

Persian translation of this paper entitled:

مکان‌یابی موقعیت پردازه‌های محرک توسعه در بافت‌های ناکارآمد شهری
(مورد پژوهی: ناحیه ۲ منطقه ۱۸ شهرداری تهران)
is also published in this issue of journal.

Location of Development Catalyst Projects Position at the Urban Inefficacious Textures (Case Study: District 2 of Area 18 in Tehran's Municipality)

Mohammad Reza Hashemi^{1*}, Esmaeil Shieh², Hossein Zabih³

1. Ph.D. candidate of Urbanism , Faculty of Art and architecture , branch of Tehran West, Islamic Azad University, Tehran, Iran.
2. Professor of Urban planning Department, Faculty of Art and architecture , branch of Tehran West, Islamic Azad University, Tehran, Iran.
3. Associate Professor of Urban planning Department, Faculty of Art and architecture, branch of Science and Research, Islamic Azad University, Tehran, Iran.

Received: 10/04/2019 ; revised: 21/08/2019 ; accepted: 28/09/2019 ; available online: 21/05/2020

Abstract

Problem statement: It is essential to be regenerated the timeworn and inefficacious textures that have been lowered their efficacy relative to other their peripheral textures. And one of the policies in this case, is performing the development catalyst projects. In summary, development catalyst project is one of the recent approaches in literature of urban regeneration in Iran and world that by their appropriate location around texture are restored and developed the development catalyst projects that are localized in.

Research objective: The purposes of this research are determining the location indices of development catalyst projects with emphasis on physical matters and locating the arenas that have potential to define the development catalyst projects in district 2 of area 18 in Tehran.

Research Method: This research is applied and research method is descriptive-analytical. Method of gathering information includes providing the questionnaire, library studies, field observations. AHP technic has been used in location section by GIS software.

Conclusion: The results show that there are different indices such as population and building density, quality and antiquity of structures, culture and literacy level in society, mixing and various applications and activities and ... to location of development catalyst projects with emphasis on physical aspects that have extracted from scholar's viewpoints. Also by employment of these indices for locating the arenas that have potential to define the development catalyst projects in problematic textures in district 2 of area 18 in Tehran, 3. 99 hectares (14.04%) from timeworn texture in this range have the least potential for formation of development catalyst projects (western sector of problematic texture in district 2), and in contrast, 9. 66 hectares (34%) of this range have most potential to perform the development catalyst projects (eastern sector of district 2), and the most appropriate arenas to locate have located in central sector and Shahid Rajaii and Sadeghia districts.

Keywords: *Development Catalyst Projects, Location, Hierarchical Analysis, Geographical Information System.*

* Corresponding Author: hashemi_shahrsazi@yahoo.com, 09123889172

Introduction and Problem Statement

The development catalyst projects are one of the recent approaches in urban regeneration literature in Iran and world. This interference type, is one of the most essential sections of comprehensive regeneration models in Iran that has been pointed to it in Iranian urban regeneration document (National guideline recovery document, improvement, regeneration, enabling the timeworn and inefficacious urban development, 2014).

One of the modern policies in urban development in general, and in regenerating the inefficacious urban textures especially, is using of development catalyst proceedings and projects to facilitate and accelerate the vicissitude in these textures by utilizing the social contribution and power of residents and using of local potentials.

In fact, development catalyst projects (flag and index project) act as a productive factor in urban regeneration and its advantage is that, has the potential of contrast with uncertain complicated status and don't need to significant investments but allow to incorporate interest groups into the existing resources.

Development catalysts as beds for social and economic functions, leading to increase the motivation for participation in improvement and regeneration process and also leading to investment of private sector in these textures.

In development catalyst approach no need to extensive interference and investment one can observe effects of existing uses. Urban regeneration influenced by this approach is completely context-based and far from any default and by complete cognition of context, adopts an appropriate catalyst element, from hardware or software, proportional to main goals and local society requirements.

Development catalyst projects by creating dynamics through recovery of useless lands or dilapidated places existing in the texture, along with social interactions and activity improvement

such as spending the free times, employment and ... also no need to great investments, are capable to regenerate and recovery of urban old, historic and valuable textures in four aspects including physical, economic, social and environmental aspects, which in a positive way, improve their peripheral environment and element quality.

The aim of this research is to extract location indices of arenas that have potential to define the development catalyst projects and modeling the location of development catalyst projects in efficacious texture in district 2 of area 18 in Tehran, which have characteristics such as lack of physical relation and dominance of the residential land use, existing the low-width and narrow passages and lack of necessary lands for traffic and parking and ... with emphasis on physical indices and providing the guideline to improve efficacy of development catalyst projects with urban regeneration approach.

According to the provided descriptions, main problems of this research are that what are extracted appropriate indices in scholars ' viewpoints to locate the development catalyst projects with emphasis on physical issues? And second, what are the places and arenas that have the potential to define the development catalyst projects in the study case?

Theoretical Foundations and Research Background

• Definition of Urban Development Catalyst

According to the development concept, we can define development catalyst on three statuses. First, it is the zero status, in which interventional action leads to the extension of building and forming the housing in an unoccupied area. Second, it is a existing urban texture that its infill designing leads to change and improve current status.

Third, it is an existing urban texture that injection an element into it as called development catalyst, allow to change and improve current status

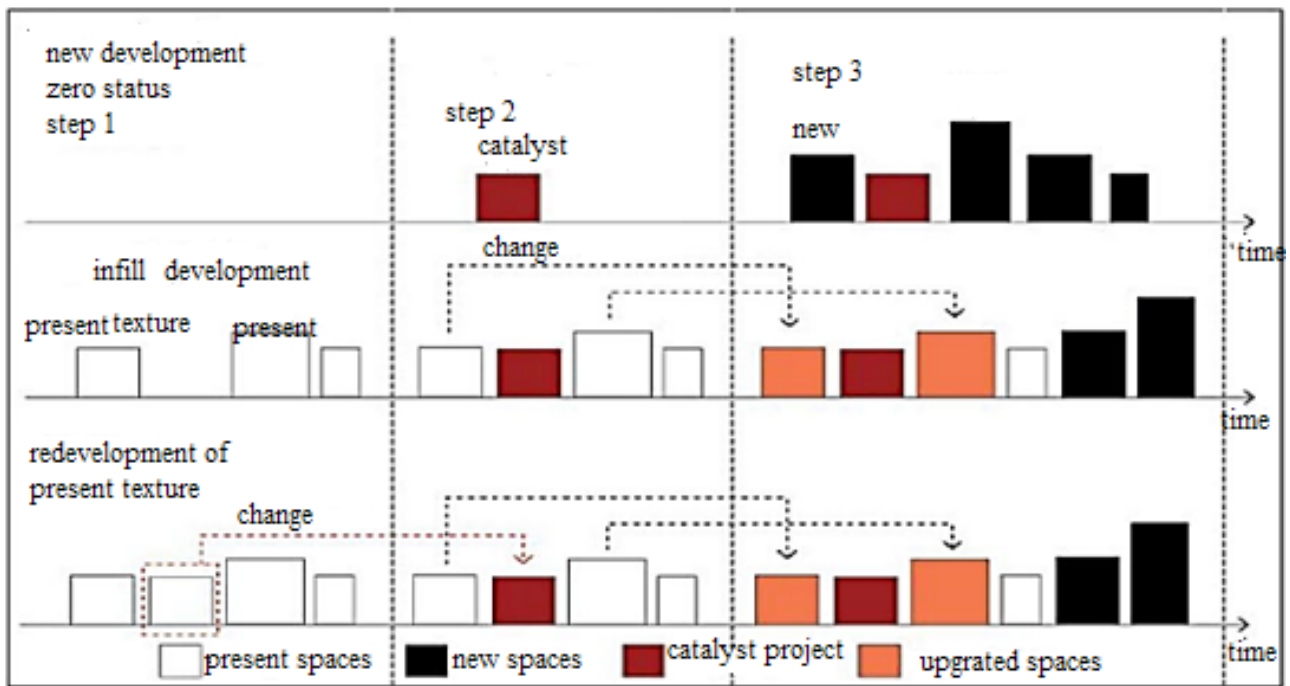


Fig. 1. The types of development in format of development catalyst. Source: Temelova, 2007, 169.

(Bohannon, 2004, 251). Its difference from previous case is considering an element that has not been in the texture. In other words, in the second case, it is attempted to be improved the texture by recovery of existing uses (Fig. 1).

• **History and Why of Design of the Topic of Development Catalyst Projects**

Since 1970s in America and 1980s in Europe, development catalyst projects were considered as a policy to encourage private investment and leading it towards regeneration of the decadent sections (Temelova, 2007,170). The development catalysts that would be considered as a major part of commercial power, were proposed to encourage the pioneering of private sector in properties-based regeneration (Smyth, 1994,18). Interpreters called this period as properties-based regeneration period because according to their viewpoints in this period building activities become a policy in development of city center. In addition, an appropriate reaction also has been demonstrated to show social and economic needs (Immire & Thomas, 1999, 51).

At this time, there was consensus among decision makers and politicians which one city will not

experience urban regeneration without development catalyst procedure (O’Tool & Usher, 1992, 221). Criokingen and Decroly emphasize that catalyst projects have been differ markedly in outcome and level of success (Grodach, 2010, 300). Also Beauregard and Holcomb claim that efforts of urban regeneration have essential similarities but there are many differences from city to city about responding to economic, political, social, historical facts (Beauregard & Holcomb, 1981,17).

In this matter, a review of various experiences in global scale, shows a fact and it is the priority of economic development in this texture, that’s beside it, will be facilitated the physical and social texture regeneration. Of course, this matter is observed in most projects (Fig. 2 & Table 1).

In a summary, development catalyst projects can be considered as elements that with its appropriate location in urban inefficacious textures, facilitates a ground for regeneration of these textures, that by historical development and lack of a planning have involved in physical, social, economic and environmental disorders.

In this case, a review of historical experiences

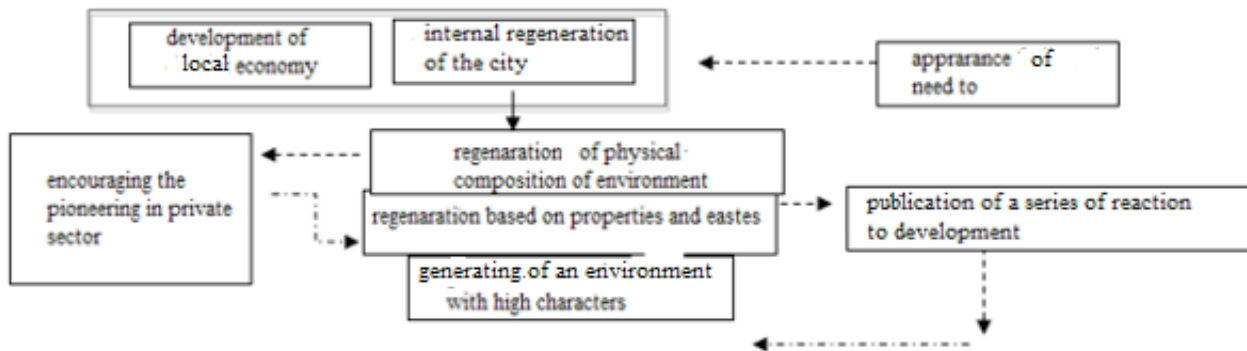


Fig. 2- Appearance of the development catalyst projects. Source: Temelova, 2007, 169.

Table1. The role of development catalyst projects in urban texture by separating urban different aspects. Source: Andalib, Bayat & Rasooli , 2013, 359.

Spatial-structural role	Administrative role	Economic role	Social role
Incorporating and unifying the texture skeleton	Increasing the motivation and tend to regenerating by making confidence.	Marketing the urban spaces	Promoting the social cohesion
Preparing the general fields for selective and social actions	Planning to detect of the set of actions of citizenship-based development catalyst	Updating the economic uses	Updating the social uses
modeling to enhance the sense of place	Creating the common responsibility between social people and managing the urban development by creating a sense of place.	Attracting investments, employers, and developmental deals.	Securing the housings
Reforming, such as smoothing the structural axes and enhancement of urban facilities networks.		Creating the local Employment	Securing the urban services
		Returning the declining arenas to economic life of the city, varying the financial tools at investment market.	Counteracting with inequality by economic development

illustrates the overcoming of economic motivations on other physical, social, cultural, and spatial in establishment of these projects. For this reason, attracting the private sector ‘s investments has been one of the essential priorities of planners and urban makers in these projects.

• Indices of Location of Development Catalyst Projects: The extracted indices in Table 2 are obtained from the views of scholars and theorists in regeneration and development catalyst on their scientific researches. It is worth noting that, in section about surveying the practical experiences in Iran and world, we will attend to identify of location indices of development catalyst projects.

In following, in order to survey of the practical experience at defining and location of development catalyst project, we can point to these cases (Table 3).

Background of Research

In this section, according to the research objectives based on extracting the indices of location of development catalyst projects with emphasis on physical matters and location process, we study different experiences and articles that are discussed in following.

Zolfigol and Sajadzadeh in their article as “studying the spatial syntax of traditional districts structures with development catalyst attitude (case study: Haji district in Hamedan)” point that traditional districts due to long antiquity in urban equations, have more importance but because of unbridle urban developments, have not previous functions, former vivification and dynamics. Thus in this ground, development catalyst as an effective and flexible approach is very essential to regenerate and return

Table 2- General framework of research about criteria of development catalyst projects. Source: authors.

Reference	Measure / Index	Theorist
Temelova,2007 Smyth,1994	Types of ownership, local economic development, marketing, functional mixture and various uses, population and buildings density	Smith
Ragers, 2013 Powel, 2007 Habibi and Maghsodi, 2009	Multi-functional development and mixture activities, presence of general spaces, social and economic vivification, replication to general demands, flexibility – consistency with human-base grounds.	Ragers
Imire et al. 1999 Izadi, 2010	Population density, stable growth of range economy, economic comparability, number of active employees, physical substructure, social substructure, housing market, various uses, environmental pollutions value	Imire and Raco
Temelova,2007	view of city, organic growth of ranges, influencing with high-function radius, quality and antiquity of structures, materials, percentage of investments of private and public sectors, culture and literacy in the city	Temelova
Loftman & nevin,1995	Influencing with high-function radius, substructures, mixture of functions	Loftman & Nevin
Beauregard & Holcomb,1981	Availability and quality of parking, quality of housing, commercial services.	Beauregard & Holcam
DETR,2000	Social incorporating, availability to economic positions, contribution of municipal development management with local community people	Environment, transporting, regions department in England
Bahraini, 2006	Status of streets and availability, status of services, special building variations, competition advantage in the range, quality level of buildings	Bahraini
Izadi, 2006	Structural incorporation and skeleton of texture, contextualization and attention to present structures, design executive mechanism, participation of people, possibility	Izadi
Andalib, 2013	The role and contribution of people in their environmental regeneration, contribution of governmental and private sectors in regeneration of ranges, status of substructures in the range, presence of additive value uses, status of quality and quantity of services, appropriate service capitations, responsibility about environment, tendency and motivation of people to regenerate.	Andalib
Sajadzadeh, Dalvand & Hamidiniya, 2015	Structure, identity, density, integrated transporting system, maximal contribution, education, security, price of land, attraction of investment, green space, decrease of contaminant	sajadzadeh

the desire local qualities, boosting the coherent social activities and improvement of physical, economic and cultural conditions in traditional districts.

Results of research show that coherent and strength connections of main corridor in district, on the one hand, and highly interconnected of spatial organization of center of district on the other hand, shows desire conditions in skeleton of residential texture main axes in Haji district in Hamedan for stimulation of development (Zolfigol & Sajadzadeh, 2017, 53).

Azizi and Bahrami in their article as “the role of

development catalyst projects in regeneration of central texture in cities (studied sample: Yazd historical texture)” point that one of the main goals of the development catalyst projects is to achieve urban regeneration. In this research, indices of dynamics and urban texture development have been extracted from theoretical texts and practical experiences.

Result show that key factors assessing the role of development catalyst projects in regeneration of central texture of cities, include position of residential texture, physical status of housing

Table3. Experiences of defining and location of development catalyst projects. Source: Hashemi, Shieh & Zabihi, 2018.

Title of experience	The aims of experience	Achievements of experience for this research
Regenerating of London Docklands Center	<ul style="list-style-type: none"> • Employing of major economic actors • Building the personal houses rather than major residential complex • Symbolizing and transition of London to a world financial center 	<p>Extracting economic indices of catalyst projects such as active employees, Attending to private sector's housing Attending to city center as one of the development catalyst cores</p>
Regenerating of Paddington region	<ul style="list-style-type: none"> • Recovering of habitation and functional values in region • Attracting of private and public investments • Providing a social-economic mixture and balanced plan 	<p>Attending to permeability as one of the location indices Providing a mixture plan in the planning of spaces</p>
Regenerating of procedure in Liverpool	<ul style="list-style-type: none"> • Increasing the economic power in the range • Persuading the public sector to contribution • Attending to view and feature of Liverpool city and protecting the physical identity of city • Persuading the private sector to contribution in building 	<p>Attending to environmental-physical indices such as quality and antiquity of structures in development catalyst projects location Attending to social indices such as popular aspect in location of development catalyst projects Attending to economic indices such as private investment in location of development catalyst projects</p>
Regenerating of Scotland	<ul style="list-style-type: none"> • Encouraging the private sector investment • Building various housings • Increasing the life quality 	<p>Converting the unoccupied lands or inappropriate use lands to useful application in location matter</p>
Regenerating of Daleville Art Park in Paris	<ul style="list-style-type: none"> • Producing the products with universal value • Building the scientific and technical museum • Building a municipal park "cultural" • Introducing an entrance toward Paris from east • Unifying architecture and landscape architecture 	<p>Making a true location of those projects that were located in industrial semi-discarded lands and using of location indices of this plan Making a true use-conversion in plan based on converting two industrial buildings into a large industrial and technical museum</p>
Exciting by event of utilization of properties	<ul style="list-style-type: none"> • Activating the unoccupied lands and sites, temporary • Making an economical dynamics and mobility in texture • Making local employment 	<p>Applying of no man's land and free land for location of development catalyst projects Attending to economic catalysts in texture</p>
Organizing the Imam Hossein Square and 17 Shahrivar Street in Tehran	<ul style="list-style-type: none"> • Using of present power in space to prosper of present space • Stimulating the development of periphery texture • Contributing the citizenship and responsible organizations • Deleting all of the roadway and transfer to downward layer • Opening the space in whole square for executing the religious ceremonies • Facilitating the sidewalk • Depleting the vision contaminants and disarrays 	<p>Injecting the new uses into texture to encourage to the walk and increasing the texture security satisfying habitants and tradespeople for performing new uses providing the physical integration Conforming the injected uses to texture with habitants' needs and spirit of plan</p>
Regenerating of Atigh Square in Isfahan	<ul style="list-style-type: none"> • Recovering the scope as a reference point to return the historical-cultural identity in order to respond to needs of the day • Organizing the functions of peripheral texture • Prospering the economy by taking advantages of booming in the range 	<p>Making a new spatial organization based on spatial hierarchy by ordering the activities and municipal uses Improving the habitation functions and services and availability to other applications</p>
Exciting the texture by local hangout in Tehran	<ul style="list-style-type: none"> • Insisting on cultural activities in sections • Insisting on gathering the people in public ceremonies • Increasing the interaction between local people 	<p>Attending to space planning with emphasis on cultural activities</p>

and residential environment, economic status and physical regeneration of texture (Azizi & Bahrami 2017, 5).

Sajadzadeh & Zolfigol in article as “urban planning in regeneration of traditional districts with approach of development catalyst (case sample: Golpa district in Hamedan)” point to the importance of development catalyst in regeneration as a productive to return the development and boom to the old and problematic districts, and in this regard, they consider how the development catalyst approach on urban regeneration in traditional districts works in main problem of research.

Results show that development catalyst aspects are four that include social, cultural, physical and environmental aspects, and on this base, social aspect is preferred in Golpa district and in this aspect, also social interactions, contribution, reliance, and security are taken into consideration (Sajadzadeh & Zolfigol, 2015,147).

Loftman & Nevin in their article as “going toward growth: flag projects in three cities in Britain” pointed that the aim of research is surveying the effect of

development of local economies on Birmingham, Sheffield and Manchester along with review of responds for economic growth and making a competition between these cities. Results show that the default of economic growth in any city is economic and financial inborn development and execution of policies of economic growth based on redefinition of development stimulant projects or flag projects (Loftman & Nevin, 1996, 209).

Methods of Research

The method of research in this study, is descriptive-analytical and method of data collecting is based on library studies, questionnaires, field surveying and observation. For this reason, at first, by using of attributive studies and universal experiences in definition of development catalyst projects, we collected necessary indices. And then by using of AHP (hierarchical analysis), was performed paired-comparison.

In this case, social statistical of questioned includes managers and elite specialists in city planning and timeworn textures includes 1000 people, that

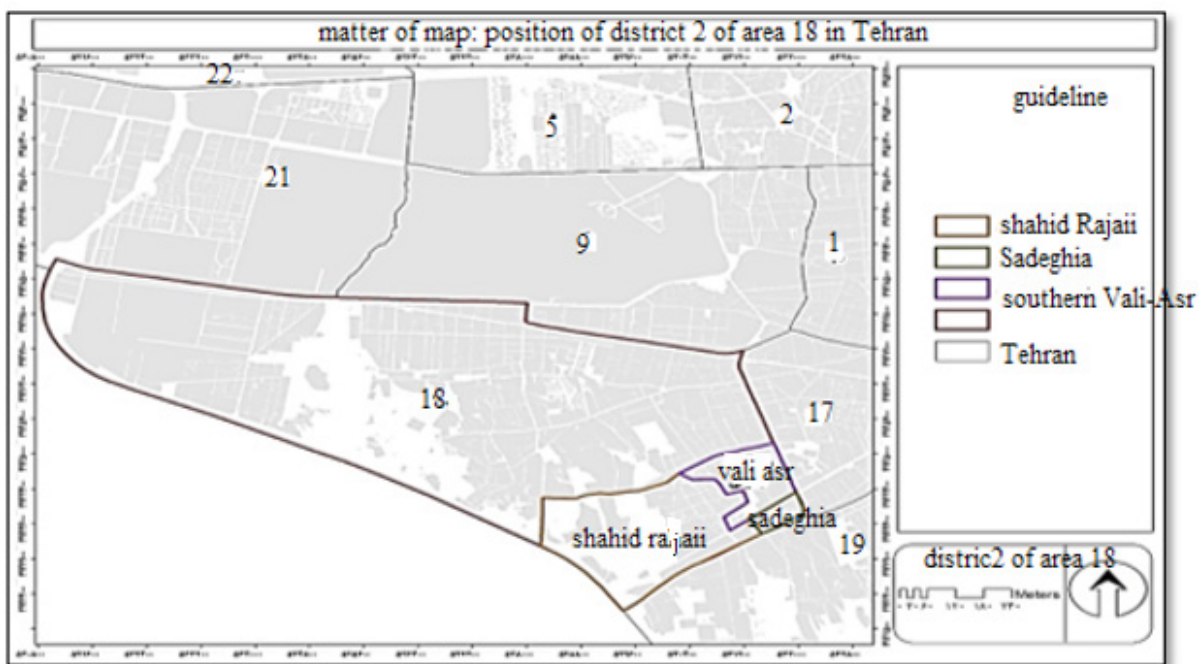


Fig.3. Location of district 2 of area 18 in Tehran. Source: Guideline document of districts of region, 2015.

according to the Cochran formula and according to the confidence level of 95% , each of 79 people was given a questionnaire. By paired-comparison, the weight of each index is evaluated according to plan options (Sener, Suzen & Doyuran, 2006) and finally, using of GIS (Geographical Information System) results from hierarchical model are analyzed and exerted on studied case and its output is shown in form of application maps, and map of arenas that have potential to define the development catalyst projects, using of Raster Calculator tool are detected in Arc Map space.

The Study Area; The area of district 2 is 687.⁵⁴ hectares, that it includes the Sadeghia neighborhood with 37.76hectares, the South Vali-Asr neighborhood with 140.⁸⁹ hectares, and Rajaii neighborhood with 49.683 hectare, respectively (Guideline document of districts of region, 2015,18).

This district is second largest population in area 18 after district 1 and is formed from three neighborhood includes Sadeghia, Shahid-Rajaii and South Vali-Asr which their population are 6547, 43377 and 30523 people respectively. In this research, to define the development catalyst projects, problematic texture (timeworn) in district 2 is studied. District 2 has 28.⁴ hectares of worn texture that is 28.6% of total district 2.

Findings of Research

We needed indices to locate areas that have potential to define the development catalyst projects, that these indices are extracted from scholar's ideas and practical experiences. Of course this study emphasizes on quantitative and physical aspects that types of physical, social, economic indices and defaults of location have been discussed in Table 4. In the following, the indices of this study were paired-compared based on specialists and expert's opinions in Expert Choice software and weight of each index that have more preferable than other indices that were extracted (Fig. 4).

Next, after computing the weights of each indices

used in this research, using of expert's opinions, items for each of these indices are determined and the priority of these items over the other items are demonstrated by an inter comparison method with numbers, such that according to AHP method, range of these numbers is between 1 to 9 that 1 is minimum and 9 is maximum priority of these items to define development catalyst procedure and the status of items and numbers related to any of them has been shown in Table 5.

In the following, all the index items are modeled according to their weights by GIS software and results were shown in Fig. 5 as geographical maps, the more the color spectrum shifts toward blue area, it is an indication of places that have the potential to define the catalyst procedure.

In the following, modeled indices by GIS are overlaid and final map of the places that have potential to define the development catalyst projects at the neighborhood levels in district 2 of area 18 in Tehran has been shown in Fig.6.

As shown in figure 6 the 3.09 hectares equivalent to 14.04% of problematic texture with a very low potential, 6.13 hectares equivalent to 21.59% with a low potential, 8.62 hectares equivalent to 30.36% with a relatively appropriate potential, 9.16 hectares equivalent to 32.25% with a high potential and 0.5 hectares equivalent to 1.75% with a very high potential can define the catalyst project, and most of shahid Rajaii and Sadeghia neighborhoods are appropriate to define the development catalyst procedure.

Conclusions

In this section we answer the two questions that proposed in introduction section. We need indices to locate the development catalyst procedure. In this field, we used of the scholar 's experiences and opinions to extract them. Results show that Smith point to the ownership land and population and building density indices, Ragers to mix of use, multifunctional development and social and

Table 4. Dimensions, indices, weights that are effective in this research to locate of development catalyst projects in study case. Source: author's.

Dimension	Index region	Index	Final Weight
0.338	Open spaces such as garden, arid land, green spaces, agricultural lands, intra texture industries centers, transportation and stock have potential to inborn development and introduction as a potential for development catalyst, especially useless lands and industrial uses that their importance is clear completely in inborn development number of floor (Blakeley & Evans, 2009,18)	Land use	physical
0.115	Increasing this level, is an indication of utilitarian for living in this texture (as for economic and social conditions in families) (Bahraini, Izadi & Mofidi, 2012)	Number of floors	
0.09	Development catalyst procedure in problematic textures should be located in spaces where in these ranges, the buildings are not of the highest utility, because of the aim is to inject the dynamics and vivification into the timeworn and problematic textures (Bahraini et al, 2012).	Quality of structures	
0.117	Development catalyst projects in problematic textures should be located in space where antiquity of buildings are not of the highest utility. Because of the aim is to inject the dynamics and vivification into the problematic and timeworn structures (Andalib, 2013).	Antiquity of structure	Social
0.124	Increasing this level, is an indication of desirability of living in this texture (according to economic and social conditions in families), high-density population around development catalyst procedure can play a more appropriate role to success of development catalyst procedure (Imire, et al 1999, Rafiian, Asgari & Asgarizadeh, 2011, Temelova, 2007)	Population density	
0.052	Similar to the population density index, the high number of households is analyzed (Temelova, 2007)	Number of families	
0.033	Resident's literacy level of an urban region, especially in timeworn areas, plays a desire role at the forming of catalyst projects, this means that the higher the social level of a section of timeworn texture, increases potential to percept of regeneration projects. And thus increases resident's potential to provide services, land and... for mentioned projects (Izad, 2006; DERT, 2000).	Level of literacy	
0.087	concerning the ownership of buildings, it should be said that dedicated ownership can be an inhibitor to redevelop. This type of ownership makes hard conditions for making-decision and urban planning. But from this point of view, the lands with public ownership on the other hand, have the best condition to develop. In this regard, the lands with public ownership have the high potential to develop, and the privately owned lands are second priority and hereditary and dedicated lands are the last priority (Bahraini et al, 2012; Andalib 2013).	Type of ownership	
0.044	The higher the number, is an indication of the better economic situation of resident households, and may allow to higher welcome to define of development stimulant procedure (Immire, Thomas & Marshall, 1999).	Number of employees	economic

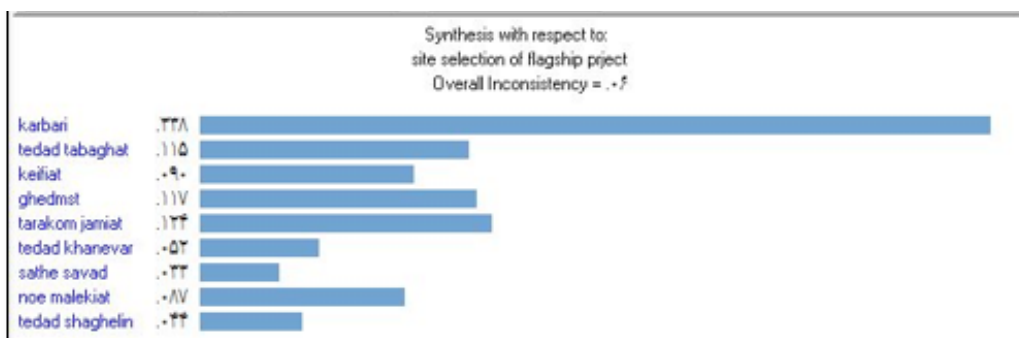
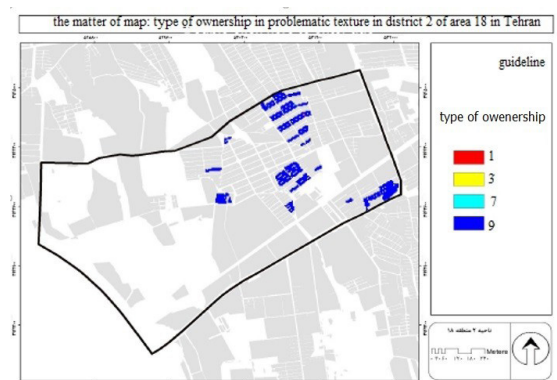
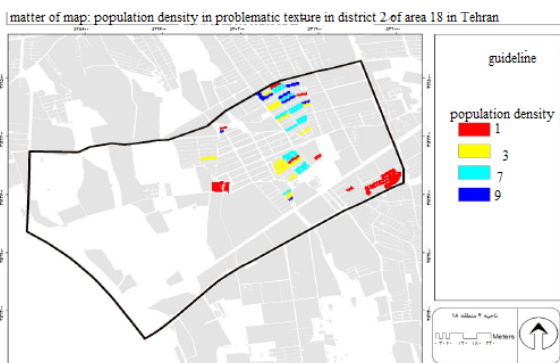
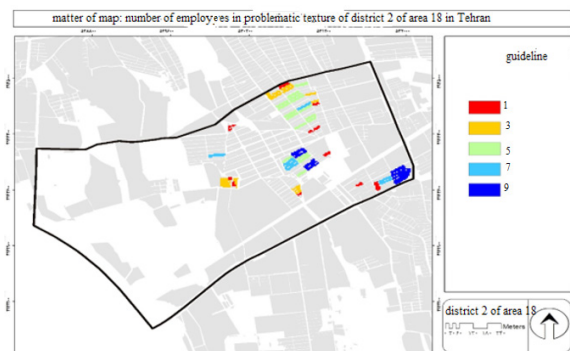
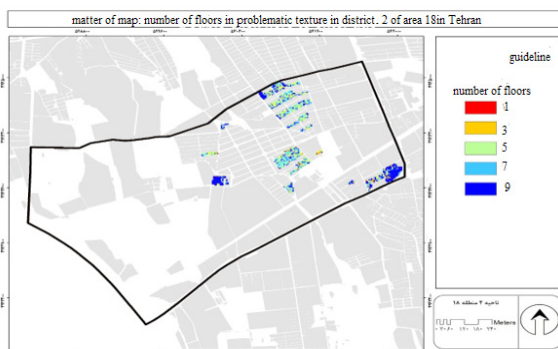


Fig. 4. Final weights of paired-comparison test of indices in Expert Choice Software. Source: author's.

Table5. Classification of the indices to location of development catalyst projects in the study case. Source: authors.

Weight	Item	Index	Weight	Item	Index
9	Arid	Land use	1	Less than 113	Population density
7	Workshop industrial		3	113- 127	
3	Commercial		5	127 – 146	
1	Housing		7	146 – 158	
9	Less than 2	Number of floors	9	Upper than 158	Number of families
7	2 -4		1	1	
5	4- 6		3	1 – 2	
3	6 – 8		5	2 – 5	
1	Upper than 8		7	5- 15	
9	Destroying	Quality of structures	9	Upper than 15	Level of literacy
7	Cultural heritage value		1	Less than 100 people	
5	renovated		3	100 -170	
3	Under building		5	170 -250	
1	Others		7	250 – 350	
9	Upper than 50 years	Antiquity of structure	9	Upper than 350	Type of ownership
7	30 – 50		9	public	
5	10 -30		7	Governmental	
3	5-10		5	Private	
1	Less than 5		1	Dedicated	Number of employees
			1	Less than 40	
			3	40-60	
			5	60 – 90	
			7	90 -130	
			9	Upper than 130	



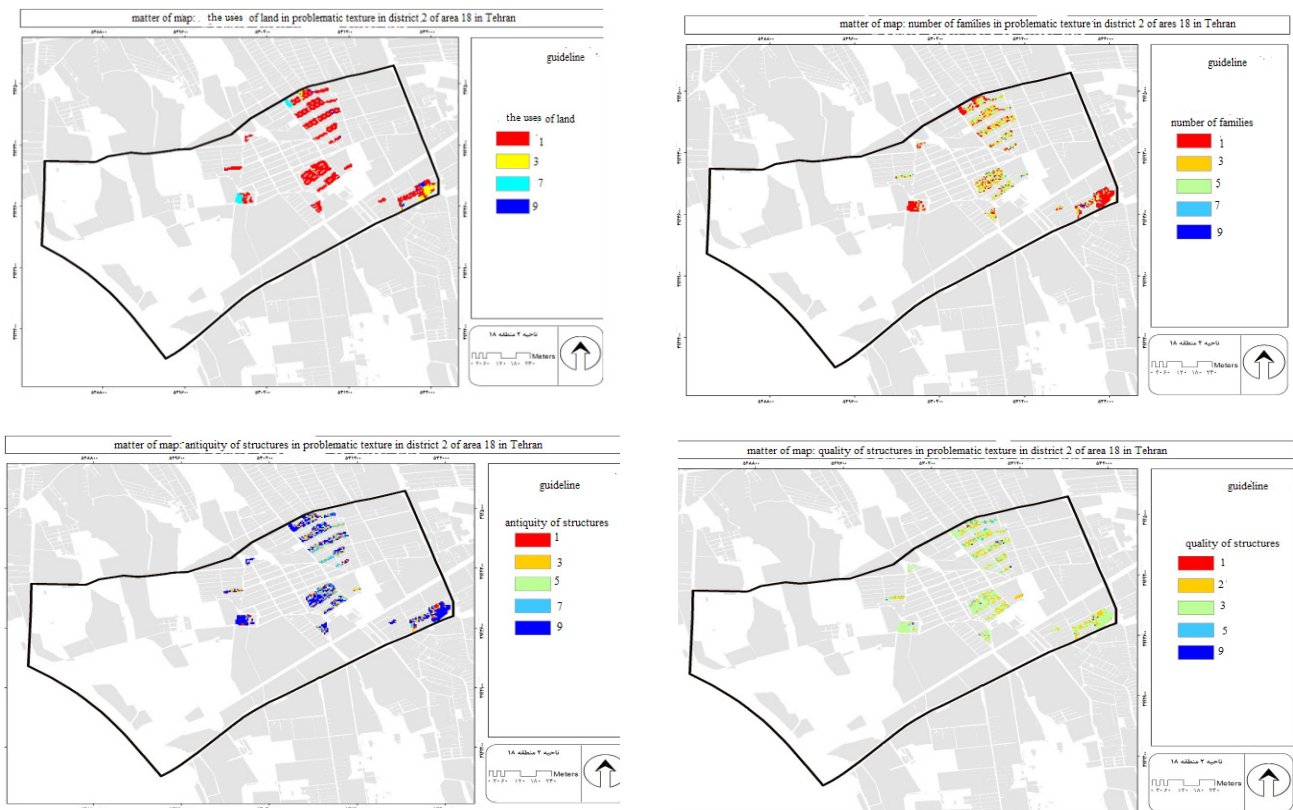


Fig. 5. Weights maps related to indices of location of development catalyst projects. Source: authors.

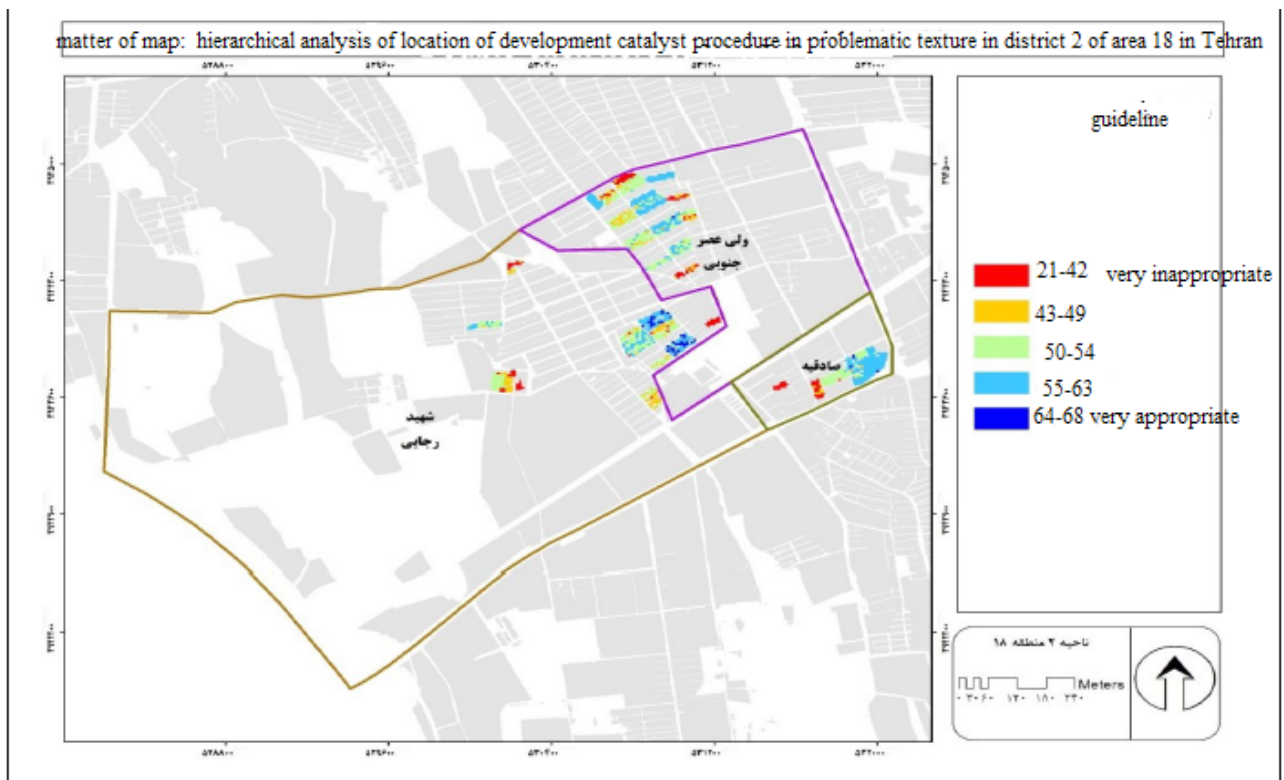


Fig. 6. Hierarchical analysis of location of development catalyst projects of problematic texture in district 2 of area 18 in Tehran. Source: authors.

economic vivification indices, Immire and Roco to population density, number of employees, variation of use, and stable economy indices, Temelova to the urban perspective, organic growth of ranges, quality and antiquity of buildings, materials, percentages of investment of public and private sectors, culture and literacy in city indices, Bahraini to the situation of streets and availability of commercial positions, quality of buildings indices, Izadi to the texture skeleton index, Andalib to the quality and quantity situation of services, appropriate service capitations indices, Sajadzadeh to the density, transporting integrated system, price of land, attraction of investments indices.

Also in experiences section, the regeneration of London Dockland center point to the active employees index, the regeneration of Paddington area to the index of permeability and width of road, the regeneration of Liverpool procedure to the index of quality and antiquity of the structures and population density, the regeneration of Scotland to the index of land use (unoccupied lands), the regeneration of Atigh Square in Isfahan to the index of appropriate availability of services and organizing the Imam Hosein square and 17 Shahrivar in Tehran point to the index of mix use.

Next, identifying the appropriate indices, it was time to locate the development catalyst projects in study case. In this regard, we used of 9 indices in different physical, social, economic aspects, to locate by hierarchical analysis model (AHP). Results show that the physical aspect with 0.661 points, the social aspect with 0.0208 points, the economic aspect with 0.131 points have the most impact respectively, and among indices also the land use with 0.333 points, the population density with 0.124 points, the antiquity of structure with 0.177 points among 9 indices have the most impact respectively. And also 3.99 hectares (14.04%) from timeworn texture lands in range, have the minimum potential to form the

development catalyst projects (western section of problematic texture in district 2 sectors) and in contrast, 9.60 hectares (34%) has the maximum potential to perform the development catalyst projects (eastern section of district 2 sectors). With regard to identified optimal arenas for development catalyst in timeworn texture range, it should be noted that, the arid and unoccupied industrial uses that has located around lands with high density population and have not appropriate physical aspect (materials, quality building life) show the most potential to form the development catalyst projects, and finally, some recommendations are provided for better location in study case:

- Using of arid lands potential to secure of housing needs of texture .
- Resolving needs and deficiencies of neighborhoods along with fixation of current native population.
- Providing the persuasive packets to regenerate and reform of dilapidated and useless housings in Ferdowsi and North Vali-Asr neighborhoods.
- Providing persuasive points to integrate of passive housings of Rizdaneh and its regeneration, especially Ferdowsi and North Vali-Asr neighborhoods.
- creating the facilitating offices into textures of Hygiene neighborhood to resolve present deficiencies.
- Dedicating the arid lands in Ferdowsi and North Vali-Asr neighborhoods to develop service uses.
- Developing some hangouts in neighborhoods, especially in Hygiene neighborhood.
- Preventing texture sector's pathways from becoming into crossing Preventing the land from becoming a stuff
- Protecting the ownership of native residents

Reference list

- Andalib, A. (2013). *Urban regeneration principles, approach for timeworn textures*. Tehran: Azarakhsh press.

- Andalib, A., Bayat, A. & Rasooli, L. (2013). Comparison and adaptation of regeneration of timeworn urban textures in Khayyam block in Tehran (Iran) and Liverpool project 1 (Britain). *Quarterly about preparation and environment*, (23), 79-104
- Azizi, M. M. & Bahrami, B. (2017). The Role of Flagship Developments in the Regeneration of Inner City Textures: The Case Study of Yazd City, Honar-ha-ye-n ziba, 22(4), 5-16.
- Bahraini, S. H. (2006). *Modernism, postmodernism and after it in city planning*. Tehran: University of Tehran..
- Bahraini, S. H., Izadi, M. S. & Mofidi, M. (2012). Approaches and policies of urban renewal (from sustainable reconstruction to sustainable urban regeneration). *Urban Studies*, 3 (9), 30-17.
- Beauregard, R. A. & Holcomb, H. B. (1981), *Revitalizing cities*. Washington: Association of American Geographers.
- Blakeley, B. & Evans, B. (2009). who participates, how and why in urban regeneration projects? The case of the new city of east Manchester. *Social policy & administration*, 43(1), 15-32.
- Bohannon, L. (2004). *the urban catalyst concept: toward successful urban revitalization*. Unpublished master's thesis of Landscape Architecture, VIRGINIA.
- DETR (Degree in Town and Regional Planning). (2000). *Duncan of Jordanston college*. Scotland: University of Dundee.
- Grodach, C. (2010). Living next to a flagship development. *Journal of Planning Education and Research*, 29, 353-366.
- *Guideline document of districts in area 18* (2016). Tehran municipality (renovation organization of Tehran).
- Habibi, S. M. & Maghsoodi, M. (2009). *Maremmat-e shahri* [Urban repairmen]. Tehran: University of Tehran.
- Hashemi, M. R., Shieh, I. & Zabihi, H. (2018). Adaptation comparison of development catalyst procedure experiences with regeneration approach in selective world cities, *scientific research and geographical quarterly of land, 15th year*, (60), 29-44.
- Immire, R., Lys, L. & Raco, M. (2011). *Regeneration of London, governance, stability. Society – base in one world city*. (M. Rafiian, Trans.). 1th volume. Tehran: University of Tehran.
- Immrie, R. Thomas, H. & Marshall, T. (1999). *Business organizations, local dependence and the politics of urban renewal in Britain*, *Urban Studies*, 32.
- Izadi, M. S. (2006). *Tahaghogh-e rahbord-e mosharekat az tarigh-e barname-ye jame-e bazafarini-ye shahri* [Realization of the partnership strategy through the comprehensive urban regeneration program, the second conference on the renovation of worn-out structures in Tehran.
- Izadi, M. S. (2010). Porozh-e ha-ye moharrek-e tosee, rahkari baraya-ye tahaghogh-e barnam-ha-ye bazafarini mahallat va marake-ze shahri [Development catalyst projects, an approach to realize of regeneration programs in districts and urban centers]. *Quarterly about inquiries of architecture and city planning* (32), 25-28.
- Loftman, P. & Nevin, B. (1996). *Going for Growth: Prestige Projects in Three British Cities, urban studies*. Retrieved from <https://journals.sagepub.com/doi/10.1080/00420989650011708>.
- Loftman, P. & Nevin, B. (1996). *Going for Growth: Prestige Projects in Three British Cities, urban studies*.
- *National guideline document of restoration, regeneration and reforming and enabling of urban inefficacious and dilapidated textures*. (2014). No. 47900/48601. Ministry of road and city planning
- O' Toole, M. & Usher, D. (1992). *Editorial, in: P. Healey et al. (Eds) Rebuilding the City: property-led urban regeneration*. London: E. & F. N. Spon.
- Powel, C. (2007). *Richard Ragers. Identity in architecture*. Isfahan: Homam press.
- Rafiian, M., Asgari, A. & Asgarizadeh, A. (2011). Citizens satisfaction with urban living environments. *Olom-e Mohiti*, 1(7), 53-72.
- Ragers, R. (2013). *the stable cities for a small planet*. Afzalyian Khosro, Mashhad.: Publication of Astan Qods Razavi.
- Sajadzadeh, H. & Zolfigol, S. (2015). Tarrahi-ye shahri dar bazafarin-ye mahallat-e ba roykard-e moharrek-e tosee nemon-e moredi: mahalle-ye golpa-ye hamedan [City planning in regeneration of traditional districts with approach of development catalyst, case study: Golpa district in Hamedan], *quarterly about environment preparation*, (31), 147-171.
- Sajadzadeh, H., Dalvand, R. & Hamidniya, M. (2016). The role of regeneration with approach of development catalyst in traditional districts (case study: Haji district in Hamedan), *Haft shahr* 4(53, 54), 54-76.
- Sener, B., Suzen, M. L. & Doyuran, V. (2006). Landfill site selection by using geographic information systems. *Environ Geol*, (49), 376-388.
- Smyth, H. (1994). Marketing the city, the role of flagship developmems in urban regeneration, Talor & Francis.
- Solesbury, W. (1993). Reframing Urban Policy, *Policy and Politics*, .21(1), 40-67.

- Temelova, J. (2007). Flagship Developments and The Physical Upgrading of Post socialist Inner City: The golden angel project in Prague, Department of Social Geography and Regional Development, Faculty of Science Charles University of Prague.
- Zolfigol S. & Sajadzadeh, H. (2017). Surveying the spatial syntax of traditional districts structures with sight of development catalyst (case study: Haji district in Hamedan). *Geography and environmental planning*, 28(4), 53-70.

COPYRIGHTS

Copyright for this article is retained by the author(s), with publication rights granted to the Bagh-e Nazar Journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>).



HOW TO CITE THIS ARTICLE

Hashemi, M.R., Shieh, E. & Zabihi, H. (2020). Location of Development Catalyst Projects Position at the Urban Inefficacious Textures. (Study Case: District 2 of Area 18 in Tehran 's Municipality). *Bagh-e Nazar*, 17(84), 57-70.

DOI: 10.22034/bagh.2019.177547.4060

URL: http://www.bagh-sj.com/article_107025_en.html

