

Assessment and Prioritization of Urban Management Challenges in Supervising the Construction of Buildings

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Abstract

Nowadays, construction of buildings has a very important role in the society development. Reducing the expenditure and duration of construction of buildings and increasing the quality and longevity of buildings are main targets because huge investments have taken place in this section. So, urban management, as the most important tool for the conduction and control of cities' development, plays an effective role in the improvement of buildings construction system. Therefore 239 municipality employees of district 3 of Tehran were selected using simple random sampling, and the questionnaire derived from the Gita article was used to collect data. To analyze the data one sample t-test was used considering the normality of data. Results show that infrastructural challenges, legal challenges, governmental challenges and economic challenges are among urban management challenges in supervising the construction of buildings ($p < 0/01$).

Key words: urban management challenges, construction of buildings

Introduction

City has a long history in the human life as a place for habitation; city had been affected by some factors which had somehow been taken place repeatedly in the history consequently. It is important to know city and its evolution for its continuity and development. We cannot ignore past experiences in the next actions because they has been achieved very expensively.

Urban management is a process lead to a decision constructing system collectively. Whether an urban management is successful or not is depends on the power, legitimating, and legal, social, and economic structure of intended society (Yang et al, 2014). On the other hand, this kind of management is considered as a kind of local and autonomous government to attract people's participation which will lead to reducing government duties (Abbasi, 2007). The main purpose of urban management is to create an environment for everyone to live in with social justice, economic efficiency and environmental stability. Urban management effects on urban

land and house, social services and infrastructure of economic and environmental development completely (Sarraf, 2000). Urbanity is an important challenge now, which is most common in Asia, Africa, and Latin America; so that every year 60 million citizens are added to the poorest countries in these areas (Stephens and Stterthwaire, 2008). If we assume city as a department, it will be necessary to use a technique to execute city affairs which is urban management (Shie', 2002). After creating Urban Islamic Council, modern urban management system of Iran has a slight difference because of adding an element in to the urban management system, but it is still in the same framework. For the reason that after adding this element to the urban management system, it can't still move and it still is scattered and disharmonic and even sometimes it can't speed up or join illegitimate activities of urban management system and can't meet urban society requirements. Urban management confronts with major limits and challenges in Iran. From one side these limits are along with urban population growth and increasing of urbanity and urbanization, and from the other side it is

confronted with traditional structure of local institutions which are not ready for structural evolution in themselves. Past structures cannot meet continuum and changed requirements to build and manage modern cities, we should have an appropriate and multilateral schematization to change this traditional view (Firouzabadi et al, 2012). Today, a metropolis like Tehran confronts with different difficulties and problems such as increase of population, decrease of geomorphologic balance, increase of duties per unit area, all of these show that natural infrastructure of a city like Tehran is getting more unstable. This issue is not considered very much when it is planning about modern metropolises and their future development, thus urban management of this metropolis does not have needed tools to manage and coincide urban life of their citizens with the natural and morphological ability of area (Firouzabadi et al, 2012).

After some decades of preparation of plans and programs which its result is applying a common pattern in construction of urban buildings in different countries, the prospect is to construct cities according to accurate rules and regulations and to develop according to economic, social, cultural and territorial abilities (Chi, 2005). But unfortunately, these patterns not only cannot respond real requirements of cities but also provoke some other problems and obstacles (Moshiri, 2010).

In this article, our purpose is to oversee on construction of buildings; it has not been still considered appropriate buildings adequately because of high seismicity of most of big and populated cities especially Tehran and the vulnerability of existing buildings against earthquake according to recent earthquakes experiences. Because of the difficulty of overseeing on construction of buildings and also the possible effect of urban management on it, studying urban management challenges in overseeing the construction of buildings and

also prioritizing these challenges, are the main purposes of this article.

Literature review

Urban management

Urban management is a collection of laws, regulations, procedures and subsidiary conditions that are commonly used in the society level by local organizations. The growth of local departments or more generally local departments define as transferring a part of local affairs of city to local departments which was previously in the government duties domain and now they are transferred in to the local department duties because of political, social and cultural conditions. Local department is a kind of department has located in a district of country; either state or government, or it is mainly according to the country divisions and administrates local affairs as a result of authorities which people have given them (Fathi, 2014). Urban management specifically has two executive methods includes:

- Centralized urban management
- Non-centralized urban management

In the centralized urban management, central government directly interferes in the city management and does those responsibilities that have local aspect by itself. This model is based on bureaucracy and It is usually followed by those governments which are not generally depends on people's works and efforts and supply their costs from national resources. People do not have any position in a centralized urban management pattern, their role is insignificant in managing cities and their views is less considered in the in the essential affairs like policy making and planning. This pattern is omitted from European countries and does not have any position in the developed countries at the present time; the most important role of people

in the urban management pattern is to select the members of city council (Ebrahimzade et al, 2014).

In the non-centralized management pattern, it is transferred urban affairs in to the private section or organizations. In this pattern, municipalities mainly undertake local responsibilities; even undertake affairs such as

tourism, plans of urban development, library construction, marriage and divorce themselves and provide their expenditure from local charges and taxes. Of course, partly the government undertakes some issues involving cost. Urban management as a model is introduced to manage and develop urban settlements includes small towns, big cities and metropolises (Ebrahimzade et al, 2014).

Table 1) some definitions of urban management

Definition of UMIC1 of urban management	Urban management is managing city affairs in order to promote urban life index in different dimensions as social, economic and cultural; with due attention to the presence of all effective formal, informal and related elements in order to achieve extensive and sustainable city development and having in mind major country purposes and policies
Paul House and Earl Etch Blanchard	Urban management is defined as a subset of local government and municipality. Urban management is as a system that has special inputs and outputs.
International bank definition	Urban management is a semi-economic activity for governments. On the other hand, urban management means managing urban affairs and more effectiveness to use international bank loans. Urban management sometimes is considered as a tool to execute urban management policy making which means the concept of society managing science.
Latifi	Urban management is the collection of laws, regulations, procedures and subsidiary conditions that is used in the city level by local organization.

Urban development strategies

The process of urban development has a strategic nature meanwhile try to achieve its purposes to arrange necessary actions; it is also emphasis on the citizen participation in the whole process, try to make a trust structure and a relation between different groups, recognize developmental abilities and opportunities and also encourage people to emphasize on development of their city unlike past. Local authorities use citizen's experiences and views in different stages of process by carrying on council meetings and providing some reports; they inform citizens about process and the results of work so that guarantee their participation. Under these circumstances, citizens will feel more dependency and

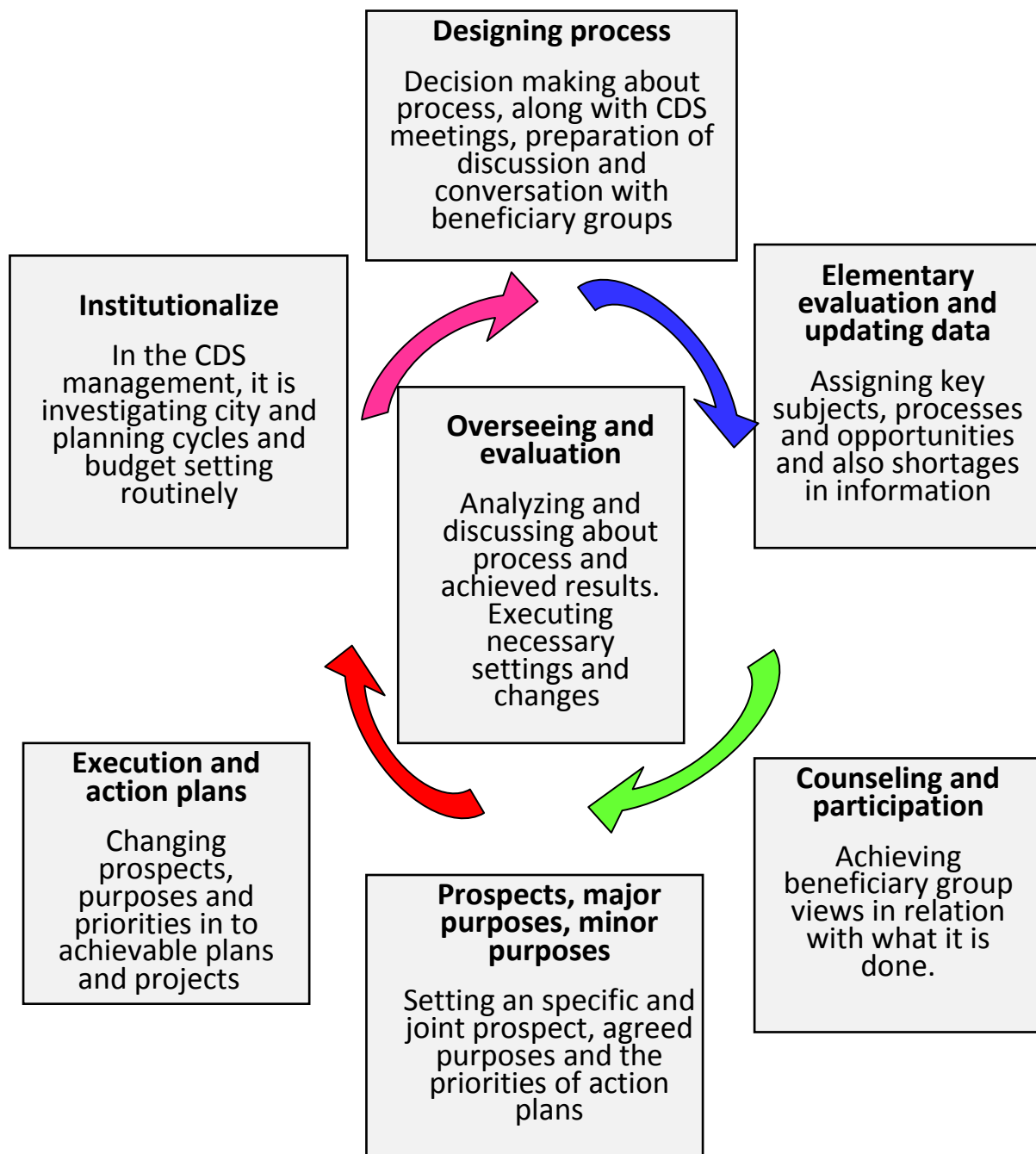
ownership towards city developmental plans; moreover they can oversee performance of responsible system more and consequently «urban authority will be accountable, knowledgeable and predictable more than before and will be more effective in providing services» (Asian Development Bank, 2006).

The plan of urban developmental strategy arranges a scene for the future of city which its purpose is to plan some activities that have been done to improve urban management and authorities and also to increase urban developmental planning in order to promote preoccupation and services condition as well as to decrease poverty constantly and systematically. In this way, the effective process of urban developmental strategy

attracts both investment and also its most favorable usages.

One of the most obvious characteristics of urban developmental strategy process is that it considers planning and designing process as well as achieved result and effect so that it can be said urban developmental strategy is both a

process and a product (ADB, 2006). Consequently, it can be evaluated it from two point of views – process oriented and subject oriented – to investigate structure. Of course, the priorities and exact elements of each one will be different because of city situation, social–economic conditions and available resources.



Shape1. Urban developmental strategy process (coalition of cities organization, 2006)

Urban management challenges

Urban management is confronted with challenges as well as previous factors and these challenges shows themselves also while overseeing over construction. In the Kastelz and Boorja's typology, it is well put together supplying infrastructures and services and flourishing economical activities as urban management challenges along with issues such as supplying and guarantying integrity and governance. It is clear that it can make some distinction between these two kinds of challenges.

Although it is seemed that it is possible to assume some challenges such as supplying services and infrastructures for ever-increasing urban population, shed cities, informal economic and health problem; which are taught in the first chapter and we called them urban challenges, as a part of challenges that are in front of urban government or urban management system but in fact it can be also classified among urban management performance or responsibility. Therefore, it seems that urban management confronts with two major challenges. It is necessary to present some factors to partly distinct these two groups of challenges which is confronted with urban management. Here to follow what has been used in the urban planning domain from 1960s; I mean the definition and separation of planning theory, theory in the planning, and transfer of emphasis point from output and product to process and procedure; it can be classified urban management challenges in to two groups i.e. content challenges and procedural challenges; from the point of view of their emphasis and relation with urban management content and subject and also from the point of view of their decision making procedure and approach and execution. In this way, although the distinction between content and procedure has mainly done in the domain of planning theories but this classification is very valuable in the practical subjects because

it helps to separate problems and challenges, to set priorities and to recognize appropriate solutions.

Content challenges:

It can be classified some problems and difficulties such as informal habitation, developing the informal part of city, inappropriate urban services and health shortage in the content and thematic problems of city, these issues has been discussed in the first chapter under the challenges of speedy urbanity title. It is placed most of problems and difficulties which have been classified under the investigation of municipalities.

Procedural challenges:

This group of problems is related to urban planning and managing system, although they are hidden and invisible problems but they are more important and more fundamental than content problems, because they create or intensify content problems. These challenges include weakness of urban fundamental ability, separation and dispersion of different parts of urban management, resistance in front of different variation and inappropriate relationship between government and urban and local management. Every substantial change in city and any reduction in its thematic issues require fundamental reforms of procedures and urban planning and management system.

The aim of this study was to evaluate and prioritize the urban management challenges in overseeing the building construction so it is mentioned a few examples of empirical studies conducted in this area to greater transparency of subject.

Fathi (2014) has examined the factors affecting the participation of citizens in the management and development of urban spaces in Tehran and he has concluded that the amount of

citizens participation in the urban spaces is lower than average.

If you want to highlight this issue it should be said that the variables of supposition kind of participation importance, supposition kind of participation results, the amount of citizens' satisfaction of plans and performance of urban management, and also the kind of citizens' suppositions of their proficiency and specialty is effective in their participation in management and development of urban spaces.

Akhbari and Ahmadi Moghadam (2014) have resulted, while investigating passive defense in the urban management that urban managers in passive defense must try to be ready to reduce life and property risks, quickly confronting and improving the circumstances until the normal level is provided in the city and of course something has been done in this way.

Abedi, Jafari e.al (2010) have done a research "making clear constituent factors of urban management based on studying the structure of the ten municipalities in the words" and they concluded that the final model of urban management have these factors: "management", "Engineering & Technology", "urban making", "Accounting", "Finance and economy", "Social Sciences", "environment", "economy", "Legal", "Political Science", "geography" and "military" and "police".

After investigating urban challenges in India and reviewing recently actions about policies adopted, Sangita and Shama (2013) have concluded that urban and state governments have not had enough performances in the executing the procedure of overseeing reduction and decentralization has been uneven across the country. Moreover, infrastructural projects which have been under some sanctions till March 2012 under the program of National Mission of Urban Renewal; also fight with some difficulties; and it has been extended two years from the time and will be continue till

March 2014. Evaluations points that the policy of economical- political factors and also weakness of management abilities are some important substantial challenges which are effective in the urban reforms in India.

Mokadasi and Nebalgoa (2005) have investigated some challenges facing urban management in Uganda and have concluded that challenges arise from ever-increasing population is jointed with central government policies that protect more rural areas than urban area. Challenges are confronted with urban areas includes: two population problem, Increasing of waste production, weak income, ever-increasing development of private sector, increasing of scattered townships, weakness of water quality, management weakness in providing urban needed services; here it has not been effective to join financial sources because the coasts of tax management has increased, managers quality has decreased in the execution procedure and there is not a public sympathy in paying tax.

Conceptual model of research

According to what was stated, research hypotheses are presented as follows:

- 1- Environmental challenges are among urban management challenges in overseeing the construction of buildings.
- 2- Infrastructure challenges are among urban management challenges in overseeing the construction of buildings.
- 3- Legal challenges are among urban management challenges in overseeing the construction of buildings.
- 4- Governmental challenges are among urban management challenges in overseeing the construction of buildings.

- 5- Social challenges are among urban management challenges in overseeing the construction of buildings.
- 6- Economic challenges are among urban management challenges in overseeing the construction of buildings.
- 7- Cultural challenges are among urban management challenges in overseeing the construction of buildings.
- 8- It is seeded that there is a meaningful differences between priorities of urban management challenges in overseeing the construction of buildings.



Figure2. Conceptual model of research derived from Gitau paper, 2011)

Methodology

The method of information gathering

In this article, it was used of books academic dissertations, research- scientific papers, magazines and Internet sites to investigate theoretical bases of study variables; and it is used of questionnaires based on Gitau model to collect necessary data so that we could evaluate and prioritize urban management challenges in overseeing of building construction. Finally, data that is achieved from questionnaires are evaluated with One-sample t-test and also SPSS 16.version software.

The mentioned questionnaires has 21 questions, each one has 5 options.

3 professors and specialists of this field have approved the content validity of this questionnaire and its reliability amount is studied with Kronbakh's Alfa test, it was .87.

Statistical sample and society

The statistical society of this paper includes all municipality employees of Tehran District 3, they were 634 member. In this paper, a simple random sampling method was used to select the sample for the study, achieved number was 239. So it

was selected 239 members of municipality employees of Tehran District 3 and was used as the basis of study.

Data analysis

Descriptive data showed that %53/56 of studied people were male and %9/62 were female. %9/62 of participants have diploma or lower levels of education, %12/13 have A.A degree, %61/09 have B.A degree and %17/16 have M.A or higher degrees; among them %31/8 were formally employed, %25/94 have semi-

formal employment contract and %42/26 were contract employment. From the view point of carrier, %6/28 of members have lower than 1 year carrier, %24/27 of members have the carrier of 1-5 years, %30/96 have 5-10 years, %20/50 have a carrier between 10-15 years, %11/30 have a carrier between 15-10 years, and %6/69 have carrier more than 20 years.

Descriptive information of descriptive indexes of research factors are presented in the table (2).

Table 2: descriptive indexes of research factors

Factor	average	Median	variance
Environmental challenges	2/762	2/666	0/924
Infrastructural challenges	3/691	3/666	0/714
Legal challenges	3/912	4/000	0/723
Governmental challenges	4/043	4/000	0/737
Social challenges	2/380	2/333	0/946
Economic challenges	3/541	3/666	0/693
Cultural challenges	3/661	3/666	0/930

According to the results of table 1, the most and the least average amount has related to governmental challenges and social challenges variables. The most and the least median also has related to social challenges and economic challenges variables.

Then we do an inferential test about hypothesis, in this way we will evaluate the pre-supposition of normally distributed variables with the use of Kolmogorov–Smirnov test before we use parametric one sample t-test; its results is shown in the table 3:

Table 3: the results of normally distributed variables test

Factor	Significance level	Kolmogorov–Smirnov statistics	result
Environmental challenges	0/095	1/160	Normal
Infrastructural challenges	0/083	1/221	Normal
Legal challenges	0/067	1/314	Normal
Governmental challenges	0/052	1/339	Normal
Social challenges	0/099	1/142	Normal
Economic challenges	0/081	1/224	Normal
Cultural challenges	0/075	1/248	Normal

It is shown according to Significance level of Kolmogorov–Smirnov test that Significance level was for all the factors have the first one mistake of more than 0/05, consequently we accept the supposition of having normal observations in the first one mistake level of 0/05.

After that, it is used of one sample t-test to study urban management challenges in overseeing the construction of buildings, its results is presented in the table 4:

Table 4: urban management challenges in overseeing the construction of buildings

Index	t statistics	Degree of freedom	Significance level	Variance
Environmental challenges	-3/967	238	P<0/001	-0/237
Infrastructural challenges	14/974	238	P<0/001	0/691
Legal challenges	19/498	238	P<0/001	0/912
Governmental challenges	21/869	238	P<0/001	1/043
Social challenges	-10/140	238	P<0/001	-0/619
Economic challenges	12/064	238	P<0/001	0/541
Cultural challenges	-5/632	238	P<0/001	-0/338

The results in table 4 show that infrastructural, legal, governmental and economic challenges are among the urban management challenges of overseeing of building construction. The results also showed that environmental, infrastructural, social and cultural challenges are not among urban management challenges in overseeing of building construction.

It is used of Friedman nonparametric rating test and its results are showed in table 4. In this test factors are classified according to the enlargement of average rating and every factor has a larger average rating among others so is more important.

Table 5: the results of Friedman rating test

Factor	Rating average	Rate
Environmental challenges	2.86	5
Infrastructural challenges	4.88	3
Legal challenges	5.28	2
Governmental challenges	5.57	1
Social challenges	2.05	7
Economic challenges	4.62	4
Cultural challenges	2.74	6
The statistics of two tests: 649/725		
Significance level: P<0/001		

According to the results of prioritizing table 5, there is a significance difference between urban management challenges in overseeing of building construction in the studied society. Based on these achieved results, governmental challenges are located in the first priority. The prioritization of other factors is as follow:

2- Legal challenges, 3- infrastructure challenges 1, 4- economic challenges, 5- environmental challenges, 6- cultural challenges, 7- social challenges.

Conclusion and suggestion

Today, construction of buildings has an important role in the development procedure of modern societies. With due attention to the great amount of investment in this section and

its effect on the national economic, it is tried to use modern methods and technologies, and professional and qualified manpower potential in this section to both decrease the expenses and duration of construction and also increase lifetime of building. Urban management is considered as the most important legal and technical tool of urban developmental managing and controlling, and this tool is certainly effective in the improvement and refinement of methods for the construction of buildings (Majedi et al. 2000).

Evaluating the performance of institutions and organizations are involved in the planning, implementation tools and methods eventually lead to identify overseeing patterns of buildings construction. Today, construction has a special role in the development of modern

societies and with due attention to the great amount of investment in this section and its effect on the national economic, it is tried to use modern methods and technologies, and professional and qualified manpower potential in this section to both decrease the expenses and duration of construction and also increase lifetime of building. Despite, there are major challenges in this field that should be studied. In this direction, the purpose of present article has been to evaluate and prioritize urban management challenges in overseeing building construction. The results of this article show that infrastructural, legal, governmental and economic challenges are among urban management challenges in the overseeing construction building. The results also show that environmental, infrastructural, social and cultural challenges are not among urban management challenges in overseeing building construction.

The prioritization of urban management challenges in overseeing building construction is as follow:

2- Legal challenges, 3- infrastructure challenges , 4- economic challenges, 5- environmental challenges, 6- cultural challenges, 7- social challenges.

Rapid increase in population, together with the development of urbanity and urbanization in the world create many problems in different countries especially in the third world countries, because speed and the amount of growth in the third world countries is much more than other countries. Urban management is created as a result of nonoccurrence of these problems i.e. mainly as the consequence of nonoccurrence of ever- increasing urban population requirements with national governments abilities (Moshiri, 2010). Some of these difficulties are includes: shortage of house, increase of huts and informal settlements, development of informal section in urban economy and consequently increase

of social inequalities, low quality of urban services, limited availability of poor population to the urban infrastructural installations, development of fatal diseases, decrease of urban safety and security, increase of social perversions (Gitau, 2011). Moreover, new procedures and evolutions like globalization and facilitation of global, social , economic, and cultural relations has created new challenges for urban management in different countries like developed countries and developing countries (Marshal, 2004). All of these elements together have leaded that urban management and overseeing the building construction to be a challenge.

At the end, with due attention to investigations that has been done in the article procedure and also achieved results of Statistical analysis of article data, following suggestion scan be make:

- Allocate sufficient budget to provide facilities and necessary technical equipment for the construction of buildings.
- Setting an obvious and consistent policy and vision about government policies for the purpose of building construction.
- Formulating and promulgating specified rules and regulations for construction of buildings and overseeing their proper implementation.
- Using an integrated management system and try to recruit skilled and professional members in the field of overseeing the building construction.
- Applying sustainable and dynamic financial resources, and direct and indirect overseeing over construction of buildings in order to prevent manufacturing defects.

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