An Integrated Method for Assessments of Detailed Plans by Using Plan Process Result (PPR) and Process Policy-Plan/Program Implementation (PPIP) (Case Study: Region 6 of Shiraz Detailed Plan)

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Abstract

This article provides an overview on the current debate on evaluation in urban planning. An initial evaluation state of the art is presented in three parts: the evolution of evaluation theory and methods, the contemporary planning debate around different perspectives and paradigms, and the nature and extent of evaluation practice in planning emphasis on PPIP and PPR . The second part of the article focuses on the Application this method in different planning systems especially in Iran. and evaluate positivism theory of detail plan. This comprehensive literature review provides the background to set a general principle to evaluate the implementation of urban plans. The research results, in addition to exam the strengths and weaknesses of the preparation and implementation of the detailed plan and provide solutions to increase citizen participation in the process theory and planning.

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introduction

A review of the history of the feasibility of urban plans shows that the gap between planning and implementation of urban plans is an issue that exists in all global experiences. Ideally, an urban plan should be implemented as was planned; But on one side, planners lack practical implementation experience and on the other hand, in practice, city managers face many challenges and are forced to balance idealism and realism in conditions of uncertainty. This situation creates a gap between planning and implementation and leads to the failure of urban plans to achieve their goals. In recent decades, with the introduction of process-oriented assessment methods, planning was carefully examined from the policy stage to the preparation of the plan and the identification of executive plans and their implementation. Although detailed and partial plans are prepared with a lot of cost and energy and can have positive effects on the implementation of macro policies of comprehensive plans, they face some problems in the implementation of these plans, and only some parts of them are implemented for various reasons. For example, in the revised detailed plan of District 6 of Shiraz Municipality in 2004, even though some methods were considered to help make the results of the plan more realistic, still specific practical suggestions to "implement plans" or "On-time Implementation of Plans" were rarely raised .

The main purpose of the research is to provide a method for evaluating urban plans and to provide solutions to respond to the existing problems caused by the gap between the planning and implementation of urban plans in the field of urban management tasks. With respect to the importance of detailed plans in the macro framework Urban plans and policies, the following questions arise. What method(s) are appropriate to assess the feasibility of the objectives of the detailed plans? To what extent has the detailed plan of District 6 of Shiraz been realized and what have the challenges and obstacles to its implementation been?

Literature Review

The thinkers, and most importantly, Peterhall, explain three separate steps in formulating the preparation of urban development plans. The first step that was expanded to the mid-1960s, can be called master plans era. The second stage, which came around 1960, can be considered as a systemic approach to planning. The third step, which began in the early 1970s, includes strategic planning (Noorian and Vahidi Borji, 2015,53). In Iran, with the approval of the law to establish the National Supreme Council for Urban Planning and Architecture in March 1351, the comprehensive plans included two phases, the comprehensive plan and the detailed plan; And a contract for the preparation of comprehensive and detailed plans (Type 12 contract) was prepared (Secretariat of the National Supreme Council of Urban Planning and Architecture, 2004). Despite the efforts made, most of the comprehensive and detailed plans are still being prepared with the same approach and philosophy of comprehensive plans, despite minor improvements in the description of services and some new approvals related to the content of the plan. In other words, the theoretical basics for preparing comprehensive and detailed urban plans in Iran are based on the modernism and positivism approaches and come from western models. The detailed plan is responsible for setting detailed plans and performing detailed actions in urban areas and neighborhoods and designing them (Saeednia 2004). In fact, the executive document and the criterion for realizing the vision, goals and strategies of the urban comprehensive plan is to guide and control the physical changes, functional changes and spatial organization. Therefore, determining the standards, zoning structure, rules and regulations of constructions is one of the most important tasks of the detailed plan.

Despite the importance of assessment in the process of preparing and implementing comprehensive and detailed urban plans, this issue in Iran has not yet reached its true place and in other words in the current situation, the city has become a phenomenon that every responsible and effective urban organization in the framework of its partial and generally inconsistent demands with other organizations, pulls it to one side or limits it to the other (Saremi and Tootzari, 2014). One of the most important measures taken in the field of content

assessment of comprehensive urban plans was the assessment plan of urban development plan in Iran, which was assigned to Zista Consulting Engineers by the Program and Budget Organization (Zista 1993). Another study is a study conducted by Sharmand Consulting Engineers in the late 1970s (Sharmand 2000) which has been selected to assess the feasibility of detailed plans of 4 cities, and items such as measuring the directions of city development, road network, various urban uses and population have been studied. In this regard, a study by Pourahmad et al (2006) on pathology of urban development plans, uneven development of the country's cities as a result of urban development plans was done. After presenting the basic concepts, Behzadfar (2009) has examined the study method and carried out comprehensive and detailed plans, and with reference to conducting four research in this field, considers these plans inefficient and unachievable. He considered realism and flexibility in the approach to setting goals and evaluating executive possibilities as effective factors in the realization of these plans. Azizi et al (2012) considers the lack of integration of the urban management system as an important factor in the inefficiency of plans. Feriver Sadri (2014) also considers the result of the plans as the friction of the forces and finally proposes the removal of the mentioned plans and programs from the public development space of the country.

Much of the existing research on detailed plan assessments has been conducted with the aim of achieving land use feasibility. Among them, we can mention the research of Mousavi and Rafieian (2004) on the study of ten detailed plans in East Azerbaijan province, the study of Shafi'i Dastjerdi (2013) on the detailed plan of Isfahan and the research of Dalir and Maleki (2007) in Ilam. Rezaei and Rahimi (2013) has also dealt with the causes of land use change and the impact on urban services in Marvdasht and has focused on the amount of violations committed; And in a more recent study about Bojnourd, The reasons for the unrealizability of land use in the problems of land acquisition, problems in how to prepare a land use plan in a detailed plan and the shortcomings of the plan preparation process until its implementation has been mentioned. Following the recent research, the present study deals with the feasibility of the detailed plan of Shiraz in the form of a comprehensive approach and its purpose is to provide a method for comprehensive assessment of detailed plans and examines the method in relation to the detailed plan of one of the regions of Shiraz and determines the degree of feasibility and non-feasibility. In this article, we try to measure a sample of detailed plans by considering measurable variables. Given that research is a procedural field and determines the principles and method of assessment of the theoretical foundations of research, explanations in this field are necessary.

Methods and Principles of Assessment

In evaluating the implementation of urban plans, the quality aspects of the plan, internal and external coherence of the plan, securing the interests of the community, balanced development in time, capacity and financial and human resources of the implementing organization should be effective. In Table 1, reviewing the relevant background, the characteristics of comprehensive assessment methods are categorized into classical and modern comprehensive assessment methods.

Table 1. Application of evaluation methods in urban plans and programs

Assessment Methods			Criteria		Main Output	Position in the assessment cycle
			Major Focus	Major Goal		
Classic Methods of Comprehensive Assessment	Cost and social benefits		Content of the Plan	Cost and social benefit assessment	Select the best project among several independent projects	Before Running
	Planning Balance Table		Content of the Plan	Evaluate social costs and benefits by dividing society into consumer and producer groups	Combining and promoting different options to serve the interests of society as a whole	Before Running
	Goals Achievement matrix		Content of the Plan	Evaluate alternatives based on goals and objectives	Upload elements and groups affected by the plan	Before Running
	Environmental impact assessment		Content of the Plan	Assessment of the impact of planned activities on the environment	Suggestions for modifying cases and using their experiences in future projects	After Running
	Social Impact Assessment		Content and plan process	Evaluate the impact of the plan on social characteristics(Separation / nobility, etc.)	Suggestions for modifying cases and using their experiences in future projects	After Running
	Multi-criteria assessment	Hierarchical analysis process	Content of the Plan	Ranking hierarchical options based on specific criteria	Proper location Selection of activities	Before Running
		Network Analysis Process	Content of the Plan	Ranking options based on specific criteria	Proper location Selection of activities	Before Running
Modern Methods of Comprehensive Assessment	Evaluating project implementation		Content of the Plan	Measure the relationship between Plan and Issuing Permit	Recognize the strengths and weaknesses of the plan	After Running
	Program Preparation Process and its Implementation		Plan Preparation and Implementation Process	Evaluate the process of preparing and implementing projects based on specific criteria	Recognize the strengths and weaknesses of the preparation and implementation of the plan	Before, during and after running
	Plan/Process/Result		Content and plan process and results	Evaluate the results and implementation process of projects based on specific criteria	Recognize the strengths and weaknesses of the preparation and implementation of the plan	Before, during and after running

Choosing the Assessment Method

When choosing an assessment method, one of the basic considerations is that the selected method should be comprehensive while adapting to the purpose of the research. According to the purpose of this research and the information in the table above, each of the method "program preparation and implementation process" and "plan / process / results" are suitable for evaluating detailed plans, which are mentioned in more detail below, and then the integrated model of this Research will be provided. According to Alexander, each of these methods is a combination of adaptive and functional approaches and is comprehensive in recognizing strengths and weaknesses. Both methods are consistent with the purpose of this study, which is discussed in the following.

Plan/Process/Results Assessment Method

This method includes a wider range of assessment techniques, including adaptive program assessment methods (Means Laurian et al. 2004; Berke et al, 2006) and Norton's advanced model (Norton, 2005). This method has the highest adaptability and effectiveness of the method) Program preparation / program Implementation) (Alexander & Fauludi, 1989). The main data in the assessment method (plan / process / results) is extracted using interview analysis with stakeholders involved in the development process, integrated analysis and

impact matrices. Three important aspects that distinguish this method from other methods are:
1) Emphasis on physical dimensions,
2) Existence of practical examples of using this method and its application in urban policies (such as Lisbon city plan)
3) comprehensiveness due to the use of a wide range of criteria for assessment(Laurian et al. 2004)

Finally, this approach deals with a set of key elements in the spatial development process, urban users, urban politicians, and the planning framework. Table 2 introduces the method criteria.

Program Preparation Process/Program Implementation Assessment Method

This approach was proposed by Alexander and Fauludi (Alexander & Fauludi, 1989) in the late 1990s as a framework for evaluating the implementation of programs and policies. In this method, 6 criteria are used for assessment as follows .

Conformity: Conformity means the extent to which executive-executive decisions and the actual consequences of what has happened in practice and their effects are consistent with the executive goals and objectives and guidelines provided in policies, plans or programs. The two main questions that are considered in this assessment method are: a) Has the content of the plan been observed and implemented? B) Are the effects of the plan as predicted?

Rational Process: The rational (logical) process needs to consider the following conditions: A) Perfection means to what extent the collection and application of available information and knowledge has been used in the design, examination and assessment of optimal measures and options? B) Compatibility- To what extent is their logical consistency in the data, the methods used in their analysis and integration, as well as the strategies presented in the proposals and the implementation of the strategies observed?

Participation: Assessing to what extent stakeholders and their presence and participation in the decision-making process have been considered and used in the preparation of the plan or policy?

Optimality Extant: To what extent can proposed implemented strategies and actions in plans or policies be properly examined? Determining the optimality includes examination and assessment of communication between goals and results or the plan's suggestions.

Optimality ex post: Are the strategies and executive actions prescribed in practice considered optimal?

Utilities: This criterion is used to measure the extent to which the program or policy as a framework or basis for executive-operational decisions has been evaluated efficiently. (Alexander & Fauludi, 1989)

Provide an integrated method for evaluating detailed urban plans: In terms of choosing the assessment method, it seems according to Table 1 the "plan / process / results" method was used as the main method of evaluating the detailed plan because this method is actually an integration of methods (Altes, 2006; Berke et al., 2006) and includes before, during and after running assessments and uses accurate information and sources. According to Tabibian and Asoodeh (2014), Plan-process-results method is more in line with the conditions of the planning system in Iran than other comprehensive assessment methods due to the emphasis on physical dimensions.

Table 1. criteria of PPR evaluation in urban plans and programs

Criteria	Assessment Subject	Sub criteria	Assessment Techniques / data sources
Internal Cohesion	Plan	Relationship between operational goals and application land use	Program Study Effect matrix (various program proposals)
		Relationship between operational objectives and urban systems	
		Relationship between operational objectives and program implementation mechanism	
Interpretation of the planning system	Plan/Planning System	Procedural interpretation	Study the plan and framing its legal rules
		Content interpretation	
Communication	Plan-City and its main needs	The relationship between the needs of the city and the operational goals of the plan	Basic position models SWOT Analysis Effects matrix (Plan Proposals-City Needs)
		Relationship between city needs and program implementation mechanisms	
External cohesio	Program- Other programs related to plan	Communication in terms of operational goals Communication in terms of regional models	Study the program and other programs from its regional aspect
		Communication in terms of implementation	
Participate in the preparation of the program	Urban Users	Number of citizens consulted Quality of consultation from citizens	Study the program (especially its participatory reports)
		Promoting public participation by local authorities	
Application of the program	Political Program/Forces	The effect of political forces on the program as well as their effect on other planning products, processes and structures.	Study different versions of the program (over its preparation time)
	Planning Process	The effect of program and plan on political forces (debates and agendas)	
Commitment of financial and Human resources	Planning process - financial and human resources	Assess the usability of resources	study of another administrative documents prepared by local authorities (Municipality Budgets)
		The relationship between project performance and the resources allocated to it	Interviews
Participation During Plan Implementation	Planning process - urban users	Number of citizens consulted	Study the design of lower levels (Especially their collaborative reports)
		Consultation Quality with citizens Promoting public participation by local authorities	
Efficiency	City Development-Planning Process - Development Control Program	Program development through urban development plans and detailed plans	Study programs and study lower-level programs Map Analysis
		Program development through urban design projects Program guide in the development control process	Field Works Analyzing planning permissions

Guidance	For city-process development Planning Development control	The effect of the program on population and copper statistics The effect of the program on transportation and mobility The effect of the program on housing	- Study the program - statistical analysis - Map analysis - Field Work - Interviews
		The effect of the program on Economy	

This method is used in Lisbon and Porto with planning systems similar to Iran to evaluate plans and can also be used to evaluate comprehensive and detailed plans in Iran; But given that this method has been used for Strategic plans so far (Faludi 2000; Needham & Mastop, 1997) and the current research is a detailed plan, so in order to evaluate the measures in detail in the detailed plan and review Consistency between performance-executive decisions and what happens in practice, Criteria for compliance with the assessment method (program preparation / program implementation), also is added to Criteria for assessment method (plan / process / results).

A total of eleven key criteria and characteristics related to them (, Faludi 2010, Pinho & Oliveira; 2004.,al et Laurian; 2000) has been extracted and can be used in the comprehensive assessment of projects, including the stages of planning, implementation of the plan and the results of the implementation of urban plans. In this research, according to the purpose of the detailed plan as an executive plan which operates the policies of its upstream plan (Comprehensive Plan), a set of these criteria (Table 2) were used to assess how to implement and the feasibility of the detailed plan. The information in the table, based on the specific objectives of the plan assessment, available information, cost and time, criteria sensitivity can be refined according to spatial characteristics, thus, it is possible to adapt to the components that form the detailed plan and select the appropriate indicators that have the greatest impact and efficiency in the plan (Table 3). It is worthy of mention that detailed urban plans as subordinate plans of the Comprehensive plans that make the task of implementing goals and macro strategies possible on a small scale, must respond to the ideas of the comprehensive plan in the field of land use, communication network, density, construction, the effect of the program on transportation and relocation, the effect of the plan on social aspects and demographic changes, and the effect of the plan on the economic function of the city. At the same time, these plans must have external and internal coherence in order to be compatible with the environment and the planning system and relevant executive organizations. In addition, the implementation of detailed plans cannot be achieved without the participation of the people and the required financial resources. Thus, the criteria presented in the table above can be used to evaluate detailed urban plans.

This section presents a comparison between the results of the evaluation of the two case studies and the main reasons for the differences and similarities found. Four main differences are identified: 1) the innovative character of the PDMP development control regulations; 2) the existence of a 'good' plan in Oporto and Lisbon and Iran of a 'good' planning system in; 3) a higher availability of financial resources a more productive relationship between planning and politics in Lisbon in the period between 1990 and 2006. The three fundamental similarities between these documents correspond to a few common goals stated in the plans and motivated by common needs of these cities, to a strong internal coherence, and to a satisfactory level of conformance of the plan proposals and the final outcomes on the built environment of these cities. The first aspect highlighted by this comparison (based on the assessment of the interpretation criterion) is the innovative character of the development control proposals of the PDMP, relative to the PDML and to the dominant planning practice in Portugal.

The preparation of the PDMP has included a typo morphological analysis of the city.

Recognizing that currently a practice of integrating different planning tools does not exist, the current PDMP was prepared with two possible scenarios in mind—its use as a singular tool, and its eventual integration into

an effective planning system with other types of plans meanwhile prepared and approved.

The second main difference is closely related to what has been said in the last paragraph, the existence of a good plan in Oporto and of a good planning system in Lisbon, particularly evident in our assessment of internal and external coherence criteria. This difference can be seen in the number of the current statutory plans for these cities—in Oporto, the PDMP and one detailed plan (PP), and in Lisbon, the PDML, the strategic plan, the regional plan, seven urban development plans (PU) and thirteen PP. It is also evident in the excellent articulation between the different planning instruments in Lisbon.

The main reasons for these differences are the strong commitment to planning matters shown by the mayor of Lisbon (1990-1995); the option to keep the same coordinating team in the preparation of the PDML and the PEL; and the realization of the World Exhibition in 1998 and the subsequent preparation of several plans to guide th e future development of the exhibition site. The third fundamental difference is the much greater availability of financial resources (our seventh criterion) for plan making and implementation in Lisbon as compared to Oporto. During the six-year period common to both cities, between 2001 and 2006, the municipal budget for Lisbon had been 3.2 times higher than the municipal budget for Oporto, for a population of approximately 40% of the size of Lisbon. The analysis of the complete time periods for the two case studies shows that, in contrast to Oporto, Lisbon has kept a continuous growth during most of the 16-year period. Also, the relationship between capital and running costs has been more balanced in Lisbon than in Oporto. Despite these differences, the financial resources allocated to planning matters, as compared to other claims on municipal budgets, were similar in both cities. This was, indeed, the most positive aspect found in the appraisal of the commitment of financial resources in Oporto. These differences are found in the number of resources allocated to each municipal

planning departments are long established. Oliveira and Pinho (2008) argue that throughout the twentieth century the financial resources available to both municipalities were one of the main factors which explain the differences between Lisbon and Oporto in terms of planning practice.

The fourth main difference is the more productive relationship between politics and planning in Lisbon, particularly between 1990 and 1995, as stated in the evaluation of the sixth criterion. This kind of political commitment has not been founded since 1995 and was absent in Oporto.

Another important issue in the relationship between politics and planning is the need to design plans that are more influential across political leadership changes, or to foster stable political contexts throughout the preparation of major planning documents such as the PDM in the case of the Portuguese system. The decisions to prepare the current PDMP and the revised version of the PDML were taken by politicians who were defeated in subsequent elections. This may well be a reason for the lengthy timescales between preparation and completion of plans.

The first convergence between these plans, as shown in the assessment of the relevant criteria, lies in their strategic goals. These are determined by common urban problems— the decline in resident population, the problems with mobility and transport, similar

social and territorial imbalances, the destruction of built form and the built heritage, and growing environmental degradation. This convergence is because these cities, despite their obvious singularities, play similar roles as capitals of the two largest metropolitan regions of Portugal. In addition, they are bound to share several issues common, in nature, to other Portuguese cities. The second main convergence between the plans corresponds to their strong internal coherence. A solid relationship between the different parts of these plans was found, particularly obvious in the case of the PDMP. The relationship between the objectives and the mechanisms for plan implementation is very similar in both plans, whereas the relationship between objectives and land uses and between objectives and urban infrastructure systems is more robust in the PDMP. At the land use level, the articulation between the typological zoning and the objectives of enhancing the urban identity of Oporto and promoting the rehabilitation of public spaces and of the built environment

should be highlighted. At the urban systems level, the relationship between the

environmental system and the strategic goals of the plan should also be highlighted. Bearing in mind the importance of both cities in Portugal, it is no surprise that the professional quality of both planning teams involved in the preparation of these plans has largely contributed to the strong internal coherence of these two planning documents.

In spite of the short period of PDMP implementation, it can be said that the third main convergence between these plans corresponds, so far, to the good results on the built environment. In terms of the main road network, more than half of the proposals of the PDML and a quarter of the proposals of the PDMP have been built in conformance with these plans. In terms of real estate investment, different products have been emerging in the two cities. Using five of the eleven indicators of our analysis on planning permits (see the assessment of effectiveness criterion), it can be said that the same developer possessing similar plots, one in each city, would build two different buildings. The Lisbon building would have higher values in all these indicators: the value for the building coverage would be 1.6 times higher (1.255m2 and 785m2) in Lisbon than in Oporto, the building area would be 4.6 times higher (13.330m2 and 2.900m2), the number of stores above the ground would be 1.8 times higher (7 and 4), and the number of dwellings would be 3.6 times higher (58 and 16). Despite these differences, reflecting two contrasting scales of the respective urban grids, the quality of the buildings in each city is being positively influenced by each plan. The good results on the ground that we found in this exercise are due to an effective influence of the two PDMs in the spatial development processes of these cities, (re)designing

(Oliveira & Pinho, 2006). their street systems and guiding the processes of development control. In any case, the differences in the production of the new urban form of these cities are due to structural reasons. Today, as throughout the whole twentieth century, the Lisbon growth has taken place by means of the urbanization of large areas. On the contrary, Oporto has grown in a less compact and rather more piecemeal and scattered way, sometimes street after street or through small-scale groups of buildings (Oliveira & Pinho, 2006).

Assessment of the detailed plan of District 6 of Shiraz Municipality

For the first time in 1995, the detailed plan of District 6 of Shiraz Municipality was prepared by Naghshe Jahan Pars Consulting Engineers (Naghshe Jahan Pars 1995,80) and preparation of a detailed plan revision plan for District 6 of Shiraz was put on the agenda in 2004. (Shahr va Khaneh, Consulting Engineers 2004, 29). In this study, factor analysis method was used to refine the criteria and determine the effective criteria in evaluating the detailed plan of District 6 of Shiraz Municipality. In order to evaluate the importance of assessment criteria in evaluating the detailed plan of District 6 of Shiraz, designed, distributed and collected questionnaires among experts and managers of some regions of Shiraz (Districts 6,1,5,3) and urban council. The statistical population includes 51949 people, which According to Cochran's formula, 381 questionnaires, followed by preparing a database and questions from managers and experts and asking the question “which criterion is more important in the assessment of the detailed plan of District 6 of Shiraz?” has been carried out. The components of the Bartlett test indicate that the variables are correlated and can be examined with factor analysis (KMO over 0/5). Based on factor analysis method, the criteria that had the most factor load, were selected as assessment criteria for the detailed plan of District 6 of Shiraz Municipality (2004); The scores for each of the criteria are as follows: Communication (0.982), External coherence (0.982), Commitment of financial and human resources (0.671), Participate in the implementation of the project (0.689), Efficiency (0.569), For urban development (0.779), Internal cohesion (0.773), Participation in program preparation (0.580), Application of the program (0.517), Interpretation of the planning system (0.501), and conformity (0.901). Given that the two criteria of external cohesion and communication have similar factors loading, both factors were evaluated. Based on the factor analysis, the criteria that scored lower were removed and finally 7 criteria were selected to evaluate the detailed plan of District 6 of Shiraz Municipality. Information needed to assess the criteria of compliance and internal cohesion, communication and direction of urban

development and commitment to financial and human resources, through documentary study - plan review studies and in-depth interviews of elites in various areas of urban management in the process of preparing, approving and supporting the plan Details of area 6 involved have been obtained. In fact, interviewees should generally be selected who have the highest insight into the subject matter. This is followed by a "snowball" technique. To evaluate the external coherence of the study of the upstream documents of the project - studies of different versions of the project - study of related projects in the three lines of objectives, land occupancy, building density and transportation have been used. To evaluate the participation of the people in the implementation of the detailed plan of the region, the opinions of the residents and the experts of the municipality of the region were used with background-based method (Semi-structural and group interview).

Table 3. Criteria, indicators and techniques for evaluating detailed urban plans

Criteria	Sub criteria	Indicator	Assessment Techniques / data sources
Conformity	Land Occupancy	Area and No. of Changed Occupancies	Field survey, documentary study of the detailed plan of the studied urban area (Plan Preparation Consulting Engineers)
	Density	No. of Floors and Floor Area	Detailed plan of the study area, field survey, consulting engineers plan, other upstream and downstream plans
	Road & Transportation Network	Access hierarchy	
Internal cohesion	Communication between operational goals and land occupancy of the plan	The result of a binary effect matrix	Detailed plan of the studied region
	Communication between operational goals and urban systems	The result of a binary effect matrix	Detailed plan of the studied region
	Communication between operational goals and Program execution mechanisms	The result of a binary effect matrix	
Interpretation of the planning system	Procedural interpretation	Coherent and meaningful relationship between different components of the plan	Detailed Plan of the Studied Region
	Content interpretation		Detailed Plan of the Studied Region
Communication	The relationship between the needs of the city and the operational goals of the program	The result of a binary effect matrix	Detailed plan of the region, in-depth interviews with those involved in the preparation and implementation of the plan
	Relationship between city needs and land use and urban systems		Detailed plan of the region, in-depth interviews with those involved in the preparation and implementation of the detailed plan
	Relationship between city needs and program implementation mechanisms		
External cohesion	Communication in terms of operational goals	Comparison of detailed plan with upstream and downstream documents in terms of objectives, density, land	Detailed plan of the study area, consulting engineer, review of other plans (Comprehensive and detailed, different versions of the detailed plan)

	Communication in terms of regional models	occupancy, road network	Detailed plan of the study area, consulting engineer, review of other plans
	Communication in terms of implementation		
Participation in Plan Preparation	Number of citizens consulted	No. of Questionnaire	Questionnaire
	Quality consultation from citizens	Age category - Education	Questionnaire
Plan Application	Promoting public participation by local authorities	Participation of council members in the preparation of urban plans	Consulting engineers preparing the design
	The impact of political forces on the program as well as their impact on other planning products (processes, structures)	Area of military lands in the plan (Barracks)	
Financial & Human Resources Commitment	The Impact of Program and Plan on Political Forces (Debates and Agenda)	Extent of plan intervention in the field of activity of political forces	Consulting engineers preparing the detailed and comprehensive plan
	Number of graduates and employees in the project implementation department	Ratio of Fixed and Non-fixed employees, level of education, and No. of employees of each section	Field Works, Related Reports, Municipal Income Sources of the Region
	Evaluate the municipal budget	Income Increase	
	Type and Diversity of Allocated Financial Resources	Fixed income to total ratio	
Participation during the Implementation of the Plan	No. of Consulted Citizens	No. of Interviews	Open and group interviews with local residents
	Consultation Quality of the Citizens	Age Category-Educations	Project managers
	Promotion of public participation by local authorities	Participation of the council members in the implementation of urban plans	
Efficiency	Program development through urban development programs and Detailed plans	Percentage of implementation of detailed plan projects in other relevant plans	Those involved in the implementation of the plan
	Program development through urban design projects	Percentage of detailed design projects compared to other design and construction projects in the region	Review existing plans and Checklist for the implementation of projects, consulting engineers preparing the project and review of municipal human resources
Guidance		Construction License, Land Price	Detailed Plan of the studied region, consulting engineers, field work, house agencies, Provincial and City Statistical Year

Questions such as "what are the problems of the detailed plan that prevents the participation of the people in the implementation of the plan?". How was the participation of the people in the detailed plan implementation process? Were the questions of this interview. Finally, for scoring the criteria, hierarchical analysis process method was used.
reliability.

Research Findings

Preliminary review and analysis of criteria Conformity: Conformity refers to the extent to which performance-executive decisions and the actual results of what has been done in practice are consistent with the executive goals and objectives and guidelines provided in the program policies. Sub-criterion of conformity, land occupancy, and its index is area and changed occupancies of the land. As we can see in table 4, the highest non-realization is related to the use of green and sports space; the total number of changed occupancies in District 6 is equal to 229 of which only 28 occupancies have been changed with the permission of Article 5 Commission and the rest have been without permission. Most of the land use changes have been on the sides of the crossing roads and most of these land use changes have been from residential and green space to commercial occupancy. As a result, they have increased the density of roadside activities.

Internal cohesion: Internal cohesion examines the relationship between the operational objectives of the plan and the objectives of the plan in the fields of land occupancy, environment, transportation and executive mechanisms of the project (urban management). To measure this criterion, the effect matrix can be used to determine the degree of strength of relationships by comparing the two goals. Objectives of the detailed plan of District 6 of Shiraz Municipality as stated in the plan report (Farnahad, 2004,38) are: O1. Strengthening the trans-regional role of District 6 in order to reduce the burden of development pressure northwest on the city center. O2. Strengthen the functional role of services within the region to reduce its dormitory role, O3. Organizing the entrances and exits of the city from the west, O4. Protection of the natural environment in connection with green and tourism activities and O5. Strengthening the managerial independence of the municipality of District 6 in its area of responsibility and preparing the background for strengthening the participation of the people in the administration of the district to strengthen the management system of Shiraz. The results show that in general, the most relation is between objectives 3, 5, and 1, and the least relation is between objectives 2 and 4 (table 5).

Communication: This criterion means the relationship of the plan with the demands, needs and ideals of the city. This criterion is evaluated to determine whether the developers of the plan are aware about the problems of the city and the demands of the citizens. Its sub-criteria are Relationship between service needs and operational goals of the program. The method of gathering information was through in-depth interviews that could lead to conclusions provided on T.O.W.S table. 12 cases have been identified as internal limitations of the region and in the form of five general categories, respectively:

Table 4. Comparison of the proposed levels of the detailed plan for 2004 and the site plan of the region

Occupancy	Proposed Detailed Plan	Site Plan	Not Achieved
	Area (Hectares)	Area (Hectares)	Area (Hectares)
Educational	16.36	14.49	3.22
Sport	8.08	0.35	7.91
Park and Green Space	31.31	14.98	16.33
Health-Treatment	2.87	0.86	2.04
Cultural-Religious	2.98	1.42	1.76
Commercial-Services	16.09	15.09	3.16
Residential	152.01	141.89	12.01
Total	232.7	189.01	46.43

W1) Problems in transportation and handling W2) Imbalances in population distribution W3) Environmental issues W4) Noninterest in investing in non-residential sectors W5)

Inconsistency and integration in the macro-municipal management system with the district municipality .The assessment method was a binary comparison with the objectives of the detailed plan of the region (Table 6).
Research findings
It shows that the five goals of the plan are more in line with solving problems and imbalances in the distribution of population and lack of interest, for this reason, the developers of the plan wanted to increase investment and construction in the region.
External cohesion: works on the relation of plan under assessment to the policies and plans prepared for the city. In the detailed plan of District 6 of Shiraz Municipality, high density has been suggested for Ma'ali Abad area, which is located in the northwestern side of the region, and other proposals are in full compliance with the objectives of the comprehensive plan. Criteria and suggestions related to the detailed plan have been implemented in District 6 of the municipality, except for 20-meter-wide streets and 10-meter-wide green space on both sides of the Tang-e-Sorkh River. Regarding land occupancy, in the detailed plan of the region for identifying the center of the region and creating a service hierarchy, no strategy has been presented; thus, the proposed uses of the detailed plan in the vicinity of the Sepidan arterial road, have not been observed and the service centers of the region, district and locations have not been formed in this region. Regarding the assessment of the external cohesion criterion, despite the fact that the detailed plan has not been able to act in accordance with the operational objectives of the upstream plans in some cases, but the most success of the detailed plan of District 6 of Shiraz Municipality, regarding the comprehensive and detailed plans, are related to the communication networks of the region; In fact, due to the lack of an executive system and a well-written program at the macro level of the country and the problems caused by disagreement and commitment or adherence to the provisions of programs at the national, regional-provincial scale and the lack of a system makes the traces of the upstream plan less visible in the detailed plan of District 6 of Shiraz Municipality.

Table 5. Binary Comparison of the objectives of the detailed plan of District 6 of Shiraz Municipality

Objectives	01	02	03	04	05
01					
02					
03					
04					
05					

Indirect Direct Communication
No communications Communication
In Contrast Available

Table 6. Relationship between the objectives and limitations of the plan of District 6 of Shiraz Municipality

Objectives	W1	W2	W3	W4	W5
D1					
D2					
D3					
D4					
D5					

No communications Available
Direct Indirect Communication
Communication

Direction of Urban Development: It means that 1) What was the city like before the project was implemented and prepared? 2) If the plan was not prepared, what process would the city go through? 3) How has the city expanded in practice. Construction License issuance process issued by the municipality and the changes in the price for square meters of land and house in different regions of the city, was used to review the statistics of housing construction related to the implementation of the detailed plan of the region. An examination of the data shows that from 2000 to 2003, there was a relative decrease in construction in the region. Between 2006-2008, number of construction licenses was decreased significantly, one of the reasons of which was the policy of excess legal density in the worn-out area (Shiraz District 8). Between 2011 and 2012, urban development and management led to an increase in Construction Licenses by including the necessary incentives such as increased density, conjugation of joint lots, the possibility of changing the occupancy of many lots without the permission of the Article 5 Commission. In such a way that in 2011 there is the largest area of construction licenses. In addition, the statistics of residential licenses (during 2000 to 2012) indicates that 50% of residential licenses in Shiraz have been issued in Districts 6 and 4, which shows the development of the city in the northwest and west. Changes in price of Square meters and houses in different regions in fact shows the growth of the space value of regions and comparisons of the differences in its changes in different regions, can show the gaps between urban areas. Increase in construction in the north and northwest of Shiraz, has also increased the price of land and house in these areas, thus, the average proposed building density, which is equal to 190% for District 6 of Shiraz Municipality, reaches 210% at the end of the period. In this way, the method of selling surplus building density, which is a way to earn income and financial independence of the municipality in various ways has continued. In Figure 1, the area of construction permits in District 6 of Shiraz Municipality in the period 2000-2011 is shown.

Financial and human resources in the implementation of the plan: Assessment of financial and human resources of Shiraz Municipality in District 6 has been examined with two indicators of the municipality budget of the region and the number of graduates working in the planning and implementation department. The highest income of the regional municipality is from changes in occupancy, construction penalties, and selling density.

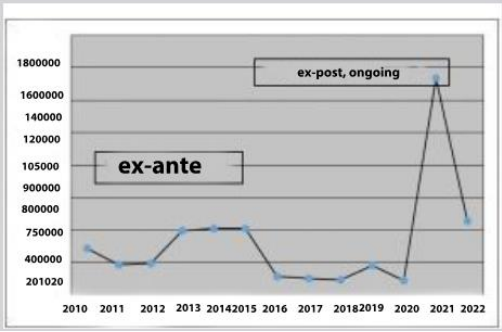

Figure 1: No. of Construction Licenses issued by District 6 of Shiraz Municipality between 2000-2012 (Resource: Deputy of Urban Coordination and Planning 2014, 56)

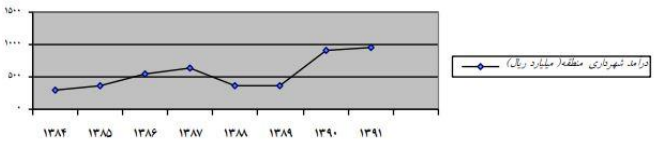

Figure 2: Income of Regional Municipality during years of implementation of the project (2005-2012) (Resource: Deputy of Urban Coordination and Planning 2014, 90)

In figure 2, the income of Regional Municipality during years of implementation of the project (2005-2012) has been shown. In reviewing the manpower resources of the regional municipality, two criterions of "the ratio of fixed and non-fixed employees, educational level, and number of staff in each section was used; most of the municipal staff in the region are informal staff (83%). Due to the unstable economic conditions of the municipality, it is obvious that due to the financial problems of the municipality, this group left their work in municipality and moved to other sectors after several years of gaining experience; according to the relevant reports, a large number of municipal employees are about to retire (59% of municipal employees), and thus, the municipality will face a lack of staff and the presence of experienced and skilled forces. On the other hand, most of the municipal staff are working in the executive and service departments and few of them had managerial and implementation positions. (Deputy of Urban Coordination and Planning 2014, 83). Figure 2 shows the income of the regional municipality in the executive years.

Participate in the implementation of the project: In evaluating the participation in the implementation of the plan, separate meetings were held with the presence of residents and experts of the district municipality and questions such as "How and to what extent people participate in the process of implementing the detailed plan and structural problems that prevent people from participating in the implementation of the plan" was discussed. Analysis of the interview findings shows that the main problems expressed by residents and experts include the following:

- Insecurity and environmental pollution due to destruction and unfinished projects, especially urban train inability to attract investors and lack of giving information from the city administration before the project implementation.
- Lack of the right of objection regarding the suggested occupancies and densities of the plan
- Public Distrust to the Municipality
- Uncertainty of the scope of activity and performance of local councils
- Absence of regional council assistants in decision-making meetings of the municipality and the council
- Belief of some experts to in the non-involvement of people in the project due to lack of professional and scientific skills

Final Assessment

Figure 3 shows the two criteria, commitment of financial and human resources (0.027) and participation in the implementation of the plan (0.041) obtained the lowest grades. The results obtained from the assessment of participation in the implementation of the project indicate that distrust to managerial organizations and institutions among people and their lack of people about the plan has led to the least amount of participation in the detailed plan of the region. Regarding the human resources of the district municipality and the results of its assessment, it can be said that the district municipality did not have a proper executive organization to implement the plans. On the other hand, the lack of specialized urban planning staff makes the municipality unable to perform its assigned tasks in the implementation of the detailed plan. In evaluating the criteria for urban development, according to what was said, the detailed plan of District 6 of Shiraz Municipality in 1995, and its first revision in 2004, has not achieved its goals in the field of housing; and despite different strategies of urban management and passing three periods different from previous ones

in the field of housing construction policies have continued. As regards the communication criteria, can also see that the suppliers of the plan did not have a comprehensive knowledge of the problems and the needs and demands of the citizens, and the objectives of the plan are more in order to solve the problems and weaknesses of numbers 2 and 4 (imbalance in population distribution and lack of interest to invest in non-residential sectors). External cohesion assessment shows that due to the lack of an executive system and a well-codified plan and the problems caused by disagreement and non-commitment or obligation on the provisions of programs at the upstream scale, less traces of upstream plans can be seen in other plans.

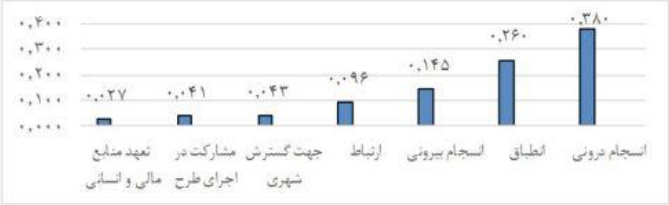

Figure 3. Point of evaluated criteria in the detailed plan of District 6 of Shiraz Municipality

Previous plans (detailed plan of District S of Shiraz, 1995) are discarded without studying the strengths and weaknesses and evaluating the gained experiences, and the plan is prepared again. Compared to other criteria of conformity (quantitative measurement of what has happened in practice than the project's executive policies), and internal coherence (examining the degree of compliance of the operational objectives of the plan with issues related to land use, environment, etc.) are in a better condition. Table 3 shows the point of evaluated criteria in the detailed plan of District 6 of Shiraz Municipality.

Conclusion

Most of the current assessment methods are of “Pre-implementation” assessment methods which is mainly used in the program preparation stage, and “During Implementation” and “Post Implementation” methods are less considered and used. While most of the problems related to detailed plans in Iran are related to their unsuccessful implementation, using new assessment methods can fill this gap. Among the new assessment methods, functional and adaptive perspectives for reviewing urban plans are more effective, which are mainly classified and used based on the success rate of urban plans in preparation and implementation. In this research, a combined method has been used to evaluate the detailed plan of District 6 of Shiraz Municipality. The combination of two assessment methods, "plan / process / results" and "program preparation / implementation process", while combining adaptive and functional perspectives, is more comprehensive and accurate than other common methods and is recommended for evaluating detailed plans. The proposed method, which is presented in the form of eleven criteria in two dimensions (preparation of the plan and implementation of the plan), has been used in evaluating the detailed plan of District 6 of Shiraz Municipality after filtering the criteria.

The research findings show that in general, the criteria of internal conformity and coherence are in a more appropriate situation but it is important to pay attention to the important issues that have scored less in this assessment, that is, participation in the implementation of the project, and financial and human resources supporting the implementation of the project. Therefore, it seems that changes should be made in the process of preparation, description of services and implementation of detailed plans, in this regard, there is no doubt that the methods of benefiting from more public participation (social engineering) along with paying attention to the systemic approach of urban management in relation to organizing local planning and executive institutions and avoiding purely physical plans without considering executive institutions, the necessary financial resources and facilities are the source of the effect and will eliminate or minimize the negative effects of the plan.

Endnotes

1. Plan/Process/Result (PPR)
2. Process Policy-Plan/Program Implementation (PPIP)

3. Source: Garagzelou (1986, taken from Pinho 2009, Alexander & Faludi,1989; Lichfield & Part,1998; Oliveira & Talen, 1996; Khakee, 2003)
4. Source: excerpt from (Oliveira & Pinho , 2009)
5. Conformity
6. Rational Process
7. Completeness
8. Consistence
9. Participation
10. Optimally Extant
11. Optimally ex post
12. Utilities

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