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Identification and evaluation of key Assets with approach passive defense (case study: Qazvin province)

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Abstract

The importance of key assets to the enemy varies, so threats are assessed based on their significance. This study will concentrate on the Qazviny case study. It is an applied research with a descriptive-analytical method, utilizing library studies, interviews, and questionnaires. A targeted sampling of 50 experts was chosen as the statistical sample.The method of information analysis for the leveling of assets was through the guidelines for the leveling of centers of gravity approved by the inactive defense organization and the assessment of the value of assets was also through the FEMA technique. The research results in the stratification section indicate that the Qazvin Karaj Freeway, Shahid Rajaei Power Plant, Qazvin 16th Armored Division, Northwest Radio Communications Directorate, and Chicken Ajdad Barkat Company are among assets with a sensitive levels. Additionally, the Qazvin Governorate, Imam Khomeini International University, Shahid Rajaei Hospital, and Qazvin Railway Station are classified as assets with an important level. In the asset evaluation section, the Shahid Rajaei Power Plant scored 9.33, while the Qazvin Governorate scored 7.96.Chicken Ajdad Barkat Company with 7/33, Qazvin Governorship with 6/84, Qazvin 16th Armored Division with 6/8, Shahid Rajaei Hospital with 6/17, Imam Khomeini International University with 5/88, Qazvin Railway Station with 5/75, General Directorate of Northwest Radio Communications with 5/5 and Qazvin Karaj Freeway with 5/48 are of high value.

Keywords: Key assets, Passive defense, Qazvin province, Asset leveling, Asset Evaluation, FEMA.

1. Introduction:

Key assets encompass physical or spiritual systems and resources that are vital to a system, and any disruption to their functionality can have significant repercussions on national security, economic prosperity, public health, or safety, or a combination of these (Zhang et al., 2015:7). Analyzing recent conflicts such as the Quds occupation regime's battle against Hamas and the Russian-Ukrainian war, it is evident that the adversary's attacks have consistently targeted key assets rather than focusing solely on minimizing cost and strength. By undermining a nation's defenses and adopting a strategy of dismantling centers of gravity, the importance of key assets is underscored in the initial stages, and any impairment or jeopardy to them results in a denial of service. Cities and metropolitan areas, with their substantial investments and abundance of critical facilities and essential infrastructure, are at high risk of enduring severe financial and human losses when faced with man-made threats (Abazarlou, 2016:31). Within these urban centers, the repercussions of such threats manifest in the form of significant damage to vital assets, encompassing physical destruction and disruptions to key urban components. This includes the devastation of buildings and structures, disruption of road networks and entry points, and impairment of crucial infrastructure like water reservoirs, power plants, and communication lines for telephone, electricity, water, gas, among others (Hosseini et al, 2011:46).Non-physical defense, as a platform for sustainable development and one of the most effective and sustainable defense methods against threats, encompasses various urban spaces. This type of defense pursues five main objectives: increasing deterrence, reducing vulnerability, ensuring the continuity of essential activities, promoting national sustainability, and facilitating crisis management (Ghazanfari, 2013:3). In this regard, the research aims are as follows:

Identification of key assets as case studies.

- Evaluation of the value of key asset case studies.
- The research background will be addressed further.

Tavassoli and Abazarlou (2021) in their article, "Modeling Vulnerability of Cities' Key Assets using Non-Physical Defence Approach with Fuzzy Logic (Case Study: Tehran District 6)," propose that the value of an asset is perceived through the eyes of a potential adversary, impacting the likelihood of a security breach. They suggest that the attractiveness of an asset to the adversary serves as an indicator of its value to the opponent. They further define the explosion vulnerability radius for critical assets and model the vulnerability level of District 6 (Tavassoli & Abazarlou, 2021:14).In the article, "Evaluation of Risk for Key Assets in Bandar Abbas City using Non-Physical Defence Approach," Mousavi et al. (1399) employed the FEMA technique to evaluate the risk of key asset case studies like the governorate and water treatment plant. Nonetheless, the study did not explicitly discuss the statistical method and the key asset identification process (Mousavi et al., 2020:744).Mashadi and Amini Varaki (1394) presented an article titled "Development and Presentation of a Framework for Assessing Threats, Vulnerabilities, and Risk Analysis of Critical and Sensitive Infrastructures with an Emphasis on Non-Physical Defence ." the study aimed to provide a framework for the accurate and precise assessment of threats, vulnerabilities, and risk exposure of the country's critical infrastructures, considering non-physical defense considerations. For, based on the strategies of foreign enemies, particularly the United States, the fundamental infrastructures of a country are considered the primary targets of potential attacks. (Mashhadi &Amini Varaki,2015:122).Skandari et al. (1393) in the article "Damage Analysis of Vital Arteries Considering Dependency Effects in Targeted Attacks", after introducing the water and electricity arteries, utilizing the graph theory model and the Leontief model, and 240 scenarios for Assessment, assessed the vulnerability, and the risk of these arteries has been calculated. Among the single variable scenarios, the scenario of the explosion in the treatment plant, and among the combined scenarios of the explosion of two treatment plants and the electric substation has the highest probability of occurrence (Skandari et al,2014:19).

Etinay and colleagues (2021) in their study "Urban Resilience for Risk Management" aimed to identify the principles of resilience to assess the risk of Washington, D.C., against terrorist threats, particularly those involving vehicular bombings. The results of this study indicate that the likelihood of terrorist attacks as Car bombing van vehicular in critical city components such as

gas pressure reduction stations, power substations, water treatment plants, and gas stations is high. (Etinay & Egbu,2018:580).

Ongkowijoyo and Doloi (2020), in the article titled "Resilience Model Based on Risk Concentration for the Reconstruction of Urban Infrastructure Systems," have delved into the subject that the assessment of resilience in urban infrastructure systems, when facing disruptions, relies on a comprehensive risk evaluation. Using the Norman method, they examined the interactions of urban infrastructures such as electricity, water, telecommunications, oil, and gas. The results indicate that the electricity and gas infrastructures have the most significant impact on other urban infrastructures, and the water infrastructure is most susceptible to interactions with the electricity infrastructure (Ongkowijoyo & Doloi,2018:1118).

Alcaraz and Zeadally, in the article "Protecting Critical Infrastructures: Requirements and Challenges of the 21st Century," argue that sensitive infrastructures play a vital role in supporting modern society. Reliability, performance, service continuity, safety, maintenance, and protection of infrastructures are national priorities for countries worldwide. The authors have delved into examining vulnerabilities and threats facing modern sensitive infrastructures, with an emphasis on industrial control systems, and have also discussed protective measures. Alcaraz & Zeadally,2015:58)

2. Theoretical Foundations

2.1. Passive Defence

Defense is the measures to resist political, military, economic, social, psychological, or technological attacks by one or more allied countries (FEMA,2003:426). Defense is of two types: active and passive defense. Passive defense is a form of defense without the use of weapons and is the main complement of the comprehensive defense of the country (Ghazanfari,2012:65). (Ghazanfari,2012:65). With passive defense measures, it is tried to minimize the impacts of vulnerabilities within the country. The primary approach is to confront or manage threatsin a manner that minimizes the impact of the threat on the country (Kalantari et al,2022:53).

"Defense is essential for the survival and security of humans. Passive defense requires minimal management and operates reactively. Therefore, passive defense must inherently be responsive during times of surprise air attacks. During attacks, especially initial attacks, a surprise air attack takes place. the passive defense is a set of measures that keep people safe from this shock (Jalali & Skandari, 2010:70).

The concept of territorial planning initially has a defensive meaning and later evolves into a developmental concept. However, in many countries, territorial planning and national schemes prioritize development rather than defense, leading to the expansion of vulnerable areas against enemy threats (Collier & Savannah,2021:280).

2-2- The Importance of Asset Identification in passive defence

In passive defense studies, the security of the studied assets is essential to identify the threats facing them. Assets mean anything of value to an organization (Setaheh,2011:51). To evaluate assets, one has to consider different scenarios. The most important task is to identify the essential assets and understand how critical these assets are in the form of human protection (Farhadi et al.,2022:201). Another definition of an asset is a valuable resource that requires protection and can be tangible (e.g., people, buildings, facilities, equipment, activities, functions, and information) or intangible (e.g., processes or antecedent and credibility of a company) (FEMA452,2005:87).

In general, the enemy must have clear and logical reasons to attack a target. If we think of the city as a living organism, the strategically important assets can be compared to the brain, as they influence the crucial decisions of the city. Attacking these assets will disrupt the city's decision-making and management, gradually leading to the disablement of other parts and disrupting the city's functioning. Therefore, assets of strategic importance are considered very

attractive targets for the enemy. In general, if an asset is essential to the system's mission, the system will be sensitive to the consequences of losing it and its impact on the urban system (Norman,2010:101).

The importance of an asset is defined in terms of sensitivity, based on the value that the organization places on that asset, and also based on the short-term and long-term consequences of damage and destruction of assets. (Vallani,2007:16).

2-3- Identification of Key Assets with Passive Defence Approach

Prioritization is one of the most fundamental tasks in achieving success and accelerating the goals outlined in each organization and organization. According to the Law of Priority (80/20), if managers in the relevant planning system prioritize work issues and activities based on their importance, 20% of efforts, time, and cost will lead to 80% success. Eighty percent of efforts, time, and money, only lead to 20 percent success in achieving goals (Alikhani et al,2019:36).

In this study, the directive for the level of gravity centers of passive defense organization approved in January 2016 is used to identify Key assets. The directive is a matrix consisting of 8 main criteria, nine sub-criteria, and 44 specialized indicators in the field of passive defense, the main criteria include: The main importance with a score of 10, the scope of influence with a score of 20, the depth of influence in the governance of the country with a score of 20, the possibility of substitution with a score of 6, being unique with a score of 14, playing with a score of 5, capital value with a score of 10, and the consequences of injury (effect) are scored with a score of 15 which total points are 100. Any asset in the range between 100-81 is a vital asset, between 80-61 is a sensitive asset, and Instructions for leveling centers of gravity of the passive (Instructions for leveling centers of gravity of the inactive defense organization,2015:22), It is worth noting that in this research, the sample assets of the study are listed in each of the three levels as Key assets.2-4-Evaluation method of Key assets with passive defense approach

Because the number of assets available may be very high in a risk assessment process, and the risk assessment of all of them is generally not feasible or necessary (due to the low importance of some assets) ،The first step is to evaluate assets, screen them, and perform an initial assessment. Passive defense organization indicators are used to assess the importance and prioritization of Key assets, based on the numerical spectrum of Likert (the number ١ is the lowest value, and the number ١٠ is the most valuable), which is as follows :(Jalali,2012:34)

Role and value of the function:

The effects and role of an asset in a system and collection are called. this means that the asset plays a major role in the set process and a secondary role in the system process. As the number approaches 10, the functional value of the key asset within the set increases.**Quantitative and qualitative beneficiaries:**

Beneficiaries or customers are divided into two parts: low and qualitative. No matter how high the members covered by the Key asset or the Key asset are to certain quality exploiters such as military, industrial, or major commercial services. The importance of this index will be directed towards the number 10. The importance of this index will be directed towards the number 10.**Relative economic value:**

The same Rial value is the key asset that each asset has more value, which leads to a higher number, ١٠.

The Impact of Assets in Facilitating Crisis Management:

3. The greater the impact of the asset in facilitating crisis management during times of threats and risks, the more value it will have in promoting economic prosperity, ensuring continued operation, and enhancing the safety and security of the collection."Methodology

The current research is descriptive-analytical in nature. The aim is to gather information from library studies and questionnaires to evaluate the value of key assets using a case study of the FEMA (Federal Emergency Management Agency) technique. The statistical population of the research consists of several experts in the field

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4. Study Area

Qazvin province is located in the northwest part of Iran, which has only 1% of the country's area, and almost 10% in Iran's economy and production. The reason for choosing Qazvin province as a case sample is as follows: The relatively high population density of the province significantly compared to the whole country (8.81 and 1.49 square kilometers respectively)Producing more than 4% of the country's total agriculture production It contains several industrial cities (Alzer, Caspian ۱۲, Arasanj, Lia, ...), and approximately 5% of the country's industrial investment is allocated to Qazvin province.the first and largest industrial city of Alborz in Iran is located in Qazvin.Employing more than 130 thousand people in the province's industrial sector.5% of the production of mother-fowl chicken, 100% of the production of egg-laying ancestors

About 5% of the electricity supply is generated by the 2000 MW power plant Shahid Rajaee.The fourth rank in the production of ornamental fish in the country

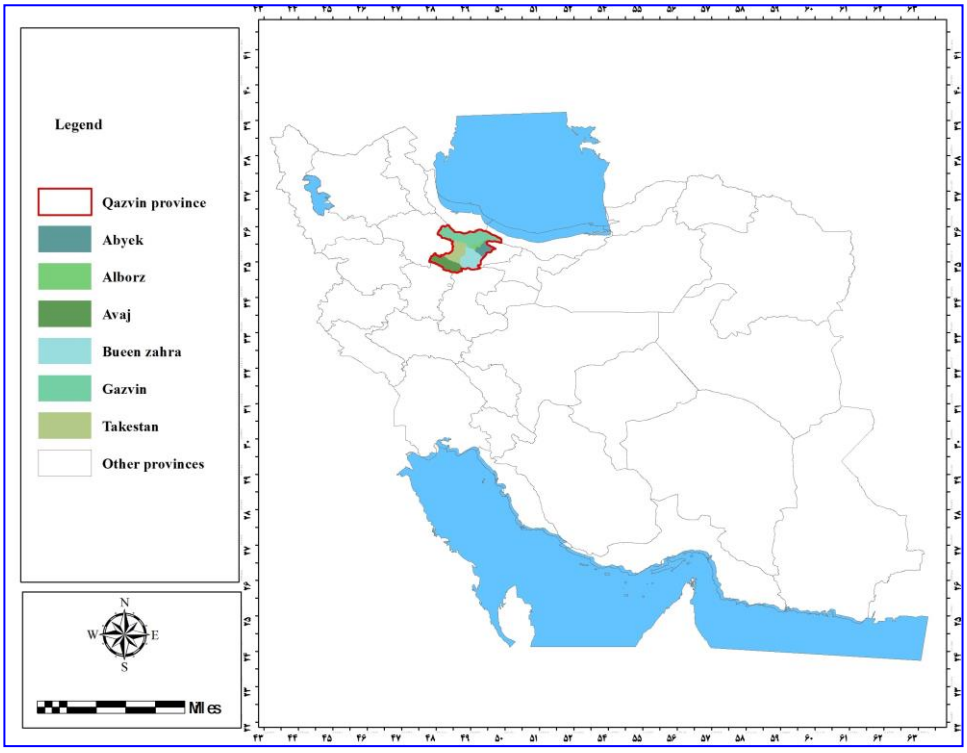


Figure1. Study Area Location. Source: Author, 2023.

5. Data Analysis

5-1- Identifying and leveling key assets Case sample

In this section, through interviews with project experts, key assets of the province were identified with an emphasis on Qazvin city, which are:

Karaj Qazvin Freeway ,(١) Shahid Rajaee Power Plant ,(٢) Qazvin Armored Field ,(٣) North West Radio Communications General Directorate ,(٤) Blessed Ancestors Chicken Company ،(٥) Shahid Rajaee Hospital٦ , Qazvin Governorate, Qazvin Governorate, Qazvin Governorate & Qazvin & Qazvin & Qazvin & ^ International University of Imam Khomeini & Co. & Qazvin Railway Station.

Using the instructions for leveling the centers of gravity according to the table, Joan was leveled. The results of the research show that Karaj Qazvin Freeway, Shahid Rajaee Power Plant, Qazvin Armored Division١٦, North West Radio Communications General Directorate ،Blessed Ancestors Chicken Company among the assets with sensitive level, and Qazvin Governorate،

Qazvin governorate, Imam Khomeini International University, shahid rajaee hospital, and Qazvin railway station are important assets.**Table 1.** Asset Leveling in Qazvin Province

	product or activity						**geography (selecting only one indicator)**			**population**	**Coating quality (selecting just one indicator)**					**Management and administration**	**Providing production services**	**The people needed to supply**	**create resources in the discipline**			
Assets	Culturally	Defensive security	Social	Economic	Politicized	Local	Provincial	Nationalizing	Transnational	population density	Public Centers	Free trade zones	Private sector	Government centres	Governmental centres				service delivery	Human resources	Rial and currency resources	**Continuity of function**
1	1	2	2	2	1	0	0	6	0	٥	2	0	0	0	0	5	5	4	1	1	1	1
2	1	2	1	2	1	0	0	٥	0	3	0	0	0	0	3	4	4	4	2	1	1	1
3	1	2	2	1	1	0	0	٥	0	5	0	0	0	0	4	5	5	4	2	2	1	1
4	1	2	١	1	1	0	0	٥	0	5	0	0	0	0	4	3	4	3	1	1	1	1
5	1	1	1	2	1	0	0	6	0	6	0	0	2	0	0	5	5	4	2	2	2	2
6	0/5	1	1	1	0/5	0	4	0	0	4	2	0	0	0	0	3	3	2/5	1/5	1	0/5	0/5
7	1	1	1	1	1	0	4	0	0	4	0	0	0	0	4	3	3	2/5	1/5	1	0/5	1
8	1	1	1	1	1	0	3	0	0	3	0	0	0	0	4	3	3	2/5	1	1	1	1
9	1	1	1	1	1	0	0	5	0	٥	0	0	0	3	0	3	3	2/5	1	1	0/5	0/5
10	0/5	1	0/5	1	0/5	0	0	5	0	4	2	0	0	0	0	3	3	4	1	1	1	1

possibility of replacement		**Being unique**						**Acting in**		**value of capital**			**Consequences of injury**			
systems replacement	substitution	Structural	Level of confidentiality of information	Equipment and facilities	Similar sample/systems	Productive knowledge	specialized human manpower	productive knowledge	Technology and safety	Creating prosperity and economic	Capital focus		sequentialism generating	general dissatisfaction	Disruptions in society	**Sum**
											spiritual	Physical				

											National credit	scientists and elites	Foreign investment	plan to have development	the aggregation of facilities	Number of employees	Launching and building value Rial				
1	1	1	0	۴	1	0/5	2	0	2	1	1	1	0	0	0/5	۰	1/5	5	5	5	**71/5**
1	1	1	۱	۴	1	0/5	۳	1	1/5	1	1/5	1/5	1	1	1	1	1/5	5	5	5	**73**
2	1	1	۲	5	1	۱/۵	2	0	2	1	1/5	1/5	0	0	1	1	1/5	5	3	5	**77/5**
1	2	2	1/5	۴	1	2	2	1	2	1	2	2	۱	0	1	0	1	5	5	5	**73**
2	2	1	0/5	۱	1	0/5	2	0	2	1	1	۱	0	1	0/5	0	0/5	5	5	5	**71/5**
2	1	1	۰	۴	۰	1/5	2	0	2	0/5	1	2	0	1	1	1	1	5	3	3	**58**
1	1/5	1/5	1	1	1	1	2	0	2	0/5	1	1	0	1	0/5	1	0/5	5	3	3	**58**
1	1	1	2	۳	1	1	1	1	1	0/5	1	1	0	1	0/5	0	0/5	5	3	3	**56**
1	1	1	0/5	1	1	1/5	2	2	0	0/5	1/5	1/5	0	1	1	1	1	1	3	3	**56**
1	1	1	0/5	1	1	1	2	0	1	0/5	1	1/5	0	1	0/5	0/5	0/5	3	5	5	**55/5**

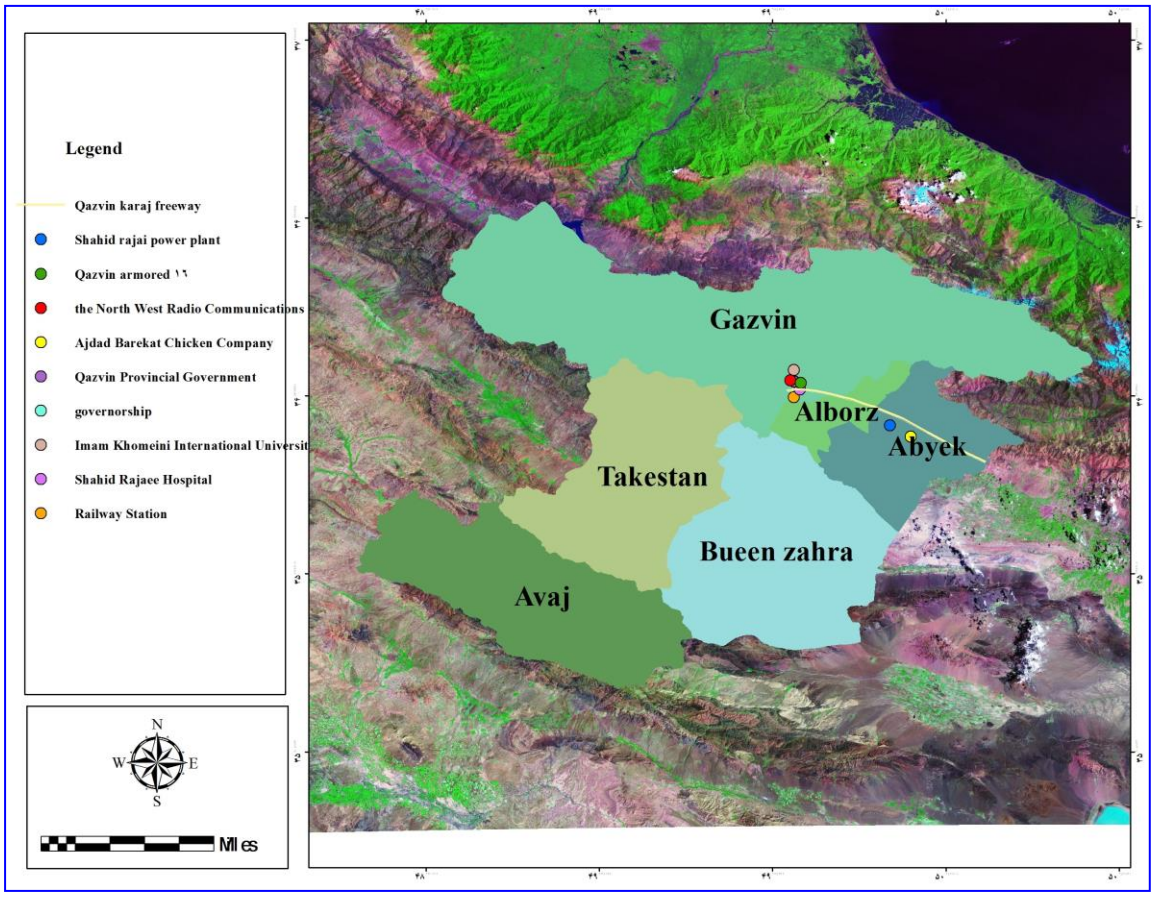


Figure2. Identification map of the key assets in Case Study: Author, 2023.

5-2- Assessment of key assets of Case Study

To weigh the key asset assessment indicators after adjusting the questionnaire using the AHP technique in Expert Choice software, the results were extracted according to the Figure (۳) and Table (۲).

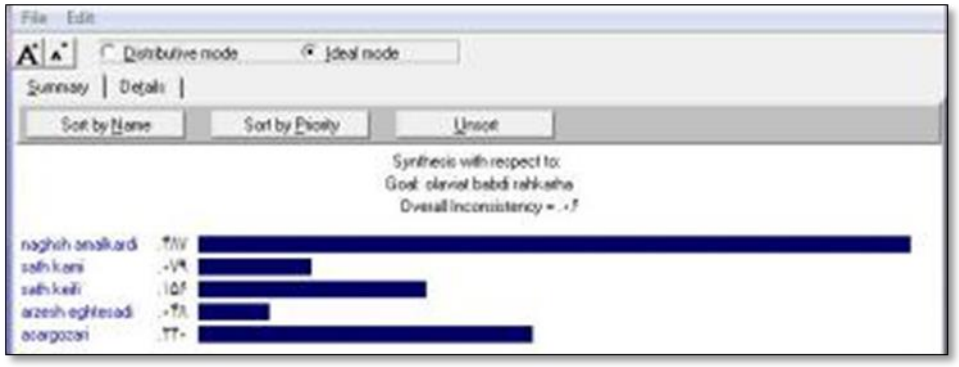


Figure3. The weighting of key asset evaluation indicators of the studied sample in Expert choice: Author, 2023.

Table 2. The weights of the evaluation indices of the key assets

Weight	Asset assessment indicators	row
0/487	Functional Role	**1**
0/079	Quantitative level of beneficiaries	**2**
0/156	Qualitative level of beneficiaries	**3**
0.048	Relative economic value	**4**
0/230	effectiveness in the process of facilitating crisis management	**5**

Source: Author, 2023

Table 3. Evaluation of key assets

Total	0/230	0.048	0/156	0/079	0/487	Total	effectiveness in the process of facilitating crisis management	Relative economic value	Qualitative level of beneficiaries	Quantitative level of beneficiaries	Functional role	Encrypts	ASSETS
5/48	1/61	0/43	0/94	0/55	1/95	33	7	9	6	7	4	1	Qazvin karaj freeway
9/23	1/84	0/48	1/25	0/79	4/87	46	8	10	8	10	10	2	Shahid rajai power plant
6/8	1/8	0/3	0/8	0/4	3/4	32	8	7	5	5	7	3	Qazvin armored۱۶
5/5	0/69	0/48	0/78	0/63	2/92	32	3	10	5	8	6	4	the North West Radio Communications Directorate General
7/33	6/1	0/3	0/9	0/6	3/9	35	7	7	6	7	8	5	Ajdad Barekat Chicken Company
6/17	1/61	0/48	0/94	0/71	2/44	37	7	10	6	9	5	6	Shahid Rajaee Hospital
7/96	2/07	0/43	1/25	0/32	3/9	38	9	9	8	4	8	7	Qazvin Provincial Government
6/84	1/84	0/34	0/94	0/32	3/41	32	8	7	6	4	7	8	Qazvin Governorship
5/88	1/15	0/38	0/62	۰/۳۲	۳/۴۱	28	5	8	4	4	7	9	Imam Khomeini International University Qazvin

5/75	1/61	0/43	0/31	0/47	2/92	30	7	9	2	6	6	4	Qazvin Railway Station

Source: Author, 2023

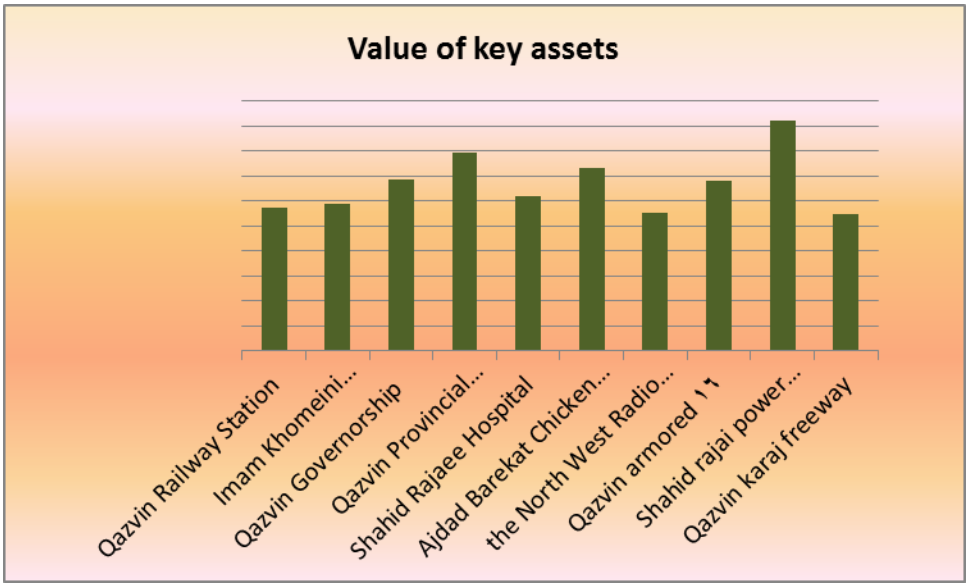


Figure4. Prioritizing the value of key assets: Source: Author, 2023.

As Figures (٤) and (٥) illustrate Shahid Rajaee power plant with a rating of ٩/٣٣, Qazvin Governorate with ٧/٩٦, Blessed Ancestors Chicken Company with ٧/٣٣،Qazvin Governorate with ٦/٨٤, Qazvin Armored Division ١٦ ٦/٨, Shahid Rajaee Hospital with ٦/١٧, Imam Khomeini International University with ٥/٨٨, Qazvin Railway Station with ٥/٧٥،Northwestern Radio Communications Directorate with ٥/Keyana and Qazvin Freeway Karaj with ٤٨/Ghan are of great value. According to the FEMA technique in evaluating Key assets, the asset rating scale and specifying the grouping of each asset is based on the scale presented in the table (٥).

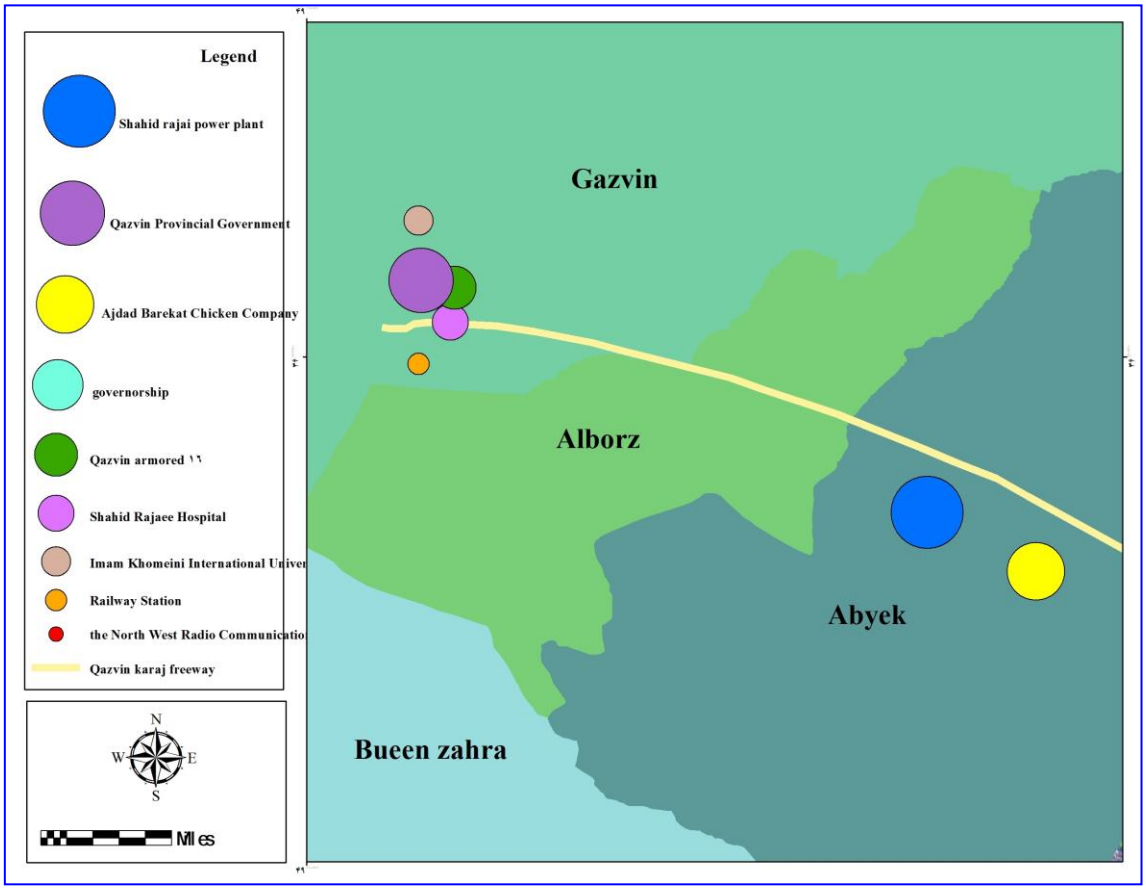


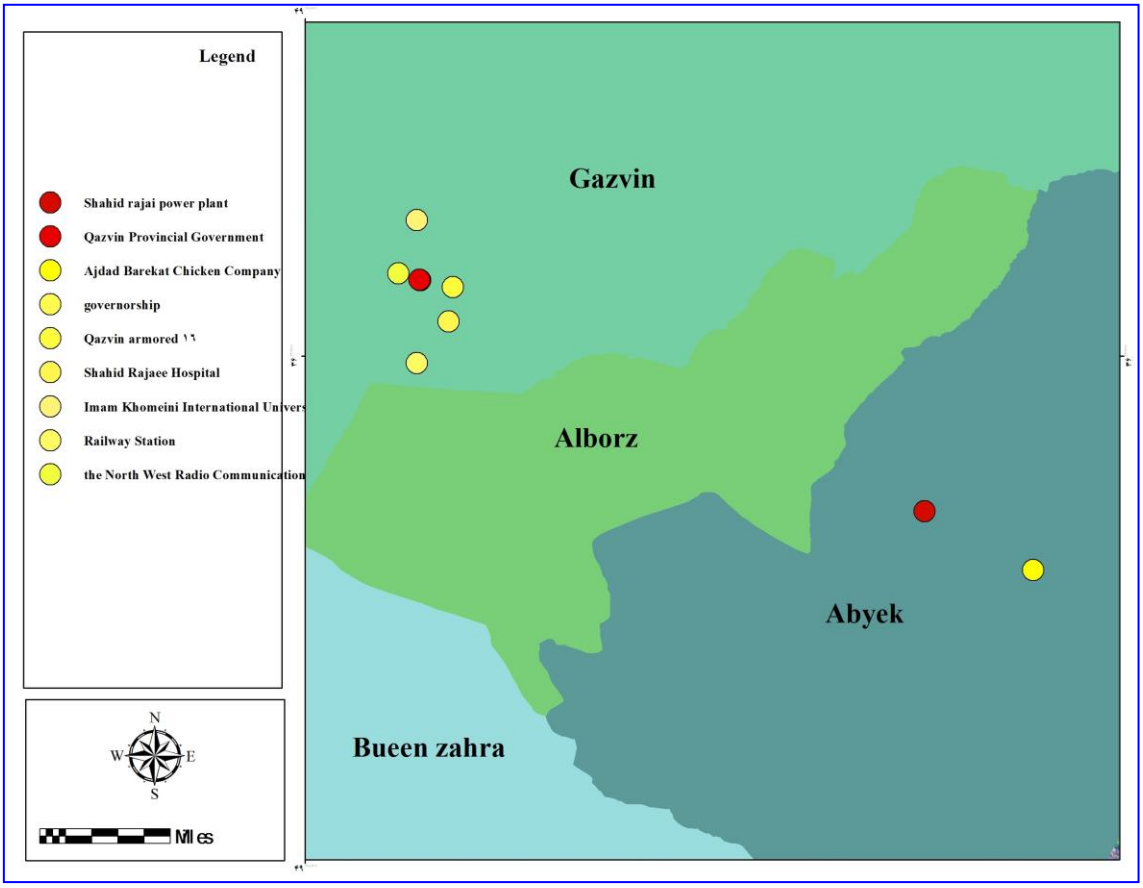
Figure5. Prioritizing the value of Key assets in Case Study: Source: Author, 2023.

Table 4. TheKey asset value scale in an infrastructure and asset group determination

Scale	Score	Interpretations	groupings
Group 1	The loss or destruction of key assets will have tremendous and dire consequences, such as the killing of large numbers of people, very severe injuries, and the‹loss of all main user services or processes	10	very high
	The loss or destruction of Key assets will have serious consequences, such as the killing of several people, severe injury, loss of all main user services or processes	8-9	high
Group 2	The loss or breakdown of Key assets will have very serious consequences, such as serious injuries and disruption to major airport uses in the long term	7	Average upward
	The loss or breakdown of Key assets will have serious consequences, such as injuries and disruptions to major airport uses and processes	5-6	Average
	The loss or breakdown of key assets will have relatively bad consequences, such as mild injuries and poor disruption of major airport uses and processes	4	Average downwards
Group 3	The loss or breakdown of Key assets will have dire consequences, such as gentle disruptions to major airport uses and processes in the short term	2-3	low
	The loss or destruction of Key assets will have serious consequences that are expendable.	1	Very low

Source: (Bayat Aqblaghi, 2012: 64)

According to Table (4) and Figure (6), Key assets of Qazvin Freeway, Qazvin Armored 16 Division, North West Radio Communications Directorate General ‹Blessed Ancestors Chicken



Company are the assets with sensitive level and, Qazvin Governorate, Imam Khomeini International University،Shahid Rajaee Hospital and Qazvin Railway Station are among the assets of the second group and Shahid Rajaee Power Plant, Qazvin Governorate are among the assets of the first group.

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Figure6. Grouping of key assets in Case Study: Source: Author, 2023.

Table 5 shows the valuable reasons of assets

Table 5. Valuable Reasons for key Assets of Case Study

Worthy Cause	ASSETS
Most car and passenger traffic, whichconnects the province to the west and east of the country	**Qazvin karaj freeway**
It is the home electricity supplier of the province. Additionally, it strengthens the productive posts,supplies power to the industries and production units, and 3/5 Grades provides the percentage of electricity to the entire country.	**Shahid rajai power plant**
Located within the territory for military use, it provides security and promotes defense development. It also serves as an Army Hospital, Tank Parking, Hosseinieh, and Peacekeeping Battalion.	**Qazvin armored 16**
Increasing the quality of communication of mobile operators in servicing provincial and improving subscribers' Communication status of villages in the province	**the North West Radio Communications Directorate General**
The largest chicken production unit of the country's mother's broiler ancestors and the production of 20 percent of the country's chicken ancestors	**Chicken company ancestors blessing**
Most beds in ICU sections, burns and surgery in the province	**ShahiRajai hospital**
Maintaining the order and security of the province	**Qazvin governorate**
As decision-making and planning centers in the provincial cities, public security, economic planning, monitoring the supply of people's needs, monitoring the work of departments	**Qazvin governorship**
The university accepts international students is the only official academic center for teaching Iranian-Islamic culture and Persian language to non-Persian speakers. More than ۱۳۰ nationalities are represented among the students body.	**Imam Khomeini International University**
Placing Qazvin on the exchange highway of the province on the Tehran to the northwest of the country railway route	**Qazvin railway station**

Source: Author, 2023

6. Conclusion

Key assets require development in the context of passive defense،to minimize their vulnerability due to the attractiveness and likelihood of being targeted. This research aims to identify and evaluate the value of Key assets in Qazvin province with a focus on Qazvin city.In this research, the guidelines for leveling the gravity centers of the passive defense organization were used to identify the key assets of the study sample.Based on input from local experts in Qazvin province, key assets in the region include the Karaj-Qazvin freeway, Shahid Rajaee Power Plant, Qazvin Armored Division 16, North West Radio Communications General Directorate, Bareh Blessed Chicken Company, Qazvin Governorate, Imam Khomeini International University, Shahid Rajaee Hospital, and Qazvin Railway Station.The results revealed that Qazvin Freeway, Shahid Rajaee Power Plant, Qazvin Armored Division 16, North West Radio Communications Directorate ،Blessed Ancestors Chicken Company is one of the assets with sensitive level and Qazvin Governorate, Qazvin Governorate, Imam Khomeini International University ،Shahid Rajaee Hospital and Qazvin Railway Station are among the important assets.

A case study was conducted to prioritize the value of key assets using the FEMA assessment technique of asset evaluation. The results of the research showed that the following assets are of great value:

- Shahid Rajaee Power Plant: 9/33
- Qazvin Governorate: 96/7
- Blessed Ancestors Chicken Co.: 7/33
- Qazvin Governorate: 6/84
- Qazvin Armored Division: 6/8
- Shahid Rajaee Hospital: 6/17
- Imam Khomeini International University: 5/88
- Qazvin Railway Station: 5/75
- North West Radio Communications General Directorate: 5/5
- Qazvin Freeway Karaj: 5/48.

When comparing the findings of our current research to previous studies, it is important to note that prior research did not have a defined process or instructions for identifying and prioritizing the value of key assets. Previous studies relied solely on expert qualitative opinions. In contrast, our present study utilized guidelines for evaluating the significance of assets within the passive defense organization, which resulted in higher accuracy rates.

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