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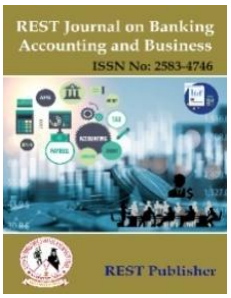

Enhancing Business Management Decisions Using the Weighted Product Method (WPM)

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Abstract: *Business management is a crucial discipline that involves strategic planning, organization, and decision-making to ensure business success. This study explores the role of business management in urban development, focusing on various locations and their potential for investment and growth. Using the Weighted Product Model (WPM) methodology, different alternatives are assessed based on key evaluation parameters, such as attractiveness, investor competency, and environmental considerations. The findings provide insights into effective business management strategies for sustainable urban and economic development. Research Significance: Understanding business management in urban development is essential for fostering economic growth, attracting investors, and ensuring sustainable infrastructure. Cities and business hubs require effective management strategies to enhance their competitiveness and long-term viability. This study identifies key factors influencing urban business investment and provides recommendations for strategic development. Methodology: Weighted Product Model (WPM): The Weighted Product Model (WPM) is used in the study to assess potential company investment sites. WPM is a multi-criteria approach to decision-making that compares alternatives by multiplying weighted criteria values. The method ensures an objective assessment of each location based on various economic and environmental factors, allowing for a data-driven decision-making process. Alternatives: Lavasan, Farahzad, Imam Hossein Square, Shahrak Takhti, Chitgar Lake Evaluation Parameters: Attractiveness, Investor's Competency, Potential Continuous Development & Flexibility, Consumption Feature, Environmental Consideration Total Cost, Air Pollution. Result: The study concludes that locations with a balance of economic viability, infrastructure development, and environmental sustainability attract the highest investment potential. Chitgar Lake and Lavasan show strong prospects for tourism and high-end business investments, while Imam Hossein Square emerges as a prime retail hub. The findings emphasize the importance of a strategic approach in business management for urban development.*

Keywords: *Business management, urban development, investment strategy, Weighted Product Model (WPM), economic growth, environmental sustainability, urban planning, business location assessment, strategic decision-making.*

1. INTRODUCTION

To present managerial techniques that can be applied to strategic business management in multi-project settings, including different project types, programs, and portfolios, along with their management approaches. Building Effective managerial techniques for strategic company management in multi-project settings are highlighted in this chapter. With reference to The ability to modify the project management method according to the project type or its strategic goals requires both structured and flexible decision-making assistance significance.[1] This preparatory role can be broadened to involve preparing both current owner-managers and prospective entrepreneurs for small business management. The organization and procedure of schooling should also be considered significant factors for investigation. It is imperative that the educational process incorporate an enterprise culture. He contends that in order to do this, instructors need to distinguish clearly between small business management, innovative conduct, and entrepreneurship. He characterizes an enterprising person and an entrepreneur by their qualities, and a small company owner by the work they do. Most The function and potential of small business education and training have been the main topics of research on education for small business management. Overall, the results show a high degree of stability across different populations, providing a strong basis for future research. development. A key point is the importance of distinguishing between distinguishing small company, enterprise, and entrepreneurship management education from traditional management education methods.[2] A model utilizing fuzzy rules to simulate firm behavior is presented, based on the assumption of predefined input parameters. Additionally, an algorithm is developed to determine the model's minimal structure. A second section

consists of flexibility-related questions, which are divided into seven subcategories. The third group is divided into two sections, focusing on turnover and customer satisfaction results. The policy focus on The strength of the small business sector lies in its capacity to generate and enhance jobs locally. Policymakers are growing increasingly conscious of the economic and social constraints of strategies that rely too heavily on the small business sector overall, following nearly two decades of employment-generating programs and initiatives [3,4]Business networking, competitive pricing or low prices, providing a range of goods and services, and having access to bank credit and capital are other characteristics that have been recognized as important drivers. Most of the companies in this poll were less than three years. Considering that a straightforward random sampling technique was used, the findings indicate a high failure rate. The performance ratings were analyzed based on the duration the businesses had been operating. There is also a need for training in areas directly related to the business being operated. This survey clearly demonstrates that managers with relevant training tend to run more successful businesses compared to those without such training.[5] The aim aim this study was to assess a well-known success-versus-failure prediction model on a sample of Central Eastern European businesses. It was thought that if the same factors predicted success and failure in both countries, this could be used as a basis for creating a model that could be used in different countries. Important insights can be gained from research on success and failure prediction. Only a period of accounting losses was required for participation in the Croatian study. But real failure could not always follow from such accounting losses.[6]There is a notable alignment of opinions between the two management groups, with the sole distinction being the method used to gauge the effectiveness of the strategy. While business managers adopt a Service Level view and stress "Customer Satisfaction" as a key performance criterion, IT managers adopt a Competitive Potential perspective and place an emphasis on "Business Leadership These viewpoints must, however, coincide with those of organizations. Just 50% of business managers and 60% of IS managers said that their organizations' alignment of business and IT strategies was successful or very successful. Respondents were asked to provide their opinions on the implementation of their strategic alignment in the questionnaire. This made it possible for us to classify their strategic approaches and compare the groupings by analyzing the strategic viewpoints and comparing them to those in the table.[7]his research aims to close the knowledge gap by offering a comprehensive analysis of blockchain's possible uses. It also adds to the small amount of literature that examines its use from the perspective of business management. Academics and professional experts who were involved in three different study groups at three UK universities made up the expert panel. The expert practitioners were departmental or functional managers from UK-based companies in a variety of commercial and public sectors, whereas the academics were all Senior Lecturers or Professors in business management disciplines. The study has focused on examining how blockchain is affecting the sector of business management. By adopting a different viewpoint, other possible applications could be discovered. Furthermore, the scope of the analysis of potential future applications has been constrained by the very low response rate. Scholars and practitioners of business management may find it challenging to understand the underlying technology of blockchain, and the concept itself is not well known. The comparatively low response rate may be explained by this. Furthermore, the panel members' inability to imagine future uses may have resulted from their unfamiliarity with blockchain principles, which could have led to somewhat cautious findings. Experts in the field of computing might be included in future studies, and their perspectives could be combined with those of business management. [8]By using this model to guide the agenda, it is evident that future research aimed at improving family-business management should assist managers in doing one or more of the following: more accurately identifying problems and opportunities related to the environment or organizational capability. The most critical issue in family-business management, although it may arise only once every few decades, is succession planning. Despite its importance, succession planning rarely takes place in family businesses. While the field acknowledges the existence of many family types, but not much research has been done to determine whether distinctions are actually important or what they mean for managing family businesses successfully.[9]The implications This research investigates the differences in ethical judgments between business students in the United States and the United Kingdom, with a focus on preparing college students for business management roles. The results imply that their ethical judgments are unaffected by variations in their demographic profiles. The impact of six demographic parameters and country as independent variables on the four important ethical scenarios was investigated using a variance-covariance model. The analysis's findings showed that, with the exception of country, none of the variables significantly correlated with the approval ratings. When it comes to understanding the disparities in ethics judgments of students preparing for business management roles, gender differences are more important than cross-cultural variances. When categorized by ethical scenario, the students' assessments reveal more notable variations by country.[10]Designing and implementing Establishing corporate-wide business management systems is a challenging undertaking. The program must enable the distributed creation and management of multiple concurrent tasks that are extremely interconnected. In summary, business management is a challenging field that necessitates advanced software programs. An agent-based method was chosen for the study's conception, design, and implementation of the business process management system. An organization must let sophisticated programs from other, possibly rival businesses to run on their local computers in order to participate in a mobile agent-based business management system. Thus, to turn mobile agents into a viable implementation option, these security concerns must be resolved.[11]Business management has changed dramatically as organizations now understand how crucial it is to use metrics-driven management to guarantee the accomplishment of strategic objectives. The DW process does not effectively enforce the company strategy from the top down, even while it facilitates the bottom-up extraction of

knowledge from data. The method of business administration has changed over the last ten years, moving from both technology and organizational perspectives. Technologically, outsourcing information systems has increasingly become a key strategy to reduce fixed costs, as it requires no upfront investment, with payments only made for the services used. an active and pragmatic approach to corporate management, as well as a collection of methods for gathering and analyzing information. Nevertheless, there is a confluence between information technology and business management. Although the majority of these industries do not yet have fully developed commercial products, they are all the focus of active research, which promises that the most significant issues will be addressed in the near future.[12]EA can be used as a tool for various elements of company management, from execution to strategy. Nevertheless, little research has been done on the relationship between corporate strategic management and EA management. Radeke (2011) shows how EA management may be used in the process of strategic transformation in a recent study that is the only one that is comparable to ours. The lack of standardized graphical representations that allow for structured and comparable visualizations of business models, as well as the disregard for the relationships and dependencies among different business model elements, are highlighted in their recent review of the business model literature.[13]Exploring both of these issues could further define the fields of small business management and entrepreneurship, offering more profound understandings of the managerial practices associated with small business performance and entrepreneurship. In an attempt to characterize specific managerial behaviors in smaller and entrepreneurial endeavors as an alternative (or supplement) to trait-based viewpoints, this study has combined the vocabulary of management competence with that of small company and entrepreneurship. Following the identification of several behaviors that appear to define an entrepreneurial style, the study poses additional research questions.[14]Key areas include support, sales and marketing, and product management. The ESE can choose to disclose recently found innovations, outsource R&D tasks, release source code, and open bug repositories for research and development. In terms of product management, the ESE may increase transparency in the requirements engineering process by letting users vote on important features, exchange roadmaps, and plan release dates. The market for content management systems is "SECO friendly" for a second reason: these systems are used in many different fields. A YouTube plug-in, for instance, has use in both the public and private sectors. This affects the SECO in a number of ways. Since the ODA is run by its members, just a four-person management team is required to provide direction. The remaining staff, about 25 developers, focus solely on adding value to the platform.[15]Using factor analysis, we created metrics for operational support and business management guidance. The two most important components in a three-factor exploratory study utilizing varimax rotation were operational support and business management guidance. Reception of both business management counsel and operational support is negatively correlated with industry experience and the team's duration of involvement in the current endeavor. Despite the assumption that VCs may make considerable contributions in this area, the assessment of business management guidance by technology-focused NVTs was not statistically significant. Although the team was more unbiased toward company management guidance, they concentrated on pursuing technology innovation acquired through operational help. All things considered, these results suggest that VCs who favor a more hands-on approach should be cautious when giving guidance, particularly if team members are not eager to receive help.[16]Effective leadership is credited by business management for its accomplishments, pointing out that administrative supervisors' leadership style significantly impacts organizational performance (Terry, 1960). A leader's style has a considerable effect on employee performance, and it also influences overall organizational performance. The leadership style shapes the organizational outcomes that subordinates must understand, providing guidance and feedback for execution.[17]The main Management of e-business Finding new commercial prospects while integrating dispersed and varied corporate knowledge is a problem at this stage of system development. E-business platforms have a significant impact on how technical innovation is shaped. In order to successfully implement complicated technology, business procedures must be modified, and the company must become proficient in the technical aspects of the technology. Even though IT is widely used in contemporary workplaces, there is mounting evidence that inadequate employee acceptability has prevented organizations from reaching their full potential. The adoption, deployment, and maintenance of e-business systems would benefit from the development of organizational learning and knowledge management methodologies. Furthermore, companies who provide their staff with e-business training and improve their e-business expertise are probably going to see greater adoption rates of e-business systems.[18]In environments where innovation in products and processes is seen as a crucial factor for organizational survival and success, there has been significant attention given to entrepreneurial orientation and the shift toward an entrepreneurial organization, both from academic researchers and organizational members. The procedures by which information is dispersed among all participants in process activities are referred to as knowledge sharing. The term "knowledge application" describes business procedures that make use of efficient methods for storing and retrieving information so that a company can readily access it.[19]Business management is responsible for integrating business planning, processes, and strategy. Likewise, the strategic planning and management process incorporates feedback from EQA self-assessments and involves the active review of key processes. The output of this process is scorecard objectives, which drive changes at the operational level. The quality management system for Vision 2000 was redesigned to deliver only the information necessary for people to perform their jobs effectively, including aspects like training. Nortel is currently enhancing it into Internet-based company management system that will include costing data, fundamental process maps, and access to more intricate maps.[20]

2. MATERIALS AND METHOD

Alternatives: Lavasan: Lavasan, located in the northeastern part of Tehran, is a popular destination known for its serene atmosphere and beautiful natural landscapes. It is surrounded by mountains, offering a peaceful escape from the busy city life. Visitors often come to Lavasan for its hiking trails, green fields, and the luxurious villas that dot the area. The small town is also recognized for its pleasant climate and is a favorite getaway for Tehran's residents looking for relaxation and outdoor activities.Farahzad: Farahzad, a tranquil neighborhood in the western part of Tehran, is famous for its traditional charm and historical significance. Known for its picturesque rural environment, it boasts narrow alleyways, small gardens, and a slower pace of life compared to the bustling city center. Farahzad is a perfect spot for those interested in exploring the cultural heritage of Tehran while enjoying the peace of nature. It also offers delicious traditional Persian food, especially famous local sweets.Imam Hossein Square: Imam Hossein Square is a major intersection in the heart of Tehran, named after the revered Islamic figure, Imam Hossein. The square is one of Tehran's busiest areas, bustling with commercial activity and serving as a key transportation hub. It is surrounded by important landmarks, such as the Imam Hossein Metro Station and several markets, making it a vibrant focal point of the city's daily life. The square also plays a significant role during major cultural and religious events, hosting parades and gatherings that attract large crowds. Shahrak Takhti: Shahrak Takhti, located in the western part of Tehran, is a residential neighborhood known for its family-friendly atmosphere and easy access to urban amenities. The area is well-developed, with a variety of schools, shopping centers, and parks, making it a preferred choice for those seeking a balanced lifestyle. Shahrak Takhti is also close to recreational spots, offering residents and visitors opportunities for leisure activities. The neighborhood’s calm environment, combined with its proximity to the city center, adds to its appeal. Chitgar Lake: Chitgar Lake, situated in the western part of Tehran, is one of the city's largest and most beautiful artificial lakes. It serves as a popular recreational spot for both locals and tourists, offering a variety of activities such as boating, cycling, and picnicking. The area surrounding the lake has been developed into a park, with walking trails, cafes, and family-friendly spaces. Chitgar Lake provides a refreshing break from the urban hustle, making it a favorite destination for nature lovers and outdoor enthusiasts.

Evaluation parameter: Attractiveness Attractiveness refers to the appeal and desirability of a project, product, or location from the perspective of potential investors and consumers. This parameter evaluates how well the offering stands out in the market, considering factors like aesthetics, market demand, and overall value proposition. An attractive project or product often has a strong market presence, good brand recognition, and resonates with the target audience, driving interest and engagement. Its ability to capture attention and maintain customer loyalty plays a crucial role in its success.Investor’s Competency: Investor competency refers to the level of expertise, experience, and decision-making ability that an investor brings to a project or business. Highly competent investors possess the knowledge to evaluate risks, understand market dynamics, and identify growth opportunities. This parameter also assesses the strategic guidance and value-added contributions an investor can provide beyond just financial backing. Investors with strong competencies can offer invaluable insights, enhance operational efficiencies, and help navigate challenges effectively, ultimately fostering the growth and success of the venture.Potential Continuous Development & Flexibility: The potential for continuous development and flexibility evaluates a project or business's ability to adapt to changing market conditions, technological advancements, and evolving consumer needs. This parameter assesses how well the system or business can evolve over time, introducing innovations, scaling operations, or adjusting strategies to remain competitive. Flexibility is crucial for long-term sustainability, as it allows the entity to respond quickly to unforeseen challenges or opportunities without being locked into rigid structures or outdated models.Consumption Feature: Consumption feature focuses on the end-user experience, assessing the usability, appeal, and functionality of a product or service. It highlights how well the product meets consumer needs, provides convenience, and delivers value. This parameter also considers aspects such as user-friendliness, ease of access, and overall satisfaction. A product with attractive consumption features enhances customer engagement and drives repeat usage, making it a critical factor in consumer purchasing decisions and long-term market success.Environmental Consideration: Environmental consideration involves assessing the impact a product, service, or project has on the natural environment. This parameter evaluates factors like resource usage, waste generation, carbon footprint, and sustainability practices. Businesses increasingly prioritize environmental considerations to comply with regulations, enhance their corporate reputation, and contribute to global sustainability goals. A commitment to reducing environmental impact can improve public perception, attract environmentally-conscious consumers, and contribute to long-term ecological health.Total Cost: Total cost refers to the overall financial expenditure required for the implementation and maintenance of a project, product, or service. This parameter encompasses not only the initial capital investment but also ongoing operational costs, maintenance, training, and potential hidden costs. A comprehensive evaluation of total cost is essential for understanding the financial viability of a venture and for making informed decisions regarding pricing, investment, and resource allocation. Keeping total costs in check without sacrificing quality or efficiency is vital for ensuring profitability.Air Pollution: Air pollution evaluates the extent to which a project, product, or business contributes to the degradation of air quality. This parameter focuses on the emissions of harmful gases, particulate matter, and other pollutants that can affect both local environments and global ecosystems. Monitoring and reducing air pollution are crucial for adhering to environmental regulations, improving public health, and fostering

corporate social responsibility. Sustainable practices that reduce emissions can improve the environmental footprint of an operation, enhance compliance, and promote eco-friendly branding.

WPM Method: Qualitative characteristics are first transformed into fuzzy numbers and subsequently into clear ratings. The weights of various attributes in respect to the goal are established in the second stage by applying the AHP technique. In the third step, MADM techniques such as SAW and WPM are used in the study, resulting in the conclusion that it is essential to objectively evaluate workers' competence levels and move away from the currently used subjective methods. This article demonstrates the application of three MCDM techniques to assess the skill levels of the workforce and choose the best operators for specific jobs. Both single-dimensional and multi-dimensional MCDM situations can use the WPM. One benefit of this approach is its ability to use relative values rather than actual ones. The WPM and PROMETHEE techniques can account for the relationships between parameters as well as mining techniques. The proposed techniques offer greater accuracy and faster computation compared to other decision-making methods. approaches. In this study, the decision matrix from Reza Mikaeil et al. was initially used. Using this matrix, calculations for each method were carried out. The second section of the study was the result of this procedure's low external validity despite its high internal validity. An extra session with a phrase set of capital letters, numbers, and punctuation symbols was part of the second phase. Each of the eight experts was required to produce a pairwise comparison matrix of criteria by comparing the criteria with one another. Consequently, eight matrices were completed. From a WPM medium, eight distinct WPM media were created, each with a different mix of ingredients tested for meristem regeneration. This suggests that, in comparison to conventional techniques, the suggested strategy can send packets faster and with less latency while using less energy. The CHs perform better in every situation, and the scales have been evaluated for both individual and aggregate features. The use of the generic decision support methodology is described in the third part. The criteria are thoroughly reviewed and suggestions for additional study are made in the concluding section. Faster speed changes were preferred by participants, who proposed a trade-off in the degree of autonomous control to let users select the ideal duration. It's crucial to remember the speed curve kept rising quickly after the 10 sessions, indicating that speed had significantly improved even after two and a half hours of exercise. The key distinction between the two approaches is that one relies on addition as the primary mathematical operation, while the other uses multiplication. This approach is a straightforward equal-weight combination technique (SAW). The MCDM e-book has more thorough details on this approach. Let's say that a particular MCDA problem has m alternatives and n criteria. The weighted product approach is being discussed here. During the continuous emulsification process, the WPM temperature is constant. However, fat droplets appeared to be linked by WPM in warm emulsions because of the quick gelation of emulsions. On the other hand, due of the low thermal balance of the emulsion and the permitted restoration of surplus whey protein concentrates, caseins interact with lipid droplets. A wooden building, such as a house, must have great stability, meaning that even in cases where the soil is unstable or prone to freezing in the winter, the foundation must reach a stable surface below. Alternative values ATM A machine for cash withdrawals, balance inquiries, and basic banking transactions. WPM The use of a collection of waveforms has a direct impact on the properties of multicarrier modulated signals. The frequency and time fields of the subcarriers overlap in multicarrier systems. The subcarriers are mutually orthogonal and do not interfere with one another if the transceivers are precisely synced. More accurate models of WPM-based transceivers are part of the ongoing research. Additionally, writers have tackled maximum likelihood decoding for wavelet modulation. A receiver with a channel impulse response estimator had been simulated for both flat fading and multipath channels. comparing the OFDM system with the wavelets in the WPM system. Comparing the WPM system to the OFDM system, all of the aforementioned wavelets produce graphs that are essentially the same. WPM systems use a variety of wavelets, including as Daubencies, Haar, and Symlet, and their BER performance is superior to that of OFDM systems. The outcomes of MCDM approaches that employ various normalization strategies are also contrasted with those of WPM, which does not require the employment of any dimensionless procedures. Therefore, in comparison to the method that does not require the normalizing technique, the sensitivity of the employed MCDM methods for choosing the best options can be seen. Lastly, the correlation coefficient between the ranks is measured and all of the alternatives' offered ranks are compared. The rankings are the outcome of using four different normalization techniques. Out of all the normalization techniques, vector normalization produced the rating that was closest to WPM. The outcomes are contrasted with the WPM approach, which does not call for normalization methods. Using the correlation measurements between the designated rankings and scores of the MCDM approaches, another comparison of normalization procedures is carried out. The chosen option is consistent across all MCDM techniques that employ linear ratio-based and linear.

3. RESULTS AND DISCUSSION

TABLE 1. Data Set

	Attractiveness	Investor's competency	Potential continuous development & flexibility	Consumption feature	Environmental consideration	Total cost	Air pollution
Lavasan	240	900	400	700	500	750	960.0
Farahzad	280	110	500	600	700	840	782.0
Imam Hossein Square	360	150	350	800	900	654	594.0
ShahrakTakhti	320	130	500	700	800	258	235.0
Chitgar Lake	200	400	300	500	600	357	894.0

The data provided in Table 1 presents a comparison of five different locations based on various parameters. Each location was evaluated on several factors, including attractiveness, investor competency, potential for continuous development and flexibility, consumption features, environmental consideration, total cost, and air pollution. Lavasan is highly attractive, with an appeal score of 240. It benefits from a very high investor competency score of 900, which suggests a highly capable investment base. However, its potential for continuous development and flexibility is moderate, with a score of 400. The consumption feature is strong at 700, and environmental considerations are moderate at 500. Total cost is relatively high at 750, and air pollution is a significant concern with a score of 960.Farahzad has a slightly higher attractiveness score of 280, but its investor competency is much lower at 110, indicating weaker investment potential. However, it offers good potential for continuous development, scoring 500, and a relatively strong environmental focus with a score of 700. The consumption feature is decent at 600, and total costs are high at 840. Air pollution is moderate at 782.Imam Hossein Square stands out with the highest attractiveness score of 360, indicating strong market appeal. Its investor competency is moderate at 150, and its potential for continuous development is lower, at 350. The consumption feature is very strong at 800, and the environmental focus is excellent with a score of 900. Total costs are the lowest among the locations at 654, but the area still faces notable air pollution with a score of 594.Shahrak Takhti has a good attractiveness score of 320 and a moderate potential for continuous development (500). However, its investor competency score is quite low at 130, which could affect the area's growth. The consumption feature is solid at 700, and environmental considerations are strong with a score of 800. Notably, it has the lowest total cost of 258, making it a more cost-effective option, though its air pollution score is among the lowest at 235, suggesting a positive environmental impact.Chitgar Lake, although scoring the lowest in attractiveness with a score of 200, benefits from strong investor competency at 400. Its potential for continuous development is moderate at 300, and the consumption feature is moderate as well, with a score of 500. The environmental score is lower at 600, and its total cost of 357 makes it relatively affordable. However, the air pollution score of 894 is high, indicating significant environmental concerns.

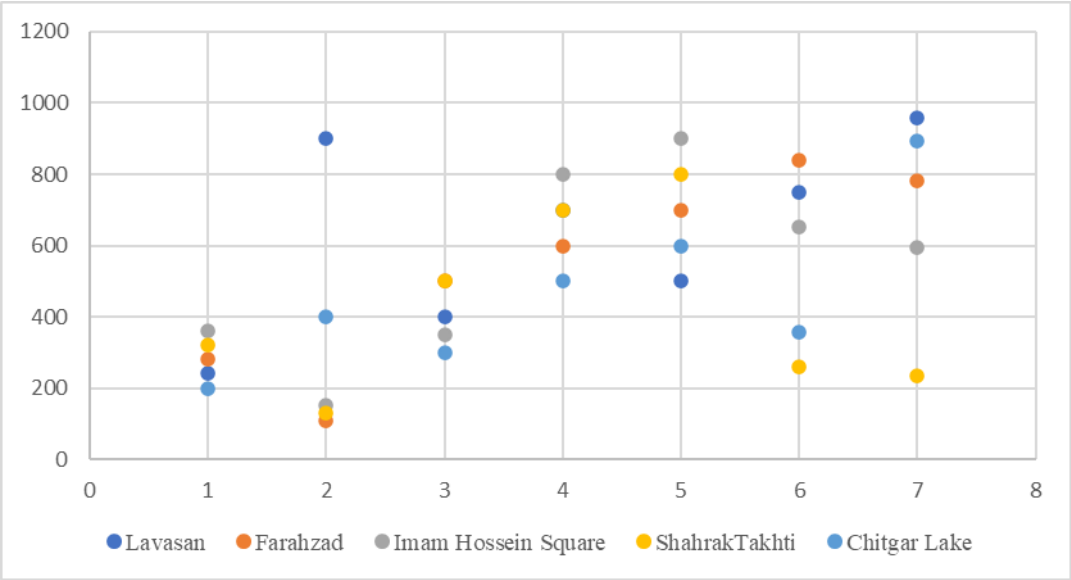

FIGURE 1. Visitor Distribution

Figure 1 shows the visitor distribution patterns across five popular locations in what appears to be an Iranian city or region: Lavasan, Farahzad, Imam Hossein Square, Shahrak Takhti, and Chitgar Lake. The data points are plotted on a scatter plot where the x-axis ranges from 1 to 7 (possibly representing different time periods) and the y-axis shows visitor numbers ranging from 0 to 1200. The visitor patterns show considerable variation across these locations. Lavasan appears to have the most volatile pattern, with numbers fluctuating significantly and reaching peaks of around 900

visitors. Chitgar Lake shows a more consistent pattern in the middle range. Farahzad demonstrates an increasing trend in later periods, while Imam Hossein Square maintains relatively stable visitor numbers throughout most periods. Shahrak Takhti shows a general declining trend in visitor numbers over time.Each location is represented by a different colored dot, making it easy to track the changes in visitor numbers across the time periods. The scattered nature of the data points suggests that these locations experience different peak times and varying levels of popularity among visitors, which could be influenced by factors such as seasonal changes, local events, or specific attractions at each site.

TABLE 2: Performance value

Lavasan	0.67	1.00	0.80	0.88	1.00	0.34	0.24
Farahzad	0.78	0.12	1.00	0.75	0.71	0.31	0.30
Imam Hossein Square	1.00	0.17	0.70	1.00	0.56	0.39	0.40
ShahrakTakhti	0.89	0.14	1.00	0.88	0.63	1.00	1.00
Chitgar Lake	0.56	0.44	0.60	0.63	0.83	0.72	0.26

The data in Table 2 reflects the performance values of each location across seven different factors. Each factor is given a score between 0 and 1, with a higher value indicating better performance in that specific area.Lavasan demonstrates strong performance in the areas of environmental consideration (1.00) and investor competency (1.00), indicating excellent performance in these areas. It also scores well in the consumption feature (0.88), though its performance in total cost (0.34) and air pollution (0.24) is relatively poor, suggesting challenges in cost-effectiveness and environmental impact.Farahzad scores highly in the potential for continuous development (1.00), showing strong growth opportunities. It also performs well in environmental consideration (0.71), though its investor competency (0.12) and air pollution (0.30) scores are low, indicating weaknesses in investment attraction and environmental performance.Imam Hossein Square shows the highest performance in attractiveness (1.00) and consumption feature (1.00), highlighting its strong appeal and market potential. However, its performance in investor competency (0.17) and environmental consideration (0.56) is less impressive, showing room for improvement in these areas.

TABLE 3: Weight

Lavasan	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Farahzad	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Imam Hossein Square	0.14	0.14	0.14	0.14	0.14	0.14	0.14
ShahrakTakhti	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Chitgar Lake	0.14	0.14	0.14	0.14	0.14	0.14	0.14

The data in Table 3 presents the weight distribution for each evaluation criterion across the five locations: Lavasan, Farahzad, Imam Hossein Square, Shahrak Takhti, and Chitgar Lake. Each factor—Attractiveness, Investor's Competency, Potential Continuous Development & Flexibility, Consumption Feature, Environmental Consideration, Total Cost, and Air Pollution—has been assigned an equal weight of 0.14 for all locations. This uniform distribution suggests that each evaluation parameter is considered equally important when assessing the overall performance and suitability of the locations. No single factor is given more priority over the others, ensuring a balanced approach to decision-making. As a result, locations will need to perform consistently well across all parameters to be considered favorable, rather than excelling in just one or two areas.

TABLE 4: Weighted normalized decision matrix

Lavasan	0.94372	1.00000	0.96863	0.98110	1.00000	0.85861	0.81787
Farahzad	0.96473	0.74062	1.00000	0.95974	0.95307	0.84482	0.84219
Imam Hossein Square	1.00000	0.77417	0.95032	1.00000	0.91946	0.87557	0.87593
ShahrakTakhti	0.98331	0.75850	1.00000	0.98110	0.93506	1.00000	1.00000
Chitgar Lake	0.91946	0.89061	0.92962	0.93506	0.97429	0.95466	0.82624

The weighted normalized decision matrix provides a refined evaluation of the five locations—Lavasan, Farahzad, Imam Hossein Square, Shahrak Takhti, and Chitgar Lake—based on multiple performance criteria. By applying both normalization and weighting, this matrix ensures that the values are adjusted proportionally, reflecting their relative importance and allowing for a more balanced comparison. From the matrix, it is evident that Imam Hossein Square consistently ranks the highest across multiple parameters, with a perfect score of 1.000 in key areas such as Attractiveness and Consumption Feature. Lavasan and Shahrak Takhti also show strong performance, particularly in Attractiveness and Continuous Development & Flexibility. Meanwhile, Chitgar Lake, despite having a high score in

Environmental Consideration and Total Cost, exhibits slightly lower values in certain criteria, which may affect its overall ranking.Farahzad presents a more balanced performance but falls behind in areas like Investor's Competency.

TABLE 5. Preference Score

	Preference Score
Lavasan	0.62979
Farahzad	0.46500
Imam Hossein Square	0.51880
ShahrakTakhti	0.68423
Chitgar Lake	0.54703

The preference scores provide a clear ranking of the evaluated locations based on their overall performance across multiple criteria. Shahrak Takhti emerges as the most favorable option with the highest preference score of 0.68423, indicating its strong suitability based on the weighted factors. This suggests that it excels in multiple aspects such as investor competency, development potential, and environmental considerations. Lavasan follows closely with a preference score of 0.62979, showing a competitive advantage in areas like attractiveness and continuous development flexibility. Meanwhile, Chitgar Lake (0.54703) and Imam Hossein Square (0.51880) hold moderate positions, reflecting a balanced but not outstanding performance across the criteria. Farahzad ranks the lowest with a score of 0.46500, indicating that it may not be as strong a candidate for investment or development compared to the other locations.

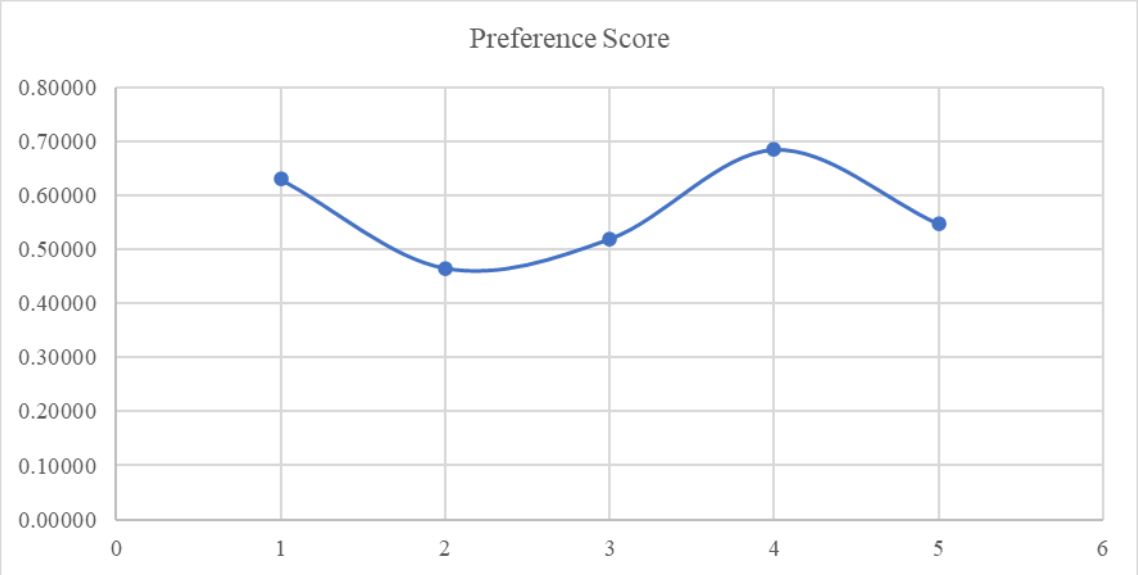

Figure 2: Preference Score

Figure 2 displays a line graph illustrating preference scores over five time periods or measurement points. The graph shows an interesting fluctuating pattern with a pronounced curve that reveals changing preferences over time. The preference score begins at approximately 0.62 at point 1, followed by a noticeable decline to about 0.45 by point 2, representing the lowest point in the dataset. From this trough, there is a gradual recovery as the score increases to around 0.52 at point 3. The trend continues upward, reaching its peak of about 0.68 at point 4, marking the highest preference score in the observed period. However, the final measurement at point 5 shows a decline to approximately 0.55, suggesting a downturn in preference levels.This pattern could represent various phenomena, such as customer satisfaction ratings, user engagement metrics, or performance evaluations over time.

TABLE 6: Rank

	Rank
Lavasan	2
Farahzad	5
Imam Hossein Square	4
ShahrakTakhti	1
Chitgar Lake	3

The ranking of the evaluated locations highlights their relative suitability based on key decision-making criteria. Shahrak Takhti secures the top position (Rank 1), indicating its superior performance across multiple parameters such as investor competency, development potential, and environmental sustainability. This suggests that it is the most promising option for investment and long-term success. Lavasan follows closely at Rank 2, demonstrating strong attributes that make it a highly viable choice. With favorable scores in attractiveness and continuous development flexibility, it stands out as a competitive option. Chitgar Lake, ranked 3rd, holds a balanced position, performing well but not exceeding the top-ranked locations.Imam Hossein Square comes in at Rank 4, implying moderate suitability with certain strengths but also limitations compared to higher-ranked locations. Finally, Farahzad is positioned last at Rank 5, suggesting it may face challenges in areas such as investor competency or environmental considerations.

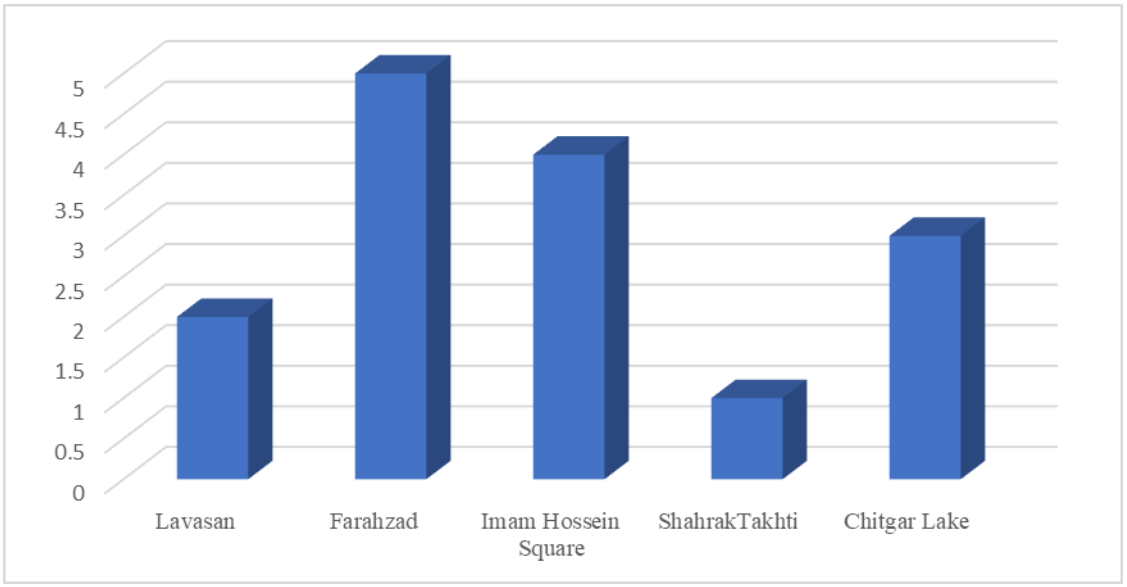

FIGURE 3. Rank

Figure 3 presents a 3D bar chart comparing ratings or scores across five different locations in what appears to be an Iranian urban area. The visualization provides a clear comparison of the relative performance or assessment of each location on a scale from 0 to 5. Farahzad stands out with the highest rating of approximately 5 units, suggesting it is the most highly rated or valued location among the five. This is followed by Imam Hossein Square, which received a rating of about 4 units, indicating strong but slightly lower performance than Farahzad. Chitgar Lake ranks third with roughly 3 units, while Lavasan receives approximately 2 units. ShahrakTakhti shows the lowest rating at about 1 unit.The three-dimensional presentation of the data emphasizes the stark differences between these locations, particularly the notable gap between the highest-rated (Farahzad) and lowest-rated (ShahrakTakhti) venues.

4. CONCLUSION

The evaluation of various locations based on key decision-making criteria has provided a structured approach to identifying the most suitable option for investment and development. The ranking results highlight Shahrak Takhti as the most favorable choice, demonstrating strong potential in investor competency, development flexibility, and environmental sustainability. Lavasan and Chitgar Lake also emerged as competitive options, showcasing balanced strengths across multiple parameters. Meanwhile, Imam Hossein Square and Farahzad ranked lower, indicating potential challenges that may require further assessment and strategic planning. This study underscores the importance of a data-driven approach in location selection, ensuring that investment decisions align with long-term feasibility and sustainability. By considering key factors such as environmental impact, cost, and adaptability, stakeholders can make informed choices that maximize growth opportunities while minimizing risks. Future assessments could incorporate additional factors or real-time data to refine decision-making processes further.

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