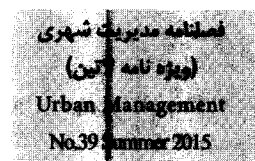
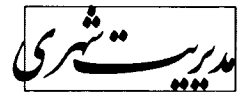
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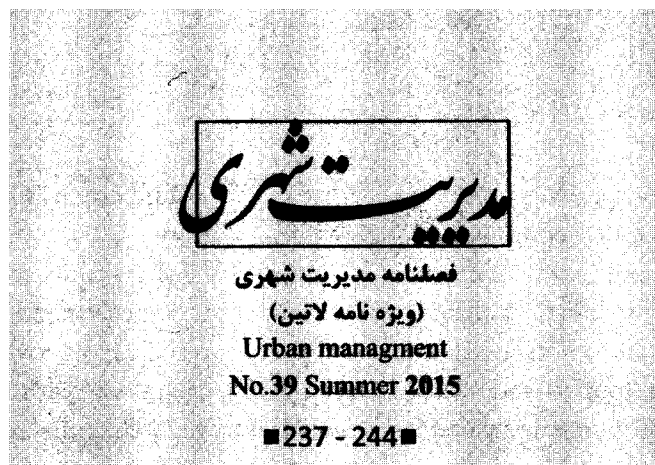
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Received 10 Oct 2014; Accepted 29 Jan 2015

Studying the importance of the tourism industry for sustainable urban development (Case Study - coastal town: Chalus)

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Abstract

Today, sustainable development is one of the principles which are considered by scholars. This means that the future of humanity is very important to maintain living standards, so that it can no longer operate as before and use the human environment. Therefore the effects of tourism should be studied perfectly to minimize its threat and maximize opportunities and strength points and this would not be realized in case of cooperation of countries. To achieve sustainable development of cultural tourism, all segments of a society should engage based on the principles of sustainable development planning to turn it into a popular culture. Sustainable development and tourism have organic communication with each other. UNWTO defines sustainable development as a kind of development which meets to needs without affecting the interests of future generations and their needs. Tourism as a social and cultural reality has both positive and negative functions in society. "Enjoying the spaces, seeing different effects and customs, understanding the ways of life, preserving cultural resources are the most important functions and benefits of this sector in society. This paper intends to consider urban tourism and its role in development addresses sustainable, tourism types and defines sustainable development and sustainable urban development, urban tourism and examines the relationship between sustainable development and urban tourism and because urban tourism is one of the most important activities and programs for sustainable development and planning for it is one of the requirements in our country due to climatic variation, historical, cultural, ethnic and religious differences.

Key words: *sustainable development, tourism, urban tourism.*

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This article is extracted from a Master's thesis by the first author who has benefited from the guidance dr. Keramatollah Ziyari hereby declare our gratitude and appreciation.

Introduction

Tourism includes communications and phenomena caused by the interaction of tourists, investors, governments and host communities, universities and controls the absorption and transport of tourists and visitors. Developing international tourism, society has changed its viewpoints about environment and tourism and global society considers environmental issues perfectly and some concepts such as green tourism and sustainable tourism and awareness of sensitivity referred to the valuable tourist information and the need to protect the environment in order to develop the industry; The development of tourism industry has multilateral effects in the countries. Balance and balance of payments situation, economic diversification, increasing incomes and creating employment opportunities are considered as the consequences of this industry. Achieving sustained economic growth is considered one of the main indicators of progress for developing countries. Tourism is a major part of the economic income of countries and included 10 per cent of their gross national product. At least in one third of developing countries tourists' are the main sources and generate income in the countries. Tourism growth in the last 50 years is considered one of the most important economic and social phenomena of the twenty-first century. Tourism can participate in the three main objectives in developing countries that generate revenue, employment and income from foreign currency and play an important role as the motive force of economic development. Tourism employment opportunities for different social groups to create a good and therefore play an important role in the eradication of poverty in developing countries. Moreover, tourism encourages the government of each country to develop its infrastructure, as well as the country's balance of payments as well. In other words, tourism is a powerful engine of progress in developing countries. Chalus city is one of the important tourism cities of Iran.

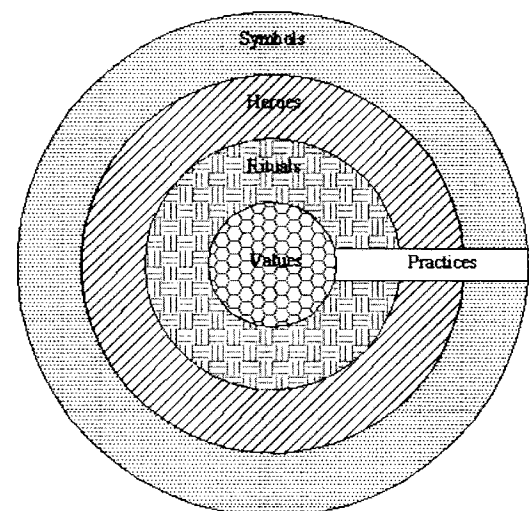
1. The city of Chalus and its tourist attractions

Chalus is one of the old cities in Mazandaran province located in the central plain of the Caspian Sea; the town was named Salus long time ago along with around small towns named Kabireh and Kechhe. Some scholars in geography consider Chalus as a village of Tabarestan. Prince Mohammed bin Owais domination of the Arab Caliphate was assigned in order to rule Chalus. Chalus was appointed caliph. Muhammad Owais in Royan (part of the Complex) was established and his son Ahmed, the government appointed Chalus. Chalus city was destroyed during the attack of Amir Timur. Since 1931 this city started to become famous city. This city is located in west of Mazandaran province on the shores of the Caspian Sea and has a lot of history and is renowned for evergreen greenery and beauty in onyx. This city reaches to Caspian by north and Tehran by South Tonekabon city by West and Noshahr city by East. Its area is 2800 kilometer squares and population of 150 thousand people and has more than 100 villages. According to archaeological findings, the earliest inhabitants of the Kelardasht backs to 2000 years before Christ.



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▲ Fig 1. Manifestation of Culture at Different Levels of Depth (HOFSTEDE 1997)

<http://www.tamu.edu/faculty/choudhury/culture.html>

1-2-tourism areas of Chalus

Chaykhoran palace; Kandovan Hotel building; Queen Mother's Palace (Palace of the king's mother); stone tunnel; Pahlavi Foundation Hotel; Kandovan stone Inn; forestry villas; Kandovan tunnel; Metal Bridge of Chalus; Parvinetesami school; Forest Park; Silk weaving factory of Chalus; Namakabroudtele-cabin; Akapl waterfall; mountain villages; Harijan Waterfall; Rezakhani resorts; Chalus Forest Park; NamakabroudForest Park; Valasht Lake; holy mausoleum of Mohammad; Stone road; Shah cheshmehmansion; Coal bridge; Holy Zakaria; Holy Haqqani; Semi complete hotel; Ajabyt Palace.

2. Theoretical principals:

3. (1) sustainable development, sustainable urban development

Sustainable development and sustainable urban development in recent decades gradually has become dominant paradigm of modern and traditional scientific literature on development and urban planning. The most important concern that has caused the deliberate and serious attention of experts and urban planners to the concept of "sustainable development" is the reality of continuing rapid growth of

urbanization in the world in this time and in the future, on the one hand and growth and development of mega cities, especially in the South and its harmful consequences for the local people (Rahnamaee, Mohammad Taqi, pour Mosa, SeyedMousa year, 2006).

3-2-Tourist

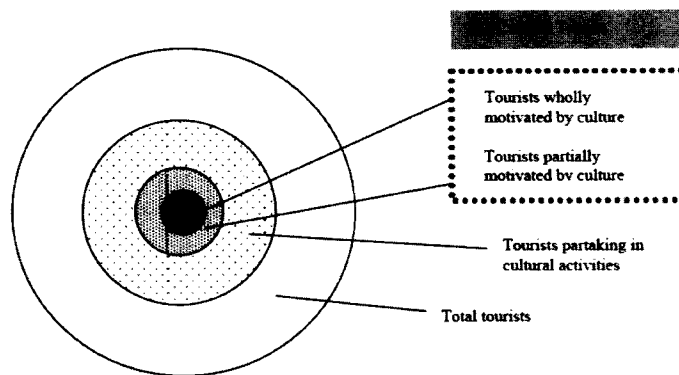
Tourism is one of the branches of the tourism industry. The industry position is in society causes sustainable cultural development of society. Due to the machinations of the post-industrial world of macro and micro structures, areas of social life is affected, people to overcome the consequences of the industrial age and psychological pressures require rest so tourism can be considered as an introspective experience for psychological recovery and for tourists who enjoy tourism and it is very important. This type of tourism in the country can be prosperous and sustainable urban development for cities of all sizes founded. In fact, the development of tourism in addition to recognizing the cultural, trade and economic development, high income, job creation, can provide the specific cultural and social measures and plans in removing inappropriate and unrealistic image that some western countries

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Type of cultural tourist	Short characterisation
The purposeful cultural tourist	Cultural tourism is the primary motivation for visiting a destination and the tourist has a very deep and elaborate cultural experience
The sightseeing cultural tourist	Cultural tourism is a primary reason for visiting a destination, but the experience is less deep and elaborated
The serendipitous cultural tourist	A tourist who does not travel for cultural reasons, but who, after participating, ends up having a deep cultural tourism experience
The casual cultural tourist	Cultural tourism is a weak motive for travel and the resulting experience is shallow
The incidental cultural tourist	This tourist does not travel for cultural reasons, but nonetheless participates in some activities and has shallow experiences

▲ Table 1. Types of cultural tourists by McKercher and Du Cros; Source: With minor alterations by the author, based on City Tourism & Culture – The European Experience, p. 4. Own editing



▲ Fig 2. The place of cultural tourists in the complete tourist flow; Source: Ontario Cultural and Heritage Tourism Product Research Paper, 2009

have described about Iran. Specific characteristics of each region will prevent feeling of inferiority and foreign-oriented base.

4-tourism

Tourism includes the activities of people who live and work outside their places to have fun, relax and do other things not stay more than a year (Will Ross, 2000). In other words tourism includes set of activities and practices that is related to tourist and the way which tourism is done, along with all the activities that tourist when traveling to locations outside of their place of residence. The main feature of tourism is primarily refers to a trip away from home or work. On the other hand, short-term accommodation which may also be non-stop night (Gunn, CA, 1988) architecture, construction of new or old sites, monuments, culture and social customs, ethnic, linguistic, religious, sports, in addition to natural attractions, commercial, political, literary, and many others in the city can be major sources optimized for operation in both urban and sustainable development of the environment offered in order to attract tourists and visitors.

5. Planning urban tourism with emphasis on sustainable development

Sustainable development method in tourism planning is concerned to protect natural and cultural resource , if these resources are lost or destroyed, tourism areas can not attract tourists and in other words, urbanization prevents formation: tourist attraction, and tourism

would not be considered successful, especially after the appearance of the future negative urban planning of recreation a priority in the cities would lead to a further increase in tourism (Sharpley, 2003) due to growing urbanization in Iran and the development of progressive physical towns and acute environmental problems, social and psychological currently planning for development and equipping of leisure and recreational spaces within the urban and suburban - scale has become a social necessity. In the presence of structural barriers, such as lack of coordination and planning and management of tourism Urban zoning system are able to determine the scope of the "leisure zone" for civilians is specified on a per capita basis (Lotfi, 2007) sustainable urban tourism consists of three levels of market, urban development and local communities (Seferiades , 2002).

6. The interaction between tourism and sustainable development in the coastal town Chalus

Development has a process which it improves conditions for people life and it is not merely wealth but it means change which realized in behaviors and wishes and desires and understanding, Meanwhile economic growth alone does not lead to development, because development requires a transformation of people in addition to changes in economic growth and social institutions. Development of historical, cultural, social, economic and politi-

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Types of cultural tourism	Tourism products, activities
Heritage tourism	<ul style="list-style-type: none"> • Natural and cultural heritage (very much connected to nature-based or ecotourism); • Material <ul style="list-style-type: none"> - built heritage, - architectural sites, - world heritage sites, - national and historical memorials • Non material <ul style="list-style-type: none"> - literature, - arts, - folklore • Cultural heritage sites <ul style="list-style-type: none"> - museums, collections, - libraries, - theatres, - event locations, - memories connected to historical persons
Cultural thematic routes	<ul style="list-style-type: none"> • wide range of themes and types: <ul style="list-style-type: none"> - spiritual, - industrial, - artistic, - gastronomic, - architectural, - linguistic, - vernacular, - minority
Cultural city tourism, cultural tours	<ul style="list-style-type: none"> • "classic" city tourism, sightseeing • Cultural Capitals of Europe • "Cities as creative spaces for cultural tourism"
Traditions, ethnic tourism	<ul style="list-style-type: none"> • Local cultures' traditions • Ethnic diversity
Event and festival tourism	<ul style="list-style-type: none"> • Cultural festivals and events <ul style="list-style-type: none"> - Music festivals and events (classic and light or pop music) - Fine arts festivals and events

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▲ Table 2. The Role and Importance of Cultural Tourism in Modern Tourism Industry

cal factors well applied for future generations. Beaches and the natural beauty and mountain landscapes should not be contaminated and, nature and wildlife as well as scarce resources should not be vulnerable to the tourists. The

government must make laws and regulations to actively protect natural resources and cultural tourism destinations and tourists should also observe them. Regulations and rules of the tourist attractions to visit and use, only in

this framework that we can continue to guarantee quality tourism product. In this context, sustainable tourism including tourism development, management and activities that contribute to the preservation, consolidation and strengthening of environmental, social, economic, cultural and lasting result. (Johnny, G., 2007).

7. Tourism and cultural interaction in Chalus

Tourism is considered as a social reality in the present day communities for sustainable development. This type of tourism so that it works in the material and spiritual culture takes many forms. Tourism includes differences in the various incentives which are formed in the form of these differences. As a matter of cultural tourism in the tourist flow in the air space, location, environment, interaction and cultural exchange makes. This exchange and interaction with humans, incentives desires, needs, and aspirations of those who will be on the basis of the culture of the community. The development of tourism as a cultural phenomenon creates opportunity for cultural exchange between tourists and host communities and controls behavior (Turner, Jonathan.

H., 1999).

8. Tourism as a social and cultural reality in the Chalus

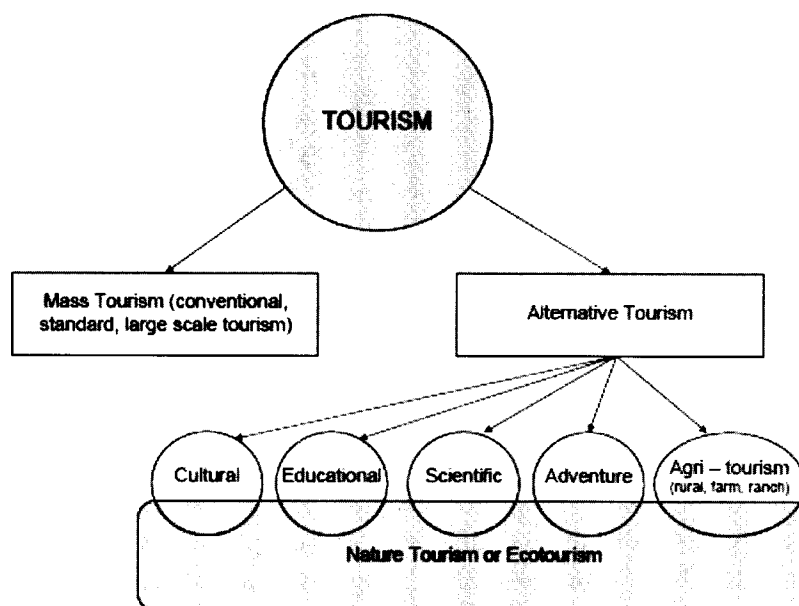
Tourism as a sustainable reality is necessary to develop communities and nations with particular capabilities in tourism and tourism in each country is considered as powerful factor in development and this would be realized in form of relations between traditions and ritual of tourists and attractive cities and places. In this order people of Chalus shape their city and culture and attractive environment respectively and different social aspects of the area for tourists to view the world of special events and interesting tourists and supply, and can contribute to creating a culture in terms of intellectual, behavioral, and social life and transfer it from a generation to another generation.

9. The development of tourism is one of the important factors of sustainable development of Chalus city

Tourism is one of the important factors of sustainable development of Chalus city and due to historical background of Chalus city and its potential and capabilities in tourism It is also in the management of the distinction between new and historical identity and cultur-

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▲ Fig 3. The role and place of cultural tourism within alternative tourism; Source: MIECZKOWSKI, 1995 p. 459.

al values in the management, preservation and restoration of historical context management, sustainable urban development, protection of historical and cultural values of indigenous and historical perspective of urban sustainability for the present generation and the future of tourism Chalus is the main goal of tourism industry in Chalus city.

10- Positive effects on tourism in Chalus city

Tourism in Chalus city as one of the ways to expand the development and cultural exchange and social interaction among people and nations can work and great benefits to society. In fact, tourism as a continuous and stable factor in the field of cultural tourism has many effects. This type of positive cultural implications, as expressed about the interaction and cultural exchange in the form of two-way tourism is going to shape. In fact, the positive effects of tourism in Chalus city lead to integrate cultural, economic and social identity. According to this approach, some of the general aspects of the positive effects of this type of cultural tourism in the context of social and cultural system can include the following items:

- *Tourism and tourists' eager to this type of tourism and travel can be a psychological comfort.*
- *Tourism in communities of high potential provided that the correct operation will lead to improve living standards.*
- *The capabilities and potential of urban and tourism in the community through good management and urban planning and cultural measures will lead to sustainable urban development.*
- *the development of tourism in the metropolis in our community to improve and enhance the quality and quantity of tourism facilities, development and strengthening urban infrastructure, provision of quality and attractive cultural, social and healthcare for citizens and tourists will be to interface type of tourism with other areas of tourism urbanization will be positive.*

11. Conclusion

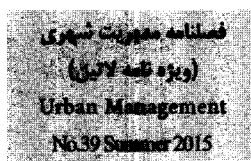
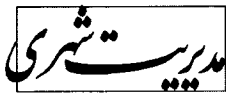
Tourism can be an experience for the psychological recovery and enjoying places for tourists in the present day. We are living through tourism practices in the region, regardless of any political tensions, social will learn. Development of cultural tourism in building confidence and understanding of cultural exchanges between cultures and civilizations religious dialogue will be present in the field of tourism. Tourism can be effective in forming and shaping sustainable development, cross-connection and environmental, and cultural factors of the metropolitan community. Complementary study, the appearance of the cultural landscape of tourism and urban development structure interactions and religious themes, environmental and developmental approach have significant role in developing dynamic urban tourism development and every nation's cultural capital. With reference to some of the issues raised in the field of tourism and effects, it can be proper for education, residents and tourists, creating fact-based planning, and the need for "guests and host", deficiency of facilities and services, decreases trust and social capital between the local community and tourists, stability, control and oversight in the area of economic and social welfare and health services in the field of strengthening the multilateral effects on the tourism industry. Balance and balance of payments situation, economic diversification, increasing incomes and creating employment opportunities is one of the consequences of this industry. On the other hand the sustainable development of the country cannot grow in isolation without tourism industry. The development of this industry depends on the development of different social sectors and infrastructure. Governments in this regard could play a key role, but the role of the private sector and their interaction with government departments, non-governmental organizations, enterprises, institutions and other entities should not be kept away. Therefore, to achieve sustainable development in the

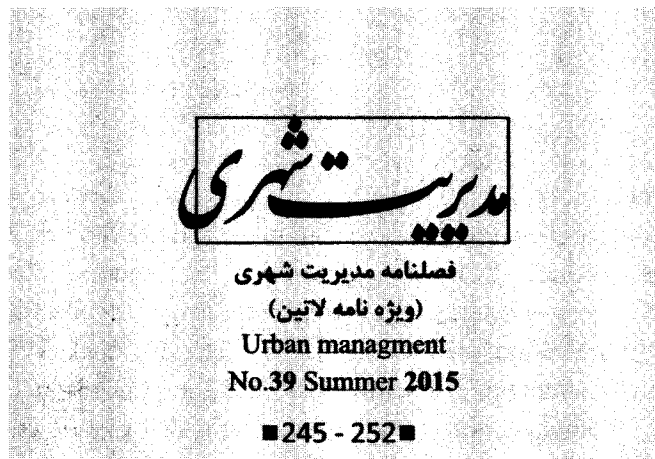


field of tourism all capabilities should be deployed perfectly.

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Received 13 Dec 2014; Accepted 29 Feb 2015

Evaluating and revisiting the public government: a policy feedback perspective

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Abstract

Existing models of quality evaluation in public sector are mainly derived from the approaches within private sector. These models which represented by the New Public Management (NPM) paradigm, don't reflect the fundamental values of public administration, which are the very essence of the discipline and contrasting it from private sector. These core values, such as democratic citizenship, are labeled as "non-performance" aspects of quality by existing market-oriented quality models and, hence, are abandoned from evaluation. Following on the changes have occurred in ways of governing, which is identified as "public governance", this study suggests that quality evaluation in this area of governance should be based not only on measuring policy outputs and process, but also on evaluating political outcomes of public services, specifically those related to democratic citizenship. Government, however, plays a considerable role in governance network. Thus, the quality of ways through which government plays its role matters and, consequently, should be assessed.

Key words: *public governance, policy, policy feedback.*

Introduction

Political theory and action in a certain period of time can be regarded as a reflection of that time main concerns. So, evolution of public administration theories can be explained through paradigmatic transformations as discussed by Thomas Kuhn (Kuhn, 1970): Wider institutional and political forces shape attitudes of scientific community members, administrators and citizens toward the nature and philosophy of public administration, the main issues it encounters, and legitimate ways of solving problems. Public administration theory as a result of these revolutions would be regarded as acceptable, as far as it would be able to solve the main problems, otherwise it is most likely to face legitimacy crisis or to be considered as outdated. For example, while, in nineteenth century Public Administration paradigm emerged in order to take the problem of corruption into account, New Public Management (NPM) approach suggested that the main problem of the discipline is that of performance (Behn, 1998). Widespread criticisms, however, of NPM with regard to its failure in solving problems, on one hand, and internal weakness of the approach itself, on the other, challenged the applicability of the paradigm as a dominant theoretical framework of reference. Here are among some critiques of NPM:

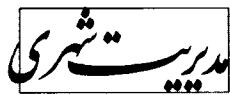
- *Transcendental values such as equity are at risk (Greve & Jespersen, 1999)*
- *While public administration operates through coordination and cooperation, NPM encourages competition rather than cooperation (Yamamoto, 2003).*
- *Supporting market-like solutions at the expense of Threatening democracy (Box R. C., Marshall, Reed, & Reed, 2001)*
- *Degrading citizens into consumers (Leig, The Fallacies of New Public Management Can They Still Be Prevented in The Austrian Context?, 1999)*
- *Failure in solving complicated problems (Bovaird & Löffler, Evaluating the Quality of*

Public Governance: Indicators, Models and Methodologies, 2003)

In addition to these criticisms, the fact that no single organization can afford what referred to as “wicked” problems, leads scholars to the conclusion that “market” and “state” as two forms of coordination are failed. Today’s world of public sphere does not resemble that of the past in which “state” can be thought of as the main actor in policy process. Moreover, the “market” is no longer regarded as an appropriate solution for wide varieties of public issues. Proposed mechanism must take our concerns of both efficiency and democratic values into account. Evolution of concepts such as “public governance” (Bovaird & Löffler, Assessing the quality of local governance: a case study of public services, 2007), “governing without government” (Peters & Pierre, 1998), “collaborative governance” (Ansell & Gash, 2007), “networked governance” (Candace, Hesterly, & Borgatti, 1997), and “public-private partnership” (Graeme & Greve, 2007) can be considered as steps along that way.

While the term “governance” as a new form of governing has been a contested concept and subject to different definitions (Kersbergen & Waarden, 2004), most of which agreed that this arrangement has blurred the borders between public and private sectors. In this polycentric network, government with the help of market and third section-civil society- are responsible for co-designing, co-producing, co-implementing, and co-evaluating of public services. Rather than implying a specified structure, for example government, governance addresses the process of governing as opposed to hierarchical decision making system (Bingham, Nabatchi, & O’Leary, 2005) through which interests of all stakeholders in a specified domain are balanced (Bovaird, Public governance: balancing stakeholder power in a network society, 2005).

Since, performance and quality evaluation frameworks derive from a wider theoretical standpoint, these transformations, also,



have made our attitudes toward quality concepts subject to the change. For example, at the end of 1980s and early 1990s, when the NPM approach was dominant, models of performance measurement approached emphasized on input-output aspects (Bouckaert & van Dooren, Performance measurement and management in public sector organizations, 2005). The story narrated by the NPM paradigm is influenced by the language from which private sector benefited. In the private sector, the objectives of quality programs were to enhance customers satisfaction and, hence, to increase corporate profitability. Similarly, NPM presumed customer satisfaction lead to citizen's trust in government. In this paradigm, the quality of government and of public policy systems are limited to and equaled with the quality of services they provide and, hence, a "good government" identified as a service provider which increases customer satisfaction with services. However, there is a few evidence that shows that citizens who are satisfied with the public programs are those who are, at the same time, trustful of government. Rather, in recent years, despite of increasing quality of public services, of increasing efficiency and of decreasing public service costs, there have been a trend along which public trust in government has tended to be decreased (Wang & Wan Wart, 2007; Cook & Gronke, 2005; Kee & Walle, 2009; Roberts, 2005; Vigoda, 2002; 2007). In addition to these findings, some research projects considered "governance" as a process- for example Bovaird & Loeffler, 2007- have brought scholars to the conclusion that quality in the public sector was totally different with that of private sector in which, although, service output matters, but also, at the same time, the ways through which outputs were produced and their outcomes were important. Rather than narrowly focusing on the quality of services provided, we should focus on measuring quality of the overall governance system; taking all stakeholders apart in designing, implementing, and evaluating poli-

cies, public governance lead both to reduce costs and to make sure of preserving democratic values. Thus, we should implement a shift away from evaluating quality of public services in favor of focusing on measuring the quality of governance.

In doing so, and with approving the fact that what is improvable which is measurable (Fiszbein, Ringold & Rogers, 2011), we start with defining what referred to as "public governance". In this study, by public governance we meant:

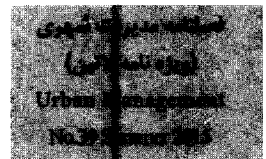
The (in)formal process of interaction by which network of all stakeholders within a policy domain or public issue in local or national level interact each other in accordance with the agreed rule of the game in order to influence political and social outcomes of public policies

This definition develops the conceptualization provided by Bovaird and Löffler (2003). For them, evaluation of public governance takes place in two areas of "accordance with principles of good governance" and "improvement in citizen's quality of life". By entering evaluation of "political outcomes, specifically democratic citizenship outcomes" as well as "the role of government in public governance system", this study has contributed to existing literature.

Although, Bovaird and Löffler (2005: 144) approve that the end goal of a high-quality public administration is to improve public trust in government through enhancing democratic values, they fail to include political impacts, specifically in terms of citizenship outcomes into their quality model. As we will show in the next section of this paper, trust in government is mainly suffered from dismantling citizen's sense of worthiness as conveyed to them by public policies. These citizenship outcomes are subject matters of what referred to as policy feedback literature.

Citizenship outcomes

Based on the idea that Quality in the public sector is different with that of the private sec-



tor, it can be conceived of as beyond the user–customer– satisfaction. Democratic institutions aim at meeting varieties of goals which are more than quality service delivery, probably, the most of which is to distribute the values. In public sphere, every quality model must develop a condition through which equilibrium between efficiency and democratic values is obtained. What we expect from government is to receive high-quality public services in a manner that respect our entities as citizen and, at the same time, bring a happier life to us. By doing this way, our economic liberties in selecting options we are facing with and our political bonds as citizens are respected. Through this way, one can expect that public administration is an instrument for expressing public values (Bourgon J. T., 2007). Thus, the first and foremost step to modify deficiencies of market-like quality models is to shift our thoughts of democratic values away from non-related metaphors into the concepts which are at the heart of a performance management system. By this effort, we will hopeful that public administration will be emancipated from intellectual fetters have been shed through inconsiderate pursuing of business models. Among other things, one of main problems of these models is to devastate democratic citizenship (Leigl, *The Fallacies of New Public Management- Can They Still Be Prevented in Austrian Context?*, 1999). For example, O’Flynn (2007) identified that managerial approach may not appropriately consider the public values underpinned public administration and, consequently, suggested that public services couldn’t be addressed in terms of pure economic rationality. Rather, it is helpful to the nature and philosophy of public administration which is to improve our political value.

Recently, Political theory has paid a good deal of attention to democratic citizenship (Denhardt, et al., 2009; Roberts, 2005; Denhardt & Denhardt, 2000). For example, in order for explaining the reasons of declining trust in government in spite of improving its efficiency,

Scholars argue that while cost-benefit analysis matters, citizen’s perceptions of self-fulfillment and self-expression (Walle, Roosbroek, & Bouckaert, 2008) are of more importance (Denhardt R. B., *The Future of Public Administration*, 1999). Nevertheless, in quality models of public sector, what ignored is the fact that policies and public programs delivered by the government may have significant democratic outcomes (Hanberger, 2001). The call for incorporating citizenship considerations into performance models is regarded as a reaction to atmosphere built by existing public service quality approaches in which fundamental democratic values are threatened by imperfect understanding of economic values (Box R. C., Marshall, Reed, & Reed, 2001). This has been mainly done by intellectual efforts reflected on what referred to as policy feedback literature which highlights Schattschneider’s (1935) famous claim arguing “new policy creates new politics”. In democracies what expected from public policies is that there must be congruence between them and preferences of citizens. Policies should be representative of public mass expectations and favorite’s Invalid source specified.. In this view, public policies may be thought of as outputs or products of public opinions which regarded as inputs Invalid source specified. In summary, the system approach predicated on the premise that “politics leads to policy”. Certain policies, however, through several mechanisms may have intended Invalid source specified. Or unintended Invalid source specified. Consequences on public attitudes and, hence, politics. For example, Pierson (1993) suggested that public policies may shape citizen’s attitudes and self-concepts either objectively through incentives and sources provided by public programs, or subjectively through interpreting messages conveyed by policy design.

These implications may take an intended or negative forms Invalid source specified.. Various researches have shown that policies had implications to public opinion Invalid source

specified., to citizen's preferences even in un-democratic societies; to social benefit attitudes (Hedegaard, 2014) and to democratic citizenship such as political participation (Mettler & Welch, 2004; Mettler & Stonecash, 2008).

Policy feedback theory draws our attention to interaction between policy and politics, between bureaucracy and democracy and specifically to the fact that public services and policies are not neutral means getting designed to meet politically predetermined ends. Rather, they are ends as itself. This process of displacement may, in some cases, lead policies to move against the way of fundamental and legitimate values along which they are supposed to be. As far as it relates to the evaluation models of quality and performance measurement, it is necessary to incorporate the implications of public services to citizens as the main owners of democracy into that models. By doing so, citizenship outcomes of public policies should be regarded as an important political aspects of public life. By citizenship outcomes we mean impacts that public services and policies have on individual identity and behavior of citizen.

Conclusion

Changes occurred in governance system has resulted in changes in quality concept according to which quality has transformed from a technical concept based on correspondence of user and a public service provider to a more political-social one which has gone beyond the service users and involved in all stakeholders existed in a territory and a given policy domain.

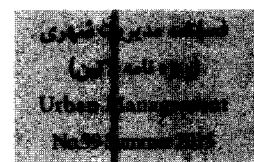
Classical interpretation of quality derived from "new public management" paradigm stresses on "output" as the basis of measuring quality. That school of thought defines quality in a user-service provider relationship. Thus, quality of public services was reduced to measuring user/ customer satisfaction with some features of those services.

In public governance paradigm, quality transcends a narrowed user-service relation and

comprises of wide range of people and organizations which may not be necessarily users of services, but affected by their outcomes. The focus of this definition is on public service-citizen, politics-society relations. Thus, it looks for improving citizen's quality of life (Bouckart, 1995). That is because of inability of government to solve wide range of policy issues such as global warming, global economic crisis. To better address these issues, government must bring multiple stakeholders to the table and invite citizens to get involved (Bourgeon, 2009). Although there has been some theoretical advancement regarding state-citizen relationships which help us to design and implement more high quality public services than the past, present models of evaluating public service quality and public governance performance don't appropriately reflect all components of public service quality. One of these models measuring public governance proposed by Bovaird and Loeffler (2003) which evaluates the concept based on measuring process of public governance labeled as measures of good governance and quality of life. Although this model is obviously regarded as advancement, but it failed to take some important elements such as citizenship outcomes into account. Policy feedback theory provides us with some empirical evidences suggesting public policies and services may have some critical democratic outcomes such as "civic engagement" and "political efficacy". Moreover, since government has an important role regarding how effectively market and civil society operate as two modes of governance, models of measuring public governance quality should ensure that government plays its appropriate role.

Moreover, in specific governance system, like Iran, which dominated by religious values leading political and administrative policies, any policy quality measuring model has to take institutional arrangement into account as well as other factors. We suggest that models of measuring public service quality have to be com-

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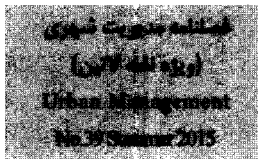


prised of service-related variables and non-service related factors. Specifically, models of measuring quality of public services have to evaluate two set of factors: factors related to process of policy formulation and implementation and factors related to policy outcomes. This contributes to the theories of measuring quality of policy by adding institutional and political dimensions to the previous classical business models. This model is more realistic in the sense that, in a governance paradigm, it views quality as a complex concept which is both technical and political concept. By regarding so, values of a political system enter models measuring quality of public services. This means that in governance paradigm, quality is rather a cultural-political-institutional concept which is totally different with classical interpretation viewing quality as a merely technical concept.

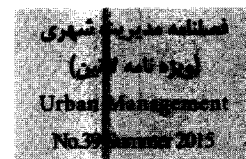
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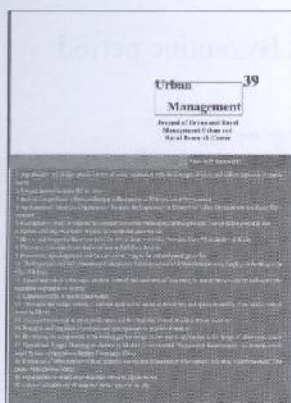
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(روزنامه علمی-تخصصی)
Urban Management
No.39 Summer 2015

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Urban Management

A Quarterly Journal of Urban
Management and Planning
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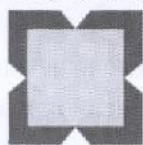
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Management, Urban and
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