



EXTENDED ABSTRACT

Application of SWOT Method in Analysis of Strengths and Weaknesses, Opportunities and Threats of Optimal Water Consumption plan in Agriculture Case Study: Markazi Province

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Introduction

Iran is located in arid and semi-arid areas of the world and the major factor in this region is water shortage. The shortage of water in the country has limited food production and agriculture activities. More than 94 percent of the water resource of this country is used in agriculture sector, but the overall efficiency of irrigation in the country is between 33 and 37 percent. Therefore, despite the water crisis in the country and regarding the low turnover in irrigation, efficient use and management of water in agriculture sector is unavoidable. One program that has been implemented by Jihad of agriculture ministry in villages and cities to increase the efficiency of irrigation in agriculture sector is optimal water consumption plan. In this plan, water demand for producing each yield unit is taught to beneficiaries to avoid excessive water in irrigation. This study aimed to suggest strategies for the development of this plan in the country. These strategies presented by SWOT method and prioritized by QSPM matrix. Nuga and Asimiea in 2015 used this technic to analyze agriculture sector in Niger. Based on results, the usage of international budget for developing of environmental educations in villages introduced as the most significant strategy, having the highest score.

Methodology

This study is a practical research and its statistical society is 57 promoters in Markazi province in Iran who were employed in jihad of agriculture organization. In this study, with questionnaire tool, completed by the promoters, strengths and weaknesses, opportunities and threats of this plan have been analyzed by SWOT method. Firstly, by investigating the internal factors, the most important factors including the strengths and weaknesses listed. After reviewing the external factors, the most important factors including threats and opportunities listed. Then, a coefficient between 0 to 1 was

assigned to these external and internal factors. SWOT matrix was derived and in this matrix four categories of strategies containing Strength-Opportunities (SO) strategies, Strength-Threats (ST) strategies, Weakness-Opportunities (WO) strategies and Weakness- Threats (WT) strategies have been presented, and in the last step these strategies was prioritized by QSPM matrix.

Results and Discussion

After reviewing the strengths and weaknesses, the opportunities and threats of the plan, which were identified by the promoters, the most important of these factors were listed. Typically, visiting successful projects for beneficiaries as one of the strengths and lack of trust t by some beneficiaries to the plan was considered as one of the weaknesses. Using the national media to promote the plan and the remoteness of some villages were examples of opportunities and threats that were written in the questionnaire by the promoters. Then weighted points of strength and weaknesses were determined in the internal factors matrix and the weight points of opportunities and threats were determined in the external factors' matrix. In the next step, the total points of internal and external factors were calculated. Based on, external matrix weighted score is equal to 2/146 and based on internal matrix, weighted score is equal to 2/316. Then ,determining the position of the organization, these weighted scores were moved to X and Y axis in external-internal factor matrix. Results showed that organization was in defensive situation and WT strategies were preferred.

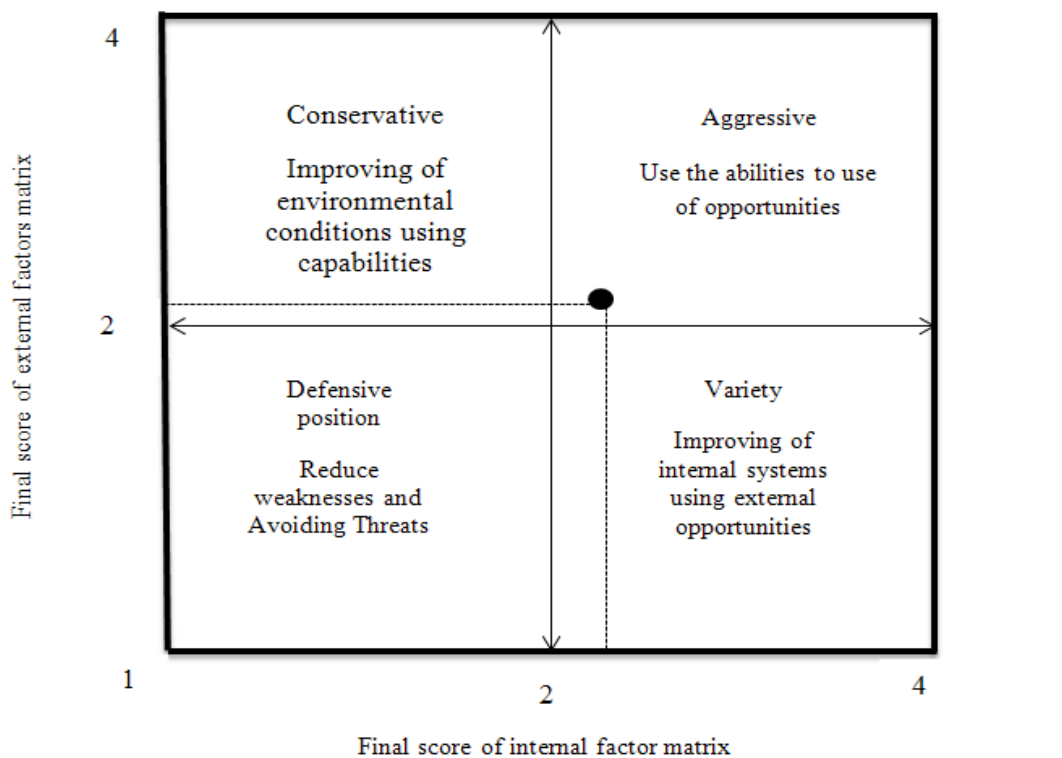


Figure 1- Internal-external matrix in optimal water consumption plan

Conclusion

The results of this study, which is the result of evaluating the optimal water consumption plan, showed that the rule of plan in increasing the efficiency was the most important strength point and the lack of education about methods to overcome crisis was the most important weakness point of this plan. Also, using of national media and financial courage by government were the most

important opportunities of this plan. The financial and cultural poverty of the villagers and Lack of laws about water consumption in agriculture sector were the most important threats of this plan. Also, the results of this study, which showed that the organization is in aggressive position, are Strategies for developing of optimal water consumption plan that priorities by QSPM matrix. Participation of promoters and lack of coordination are some limitations of this research.

The priority strategies, presented for developing the plan, are as below:

1. The usage of international budget for developing of environmental educations in villages,
2. Development of formal and informal education in areas related to the water crisis and climate change, the consequences of excessive consumption of water, irrigation methods of jug, and cropping pattern,
3. Developing the usage of national media and communication technology about optimal water consumption in agriculture,
4. Composition of educational content in university thesis about the water crisis and climate change, the consequences of excessive consumption of water, irrigation methods of jug, and cropping pattern,
5. Development of communication with related organizations such as the Department of Environment and Regional Water Organization,
6. State supports for the development of high efficiency and low consumption methods,
7. Legislation in the field of water use in agriculture sector.

References

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