

Performance Appraisal of Fourth Development Plan in Industrial and Mining Infrastructures of Markazi Province

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Abstract: The present study aims at evaluating the performance of fourth development plan in industrial and mining infrastructures sector of Markazi province. To this end, recommendations and performances in relation with the following 4 indicators the number of industrial estates and zones; the ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones; the ratio of the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones; the ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones, are investigated during the years 2004-2009 in the Forth Research Development Plan. The findings are representative of the fact that, on the first and third indices, the performance was lower than the expected value while, on the second index, the performance was better than it was expected and finally, on the forth index, the performance exactly agreed with the expected value in the plan. It is recommended to precisely evaluate and take into account the regional capacities and potentials of development plans in regional and provincial levels.

Key words: Fourth development plan, industrial sector, industrial estates and zones, Markazi province, forth index

INTRODUCTION

Economic inability of villages and agriculture in attracting unemployed labor and making the livelihood of villagers led custodians of rural development to make new policies in their plans with the purpose of enhancing industry in rural areas and using an appropriate technology in decentralized manner. One the government policies in diversifying the rural economy is to avoid the indiscriminate immigration from rural to urban areas; therefore, industrialization of rural areas as the cornerstone of future development strategy, can be discussed. (Alami, 1999).

In the present study, firstly economic planning and development plans and afterwards the recognition of industrial and mining center of Markazi Province will be addressed. In the next section, as the most important part of the study, the recognition and evaluation of indices, quantitative objectives of the provincial operations in the fourth plan, the forecasts and the indices performance Fig., firstly individually and then mergely, will be dealt with to understand how well they will be met and whether they could fulfill the plans objectives or not. Finally, the problem causes and the final outcomes will be identified. (Tofigh, 2006)

The theoretical principles

Development plan: Development plan is a complex process in which various organizations and brokers are interacted in terms of developing, making and executing social and economic policies of a country. Planning as a policy making tool has been accepted in a number of developing countries. The reasons mentioned by proponents planning are as follows: firstly, as the market agents in the developing countries are not complete, the market forces fail to optimally allocate these agents, hence the government could help to optimally allocate the aforementioned resources via a planning. Secondly, as the private investors draw less attention to the dynamic foreign accruing in economic development process, there is a gap between the final value of Net Social Benefit (NSB) and net economic benefit; therefore, a planning can remove such a gap. Thirdly, the foreign investor seeks to maximize the short-time interest, so it may lead to the resource allocation which may not be necessarily optimized in long-term. Fourthly, achieving the economic development by merely relying on market forces is a long-term process. Regarding the differences between the developed and undeveloped countries, accelerating the development process is a matter of great importance. The proponents of planning believe that it accelerates the economic development process. Fifth, if structural and infrastructure reforms fail to keep pace with economic development, the growth will be slow. Planning may

enable the structural and infrastructure reforms to achieve economic development. 6th, planning has such psychological impacts upon both government and the society as a whole which facilitates the endurance of short-term economic difficulties to achieve a higher level of life quality in the future. Seventh, given the limitations of some resources including skilled labor, foreign currency, management, etc., the allocation of such resources in developing countries is a matter of utmost importance. The proponents of planning believe that it facilitates the achievement of such goal. (Beheshti, 1999)

Development plan and its importance: Development plans of the country is the roadmap for regime, mixed with the traditional comprehensive planning method of the developing countries. From the perspective of time, planning is divided into three groups: long-term (a 10-20 year vision), middle-term (a 5-year vision) and short-time (annual vision); from that of magnitude, it is grouped into macro, sectorial, sub-sectorial and projects and from that of geographical parameter, it falls into national and regional groups. Looking precisely at the evolution of the national plan may indicate that plans achieve their objectives when the development policies and principles are more specified and limited. However, gradual evolution in diversification of the plans type, method and content and the shift in governmental activity (especially in terms of social development and infrastructure services) from normative to guiding and directive, may highly promote the speed and amount of plan success and the objectives fulfillment. (Vahidi, 1990)

The fourth development plan was regulated with a knowledge-based, sustainable economic growth approach

and includes clear and novel messages and themes in terms of competitiveness, active interaction with the global economy, human security and social justice. Emphasis upon developing meta sectorial and sectorial-provincial development documents is another feature of this plan, in which the plan feasibility and actual realizations of goals are possible by relying on the country capacities and capabilities, human resources and efficient exploitation of novel technologies and resources. The aforementioned plans are the main basis for arranging operational plans and annual budget. (Sarafi, 1998)

Performance appraisal of middle-term plans through continually controlling and monitoring and evaluating of actions and activities may enable us to measure the level of qualitative and quantitative objectives achievement predicted in the plans, determine the deviations from targets, identify obstacles and problems, revise the objectives and determine and prioritize the operational plans in order to achieve the objectives as soon as possible.

A review over development plan: Considering the content and orientation of development plans may help providing a better planning system of the future development plans in addition to helping them in terms of content, way of regulating and pathology. During the recent years including before and after the Islamic revolution, various plans developed and implemented. After the Islamic revolution victory, five economic, social and cultural development plans were established and executed as well. Each of these plans being to great extend proportional to the general conditions of the country have followed distinct programmer, objectives and orientations. (Table 1)

Table 1: A summary of general and main objectives of Iran development plans

Plans	Duration	Main objectives	General objectives
The first development plan	1989-1993	Economic reconstruction of the country by the end of the war	Reconstruction and launch of production cycle+physical facilities and infrastructures development+public social services development+regions and segments imbalances removal
The second development plan	1995-1999	Economic stabilization and various markets organizations	Consolidation the achievements of first plan + stabilize the economic trends + reduce the heavy burden of economic evolution on the society
The third development plan	2000-2004	Institution-building and structural reform	Competitive economic development through: Liberalization of economic system + the formation of the Social Security system + institutional legislative reforms + abolition of the monopoly to pave the way for private sector participation + reduced charges of the government
The fourth development plan	2005-2009	Knowledge-based sustainable economic growth	Knowledge-based economic growth in interaction with the world economy + environment prediction + Land preparation and regional balance + health, human security and social justice development + protection from the Iranian Islamic identity and culture + safeguard national security + state modernization and governance effectiveness
The fifth development plan	2001-2005	Justice-based progress	Promoting Islamic lifestyle + comprehensive social security development and respect for human dignity + strengthening Islamic-Iranian identity +creating a self-confident society with the centrality of family + technology and knowledge development with emphasis on IT + justice-based and sustainable economic growth + productivity promotion + implementation of the general policies of article 44 + total social security and public health promotion + strengthening the national security and developing foreign relations based on 3 principles, namely dignity, wisdom and expediency +lands preparation and development and regional balance+reduce the economy's dependence on oil+promotion of cooperatives and competitiveness in the economy

The first development plan (1989-1993): was made with the purpose of economic reconstruction of the country at the end of the imposed war. The activities of the first plan in the framework of a financial policy fitting the building and reconstruction needs were predicted to balance the state budget and generate income through taxes, increased morbidity and services price adjustment. In this plan, supreme council of recovery decisions, the parliament, the cabinet, the council of economy, plan and budget organization, macro committees, sectorial councils and groups of integration and provincial and sectorial committees were organized.

In the second development plan (1995-1999): due to increased foreign obligations at the late of the first development plan and increased prices, macroeconomic management was made with the aim of emphasizing on the establishment of the first plan achievements and the organization of different markets, increase efficiency in using public resources, change the administrative structure of public institutions and devices to reduce the size of public sector. Developing the plan of economic organization of Islamic Republic of Iran (1998) is another measure the government took in terms of planning during the years of the second development plan.

The third development plan (2000-2004): was made with the aim of reforming structures, establishing required infrastructures to development, reforming regulation and rules and developing the executive plans. Moreover, this plan was regulated with the aim of increasing the level of social involvement, trying to enhance employment and providing the possibility of accessing economic growth required based on the respective document.

The fourth development plan (2005-2010): was made as the first plan starting the 20 year vision with the aim of knowledge-based sustainable economic growth and a single-digit unemployment and inflation, stable and continuous growth, knowledge-based development, active engagement with the global economy, economic competitiveness, human security, social justice, national security, health improvement, improved life quality and environment, sustainable development, cultural development, government management development, judiciary development and security and regional equilibrium and balance.

The fifth development plan (2011-2015): was made as the second plan of the vision document that is assumed to move towards the document objectives, i.e., reaching the first economic, scientific and technological position in the

region along with Islamic, revolutionary and inspiring identity in the Islamic world and also with a constructive and effective interaction in international relations. In spite of the fact that in the general policies of the plan and article 234 of the Act, average growth rate of 8%, 7% unemployment rate and current government dependence on oil and gas revenues were set as the plan objectives, in practice, up to the end of 2013 (the middle year of the fifth plan), the rates of economic growth and unemployment reached 1.9% and 10.5%, respectively.

Industrial estates company of markazi province: Markazi province is one of the industrial poles of the country either in the quality sector or in the industrial diversification sector, so that over 2850 industrial units are deployed and active in different cities of this province, particularly Arak, Saveh, Delijan, Mahalat and etc.

Industrial estates company of Markazi province is an independent joint stock company which is the subordinate of small industries and industrial estates of Iran. This company is established with the aim of creating required attractions for investment and moving towards investing on regions having comparative advantages in service and supporting and industrial, research and technological activities including engineering design, training, informing, consulting and business. The company has taken step based on long-term macro strategies of Islamic republic of Iran and in line with approved rules and regulations. Furthermore, the company is equipped with a precise and logical control system to fulfill and update the aforementioned strategies. Here, the industrial estates and zones along with the investment and employment value are presented (Table 2-4)

The qualitative objectives of industry sector in the fourth development plan in markazi province:

- Promoting the share and status of the province in industry and enacting a specialized role in production
- Developing the new industries with the emphasis on establishing industrial clusters and expanding the subcontracting related to the existing industries and avoiding the water-consuming resources
- Strengthening the industrial estates and zones and establishing technology and business centers as well as workshop complex
- Organizing and supporting the link between small, medium and large-scale industries, developing the networks and industrial clusters, developing the informing centers and electronic business for them.
- Studying, reviewing and multi-purpose planning to construct industrial estates and zones

Table 2: Data related to industrial estates of Markazi province, 2007

Estate name	Total area	Transferable land area (Ha)	No of deployed units	No of exploited units	Investment made (million Rial)	job created (person)	The rate of development (ha)
Arak	48.6	29.8	158	140	949838	3074	0
Aybak Abad	156	99.06	124	54	115268	972	500 hectares of land undelivered
Kheir Abad	344	139.5	277	107	1234579	1630	1000 hectares of land undelivered
Ashtian	294	65	12	6	39300	241	0
Delijan	2000	202	160	107	402075	2199	
Mahalat	272	168	72	30	146317	420	
Khomein	317	122.94	74	27	138236	472	179.5
Komijan	92.4	60.2	7	2	3896	23	
Nobaran	100	53	25	20	272284	786	0
Farmahin	142	71.5	15	11	5633261	1946	
Astaneh	50	19	5	0	0	0	0
Mamuniyeh	992	112	138	22	289603	494	0
Ghargh Abad	90	40	1	0	0	0	0
Zavieh	400	90	19	0	0	0	0
Arak 4	0	0	0	0	-	-	-
Shazand	0	0	0	0	-	-	-
Saveh (Kni)	1143.5	0	0	0	0		Delegated land
Zarandieh	909.7	90	1	0	0	-	
Sum total	7351.4	1362	1088	526	9224657	12257	4179.5

Arak 4 (2,000 hectares of land approved by the government has not been determined); Shanzad (500 hectares of land approved by the government has not been determined)

Table 3: Industrial estates and zones of markazi province

City name	Estate name	Estate area	No of deployed units	Infrastructures facilitie			
				Water	Electricity	Gas	Telephone
Saveh	Kaveh Industrial City	2500	500	*	*	*	*
Arak	Haji Abad Industrial Town	290	120	*	*	*	*
Arak	Ghotb Industrial city	65	80	*	*	*	*
Sum total		2855	700				

Table 4: Data related to industrial zones of Markazi Province, 2007

Name of zoon	Total area (Ha)	The area of delegated land	No of exploited units	Investment made (million Rial)	Jobs created (person)
Shahid Foruzan	11.8	7.72	4	4471	47
Martyrs Khondab	11.2	7.32	6	4589	70
Martyrs Garekani	12.36	7.24	1	1120	6
Martyrs Ravarj	52.25	35.36	15	31243	240
martyr Habibi Nakhjirvan	36.3	23.8	21	21910	201
Martyr Abdol Ali Saeedi	27.57	19.91	7	10467	115
Martyrs Khoramdasht	8	4.42	0	0	0
Martyrs Tafresh	34	20.2	8	47484	313
Martyr Mehdi Parandak	50	28.64	38	55833	845
Babai martyr	51.8	38.6	25	44307	538
Martyrs	5.4	3.56	1	1100	12
Nahramian					
Sum total	300.88	196.73	125	222524	2387

- Providing prioritized measures and strategies to remove problems, accessing the plan qualitative and quantitative objectives to provide appropriate infrastructures for development

MATERIALS AND METHODS

The fourth development plan in industrial and mining infrastructures in markazi province: The condition of industrial and mining infrastructures was evaluated through four indices.

The first index: The number of industrial estates and zones: industrial estates and zones include the area of

delegated lands in industrial estates and zones and the number of industrial zones approved by the company General Assembly. The measurement unit of the area of delegated lands in estates and that of the number of industrial zones approved by the company General Assembly is hectare and district, respectively. The latter includes: Robot Mil, Tafresh, Milajerj and Naragh.

The second index: The ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones considered part of the infrastructure facilities.

Table 5: the perdition of four indices for investigating the industrial estates and zones of Markazi province

Indices	Measurement unit	Value at 83	Activity (contained in Article 79 of 4th Plan Regulations (years))				
			2005	2006	2007	2008	2009
The number of industrial estates and zones	Estate	27	29	31	33	34	35
The ration of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones	%	27	34	37	38	42	43
The ratio of the number of industrial estates and zones with entrance entrance to the gates to the total number of industrial estates and zones	%	24	95	96	97	99	100
The ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones	%	96	80	52	52	52	48

(Forecasts in term of providing water, electricity, gas, telecommunications, and constructing a road to the entrance of the gates of industrial estates and zones help to establish and complete industrial estates and zones)

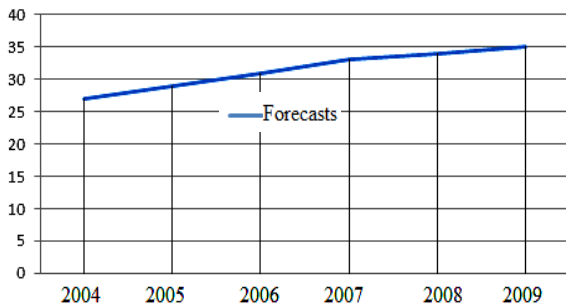


Fig. 1: forecasts of the number of industrial estates and zones

The third index: The ratio of the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones.

The forth index: The ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones.

Table 5 demonstrates the perditions of four above mentioned indices during the fourth development plan in the industrial sector of Markazi province.

The first index: The number of industrial estates and zones. According to table 5, it is predicted that the number of estates should reach 31, 33, 34 and 35, in, respectively, 2006, 2007, 2008 and 2009, as it is shown in Fig. 1.

The second index: The ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones. According to Fig. 2 the ratio of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones was 24% in 2004 up to 43% in 2009.

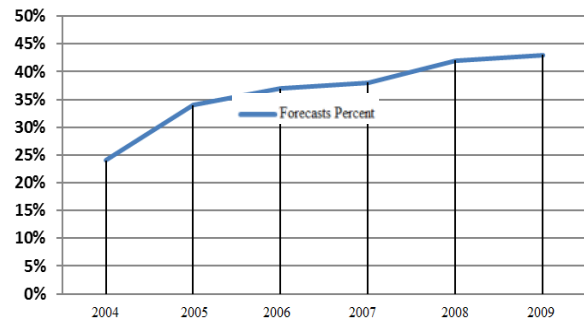


Fig. 2: Forecasts associated with the ration of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones

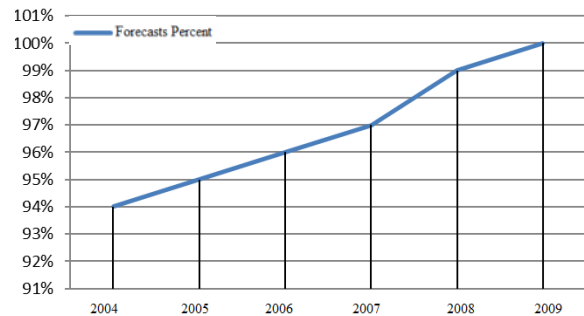


Fig. 3: forecasts associated with the ration of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones

The third index: According to Fig. 3, the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones was predicated to reach 100% in 2009 from 94% in 2004.

The forth index: According to Fig. 4, the ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones that was 96% in 2004, was predicted to reach 48% in 2009.

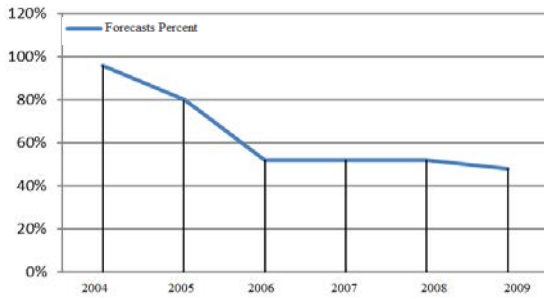


Fig. 4: Forecasts associated with the ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones

RESULTS AND DISCUSSION

The performance of the fourth development plan in industrial and mining infrastructures sector: Now, the 5-year performance of the above mentioned indices are to be addressed to shed some light on the fact that how we approach or away from such objectives (Table 6)

Now, the Fig. are plotted to enable the comparison of this Fig. with the predicted ones.

The first index: According to Fig. 5, the number of industrial estates and zones being 27 in 2004, reached 31 at the end 2009.

The second index: According to Fig. 6, the performance of this index, i.e. the ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones, being 24% in 2004 reached up to 55% in 2009

The third index: According to Fig. 7, the performance of this index, i.e. the ratio of the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones, being 94% in 2004, reached 87% in 2009.

The fourth index: According to Fig. 8, the performance of this ratio, i.e., the ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones, being 96% in 2004, reached 48% in 2009.

Now, to investigate the performance, a graph is plotted, then the performances and forecasts are demonstrated side by side. In this way, the analysis of them during the development plan will be possible.

The first index: As it observed in Fig. 8, according to the forecasts, 4 further industrial estates and zones should

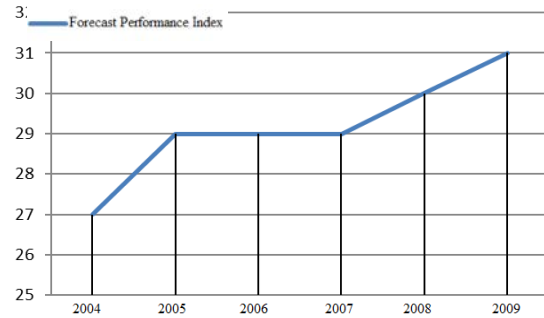


Fig. 5: The ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones

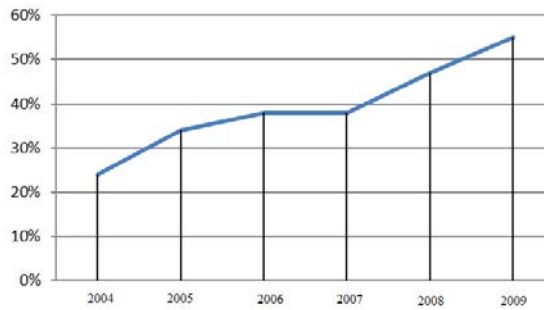


Fig. 6: The performance of the ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones



Fig. 7: The performance of the ratio of the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones

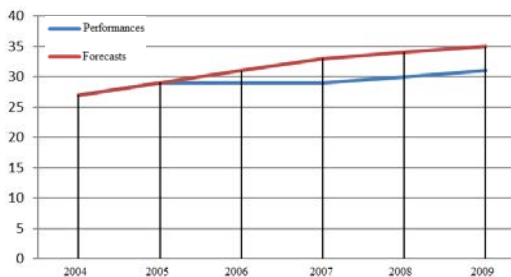


Fig. 8: The performance and the prediction of the number of industrial estates and zones

Table 6: The performance of quad indices during the Fourth development plan Mining and industrial infrastructures plans 40301000 (Plan)

Indices	Measurement unit	Value at 83	Qualitative target indices (separated by the years)				
			2005	2006	2007	2008	2009
The number of industrial estates and zones	Estate	27	29	29	29	30	31
The ration of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones	%	24	34	38	38	47	55
The ratio of the number of industrial estates and zones with entrance entrance to the gates to the total number of industrial estates and zones	%	94	86	90	90	83	87
The ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones	%	96	62	62	70	53	48

(Forecasts in term of providing water, electricity, gas, telecommunications, and constructing a road to the entrance of the gates of industrial estates and zones help to establish and complete industrial estates and zones)

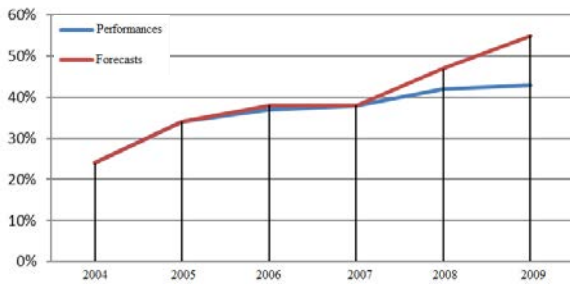


Fig. 9: The performance and the prediction of the ratio of the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones

have been established, then we could claim that the predictions came true. The first year has a progressive trend; however it declined during 2005-2007, i.e. the performance during the latter was not satisfactory.

The second index: As it observed in Fig. 9, according to the forecasts, the number of industrial estates and zones should have reached 43% in terms of facilities, but according to our observations, this value is 55%, that is 12% more than the predicted value. Consequently, it is found that the performance was satisfactory in this case. At the end, the reason of such good performance and its strengths should be investigated.

The third index: As it observed in Fig. 10, according to the forecasts, the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones should have reached 100% and all become entirely completed. However, according to their performance, a decreasing trend is observed and the value decreased (87%) compared to 94% in 2004, i.e. it decreased even 7% more than the time it was investigated.

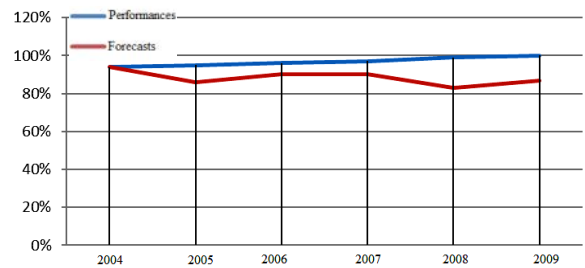


Fig. 10: Comparison of the performance and the prediction of the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones

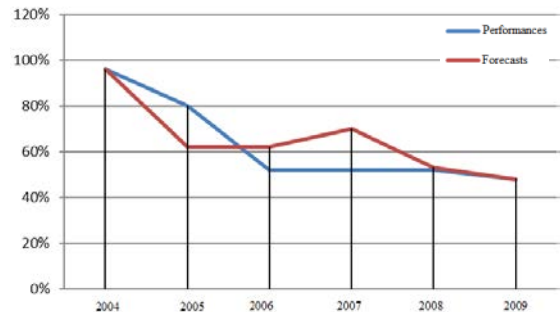


Fig. 11: Comparison of the performance and the prediction of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones

The fourth index: According to Fig. 11, the estates completion was predicted to reach from 96% in 2005, to 48% in 2009. Likewise, according to the performance, such a prediction came true. In details, the trend during 2005-2006 was better than the value predicted; however during 2008-2009, such a trend declined. If the progressive trend continued, the outcomes even would exceeded the predictions. In short, the performance in this area is satisfactory.

CONCLUSION

The first index investigation: The number of industrial estates and zones in 2004, were 27 estates that, according to the prediction it should have reached 29 estates in 2005 and came truth according to the performance. According to the prediction it should have reached 29 and 33 estates, in, respectively, 2006 and 2007; however it again remained 29 estates. According to the prediction it should have reached 30 and 35 estates, in, respectively, 2008 and 2009; however, there was a more estate, i.e. 31, compared with 2008. Therefore, in this index, 4 industrial fell short of forecasts.

Second index investigation: In this index, the number of industrial estates and zones equipped with water, electricity, gas and telecommunications to the total number of industrial estates and zones was 24% in 2004. According to the forecasts, this value reached 34%, 38%, 38% and 47%, in respectively, 2005, 2006, 2007 and 2008. And finally, according to the forecasts, this index should have reached 43% in 2009, but good performance reached it to 55% which was even 12% better than the predicted value.

The third index investigation: The ratio of the number of industrial estates and zones with entrance to the gates to the total number of industrial estates and zones was 94% in 2004. According to the forecasts, this index should have reached 95% in 2005, but based on the performance, it reached 86%, i.e., 9% lower than the predicted value. This index reached 90% in 2006 and remained 90% in 2007, i.e. no increase was observed. In 2008 it declined to 83% and according to the forecasts, this index should have reached 100% in 2009, but it reached 84% with only 4% increase compared the previous year. In short, this index fell 13% short of forecasts.

The forth index investigation: The ratio of the number of industrial estates and zones which require to be completed to the total number of industrial estates and zones was 96% in 2004. This index reached 62% in 2005, i.e. a 34% change was observed and it was 18% better than the predicted value. In 2006, this value remained again 62% like the previous year and reached 70% in 2007 and according to the forecasts, it has a 18% increase indicating its poor performance.

According to the forecasts, this index should have remained 52% in 2008; however it reached 53% based on its performance, i.e. 1% short of the predictions. However, 17% improvement in this index is representative of its good performance in 2008.

According to the forecasts, this index should have reached 48% in 2009. Regarding the performance of this index, such a value came true with 5% reduction and reached the value predicted, i.e. 48%.

RECOMMENDATION

In line with the findings of this study, the following recommendations are presented establishment, completion and governance the affairs of industrial estates and zones should be completely monitored to ensure whether the investments made according to the forecasts, were optimally applied. Small-scale industries should be supported and the level of employees knowledge has to be promoted through providing the required training to increase their productivity and guide them to the due path. Failure to extend the gas network in industrial estates and zones and delay in power supply in large units, are problems required to be removed. High risk of investing on mining and industry compared the other economic sectors of taxes and duties units and also high profits in other sectors of the economy are among other problems need to be dealt. A further problem is lack of financial resources in launching projects being about to be launched with a reasonable and moderate profit. Moreover, lack of industrial infrastructures in Arak and Shandiz is another crux required to be addressed.

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