SUGGESTIONS ON RURAL DEVELOPMENT FOR TUZLA RIVER BASIN (NW TURKEY)

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Abstract:

Rural development consists of a wide variety of new activities such as organic farming and livestock, region-specific products, nature conservation and landscape management, rural tourism, and the development of short supply changes. This research aimed to use a SWOT analysis to identify strategies for rural development in the Tuzla River Basin.

The Tuzla River Basin is located on the southern side of the Marmara Region and extends in northeast-southwest direction from the Aegean Sea to the western slope of Mt. Ida. This basin is divided into three sections, namely upper, middle and lower sections along the Tuzla River Basin. Some nine villages which represented three basins were selected from 35 villages using the methods of stratified sampling for this study. Some 200 surveys were performed in regard to the household number of each village and at 95% confidence level. According to the survey results, the investigated relation between the form of rural economic activity and the rural development characteristics was determined. SWOT and QSPM analysis techniques were used to explain poor conditions and future possibilities of rural development in the basin. In the rural areas of the basin, the form of agriculture, low-income animal husbandry carried out under natural & traditional conditions, emigration and traditional lifestyle are the causes of obstacles to rural development.

Key words: Tuzla Basin, Rural Development, SWOT, QSPM.

Introduction

Rural development can be characterized as the process of achieving a desired future in the countryside (Elands and Wiersum, 2001) Rural development aims at the improvement of the living conditions of the people living in rural areas. The development of a rural area must be planned within the framework of a general national strategy. Theoretically, the rural development policy of Turkey focuses on three issues: improvement of the competitiveness of agricultural and forestry sectors, improvement of the

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environment and the countryside, and improvement of quality of life in rural areas and encouragement of diversification of the rural economy. However, these policies could not be applied in the underdeveloped rural areas of Turkey as the rural areas were highly scattered and fragmented and as the land was irreversibly degenerated.

The most important components of rural development are the demographic qualities and spatial characteristics of the rural population. In this basin, rural development varies depending on the economic and cultural properties of the population.

One of the typical results of insufficient rural development in such places is migration from rural to urban areas (Özden and Mendes, 2005). Due to the continuation of migration trends, the rural economy loses its productive powers such as workforce and capital. This impact is felt more intensively in forest villages wherein both agricultural fields are limited and sources of income are mostly dependent on forestry and which are relatively disadvantaged in terms of opportunities of access to the market and services as well as in the rural areas that are far from city centers (SPO, 2008).

Micro-basin projects have proved to be a valid way to plan and achieve environmental and rural development projects. In selecting a project area, micro-catchment boundaries rather than the given administrative boundaries should be considered. Such an approach is important to make impressive outcomes more visible, to ensure better access, and to scale up a model initiative.

This research aimed to use SWOT and QSPM analyses to identify strategies for rural development in the Tuzla River Basin. This study is going to help bridge the gap between theory and practice of rural development.

Study Area

The Tuzla River Basin lies in the northeast-southwest direction in parallel with the extension of the Gulf of Edremit, the Tuzla River and Mt. Ida in the southwestern section of the Biga Peninsula in the South Marmara Section. The Tuzla River Basin has an area of approximately 523.4 km^2. The basin is bordered by Mt. Ida in the east, the volcanic plateau in the south, the volcanic plateau area that separates the basin from the Bayramic basin in the north and the Aegean Sea in the west (Figure 1).
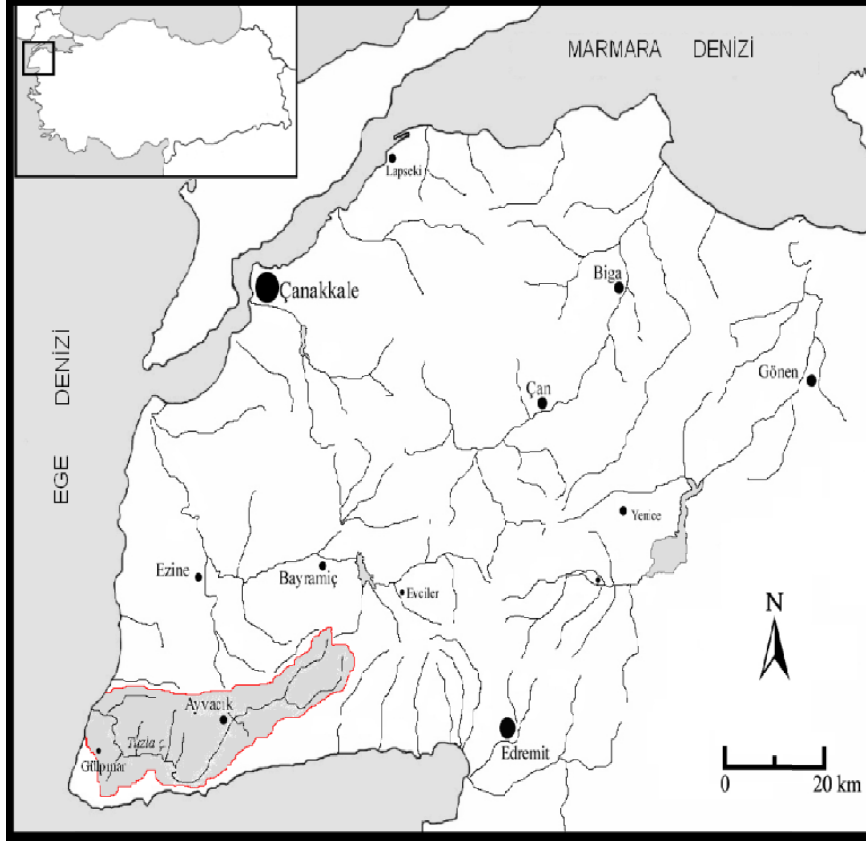
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Figure 1. Location of the study area

The study area is administratively located within the borders of the district of Ayvacik. There are totally 37 settlement units - 35 villages, one town (Gulpinar) and a district center (Ayvacik) - in the basin area. The district center of Ayvacik was excluded from the study because it lacked rural qualities. All villages in the basin have a collective village character, and their settlement fabric varies by location. The village which is the nearest to the sea level in the study area is Tuzla (15m), while the village with the highest elevation is Tuztasi (520m). The morphological units in the Tuzla River Basin can be divided into 3 groups.

(1) Western slopes of Mt. Ida and the valleys lying along the Tuzla River: These slopes, forming the upper section of the basin, have the characteristics of a relatively high (700-800m) plateau that is disintegrated by the tributaries of the Tuzla River. The section of the Tuzla River from its source to the Ayvacik Basin has split off quite deeply.

(*2) Volcanic plateau (150-300m) and the Ayvacik Basin:* In the middle section of the basin are the volcanic plateau and the Ayvacik Basin that has been generated by tectonism. The northern and central sections of the volcanic plateau consist of slightly wavy surfaces and the hills ascending on these surfaces (Bilgin, 1969). The central and southern sections of this valley have narrow and steep slopes. This narrow valley is located in the middle section of the Tuzla Basin and in the eastern section of the volcanic plateau. The valleys opening to the Ayvacik Basin via the plateau have split off deeply. The northern section of the basin is higher than its southern section. Therefore, the south of the basin floor is covered with alluviums. The Behram Depression lies in east-west direction in the northeast of the Behram Village. This depression area between the ancient city of Assos and Pasakoy is used as agricultural land.

(3) The Tuzla Delta: The Tuzla River goes through the flood-delta plain, which it has generated by filling in the area between Gulpinar and Tuzla with its alluviums, and it pours into the Aegean Sea in around 10 km north of Cape Baba. This coastal plain was shaped inside a structural depression that was opened on the marine Neogene formation extending in a narrow band along the western coasts of the Biga Peninsula (Kayan, 2001). The Babadere Tributary, which passes through two cuestas, joins Tuzla near the delta. The southern section of the delta plain sometimes turns into a swamp (Figure 2).

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In terms of its population quantity and distribution, the Tuzla River Basin is included in the areas with a small population. The failure to activate the rural potential in the locality has led to a regression in social fields such as education and health. The negative economic conditions resulting from the failure to make a transition to modern agricultural and animal husbandry systems in the basin have led to a regression in the population of the basin. As a matter of fact, the population in the basin tended to rise between 1935 and 1990 and to fall between 1990 and 2009. This falling trend is more evident in the villages of the upper and middle basins. The population increases in the settlements with high agricultural weight such as Gulpinar, Tuzla and Yukarikoy, whereas the population decreases in all villages in the upper basin and in the villages of the middle basin excluding Behramkale (Figures 2 and 3).
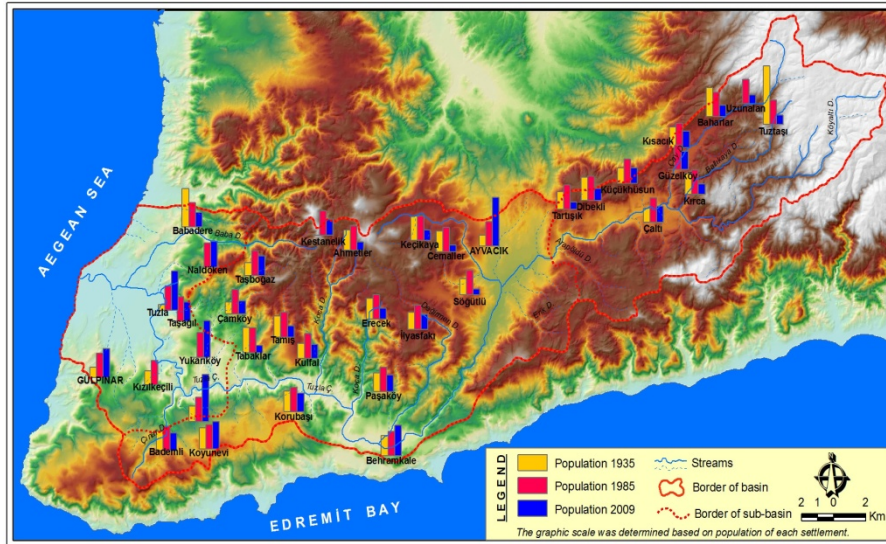
Figure 2. Variation of population in the Tuzla River Basin by year (1935-1985-2009) (Özözen et al.)

As a matter of fact, the population in the basin tended to rise between 1935 and 1990 and to fall between 1990 and 2009. This falling trend is more evident in the villages of the upper and middle basins (Figure 3).
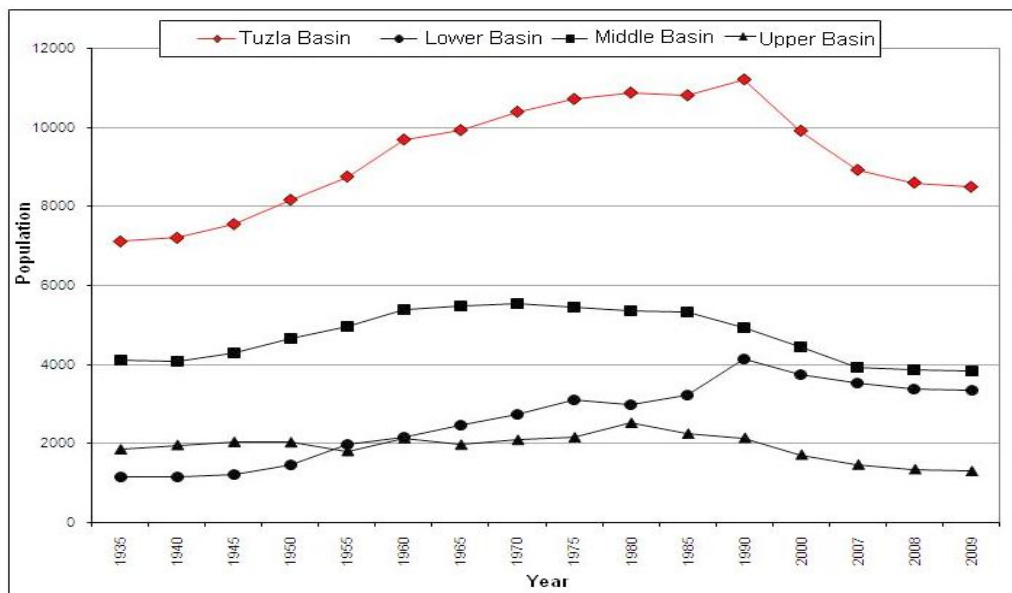
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Figure 3. Distribution of rural population in the Lower, Middle and Upper basins by year (1935-2009).

Data and Methods

The micro-basin where the villages to be selected are located has to reflect the expected attributes for the specification of the units to be selected for the sample in the method of *monographic sampling*. This is the only way of detecting the average attributes of the basin. For instance, because most of the villages were underdeveloped, the villages to be selected for the sample were also selected from the underdeveloped ones. *Stratified sampling* is used in cases where there are substrata or subunit groups in a universe, the limits of which are specified. Each class within the total sample can be represented as much as its rate in the universe. The samples were selected from the specified substrata with simple random sampling. The universe of the study area was the Tuzla Basin, and the substrata here consisted of lower, middle and upper basins.

With the method of stratified sampling, the Tuzla Basin was divided into three sections to represent lower, middle and upper basins. The sample villages were selected from these 3 strata using the random sampling method. Totally 9 sample villages (2 villages from each of the lower and upper sections of the basin and 5 villages from the middle section of the basin) were selected for the house survey. Accordingly, minimum 184 surveys were required at 95% significance level *(n = N t²pq / d² (N-1) + t²pq n = 728*3.8416*0.16/ 0.0025*(728-1) + 3.8416*0.16 = 183.9) (N = number of population of the universe, n=number of individuals to be included in the sample, p = probability of occurrence (likelihood) of the event to be examined, q = probability of nonoccurrence of the event to be examined (1-p), t = theoretical value in table t at a specific degree of freedom and at the determined error level, and d = deviation according to the occurrence of the event).*

Proportionally to the number of households in each village, totally 200 house surveys were applied using the method of stratified sampling. In our research, it was considered that α=5%. Accordingly, the confidence level (1-α) was 95%. Face-to-face interviews were used during data collection. In addition to this survey, face-to-face interviews were made with local representatives and 24 headmen on villages' problems and socio-economic issues.

The questionnaire forms were designed in two types: (i) a form for headmen, designed to collect information and problems of the villages, and (ii) an individual form designed to collect relevant information on household basis. To collect sounder information from the rural section, the questionnaire forms were filled in either with the face-to-face interview technique or individually.

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The distribution of surveys by basin section, village and gender is presented in Table 1. It is observed that because surveys were applied to the houses, the respondents of the surveys mostly comprised the men who were the heads of household. Due to the high number of villages in the middle basin, the number of surveyed units was higher in the place concerned. Some demographic characteristics of the basin and the reasons for migration were presented comparatively in the study according to the survey and the statistical data.

Table 1. Distribution of Subjects by Age and Gender

Sample villages		Population (2007)	Number of Houses	Number of Surveys	Number of applied surveys			
					(F)	(M)	(Total)	
L	Yukarikoy	657	187	47	14	35	49	68
	Kizilkecili	237	68	18	9	10	19	
	Tasbogaz	113	32	8	2	7	9	
M	Erecek	98	28	8	7	3	10	
	Cemaller	26	8	2	0	4	4	
	Pasakoy	481	127	34	1	35	36	98
	Behram	563	161	36	6	33	39	
U	Guzelkoy	239	68	18	1	19	20	34
	Tuztasi	171	49	13	5	9	14	
	Total	2,585	728	184	45	155	200	200

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These included rural development suggestions, rural education, rural labor migration, rural production, non-farm sector development policy, and rural poverty alleviation policy. Both the negative and positive impacts on the Tuzla River Basin were outlined for each of the implementations. Examples at village level were given to show the local experience and the policy implications for sustainable development. Finally, strengths, weaknesses, opportunities and threats were determined and some future-related development policies and recommendations were provided according to the results of SWOT and QSPM analyses. Internal factors consist of strengths and weaknesses. External factors consist of opportunities and threats.

A SWOT analysis can help researchers gain insight into the past and think of possible solutions to existing or potential problems (Ommani, 2011 and USDA 2008). The SWOT analysis is an efficient method, used in the case of strategy planning, to identify the potential and the priorities and to create a common vision for the accomplishment of the development strategy (Buta, 2007). The Quantitative Strategic Planning Matrix (QSPM) provides an analytical method for comparing feasible alternative actions. The degree of attractiveness of each strategy is established by using quantitative strategic planning matrices (QSPM). The QSPM approach attempts to objectively select the best rural development strategy.

A Survey of Rural Development in Tuzla Basin

Agricultural (such as field, land, irrigation opportunities and technical input) and other economic inadequacies in many villages of the basin increase unemployment in the rural area, thereby causing migration. Migration owing to marriage ranks second. It is understood that those heads of household who have children that are educated outside the village have a higher tendency to migrate and that the tendency towards migration increases with the increasing number of relatives who have migrated from the village.

As to the socio-economic status of households, the majority are farmers engaged in both crop farming and animal husbandry. Farming is the major source of income and subsistence. The majority of the households included in the sample in the area make a living from agriculture and animal husbandry, while 40% of them have a single source of income.

Small family farm units are the main characteristics of the Turkish agriculture. The average farm size is about 6 hectares. Over 80% of households have land in the range of 0-100 decares in the countryside of Tuzla. The average size is 15 decares. The area of irrigated land in the sample villages is limited due to the topographic features and the water resources and 62 % of the households (n = 200) have irrigable land of varying size (Tables 2 and 3).

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Table 2. Size of agricultural farms owned by subjects (da)

	Quantity of land owned						Total
	With no land	Less than 25	26-50	51-100	101-200	201-250	
Yukarikoy	23	17	5	3	0	1	49
Kizilkecili	7	12	0	0	0	0	19
Tasbogaz	0	4	1	2	1	1	9
Erecek	2	1	0	1	5	1	10
Cemaller	0	2	1	1	0	0	4
Pasakoy	8	11	9	3	5	0	36
Behram	9	16	10	3	1	0	39
Guzelkoy	2	7	8	3	0	0	20
Tuztasi	0	10	1	3	0	0	14
Total	51	80	35	19	12	3	200
%	25.5	40	17.5	9.5	6	1.5	100

Table 3. Number of lots in the agricultural fields

Number of lots	Frequency	%
1	23	11.5
2-5	102	51.0
6-10	19	9.5
11-15	3	1.5
16-20	1	0.5
21+	1	0.5
With no land	51	25.5
Total	200	100.0

Some of the agricultural fields in all villages of the basin are allocated for grain agriculture. Depending on this, grain production is available in almost all villages. Grain sowing is relatively more common in Babadere, Tuzla, Gulpinar, Suleymankoy, Kocakoy and Baharlar. Nevertheless, it is generally produced for the needs of the locality. Olive groves are observed to be concentrated around Gulpinar and in Babadere, Kocakoy, Bademli, Koyunevi, Bektas, Pasakoy and Behram in the basin.

Moreover, olive cultivation is performed at a small rate in Kizilkecili, Camkalabak, Yukarikoy, Naldoken, Korubasi and Sogutlu Villages. The small size of lots in olive groves is remarkable. In vegetable production in the basin, tomato is the most important product in terms of cultivation area and production. Production of tomatoes has an important place in Babadere, Tuzla, Gulpinar, Kocakoy, Kizilkecili, Tasagil, Tamis, Camkoy, Tasbogaz, Yukarikoy and Camkalabak Villages. Besides tomato, the production of beans is of importance in Kosedere, Babadere and Tuzla Villages.

The products produced in the villages generally meet the fresh and winter consumption needs of families. In addition, some of the products concerned are displayed in Ayvacik bazaar. There is a wide variety of products produced in the basin, and we can classify them into four groups depending on the feature of agriculture and order of importance, i.e. (i) grain, (ii) olive, (iii) vegetable and (iv) miscellaneous. The crop design in the area is as follows: wheat, olive, tomatoes, green bean and vegetables.

As far as household heads are concerned, animal husbandry and forest works constitute the secondary job after farming.

Since the basin is rich in forestland, forest workmanship is an essential source of income. The people of Kirca, Kisacik, Baharlar, Tuztasi, Uzunalan, Calti and Guzelkoy work as laborers in the forest under the coordinatorship of the forest establishment. In addition, non-wood forest products are collected in the basin (mushroom, laurel, thyme, sage, linden, carob and mast). The production of wood charcoal is maintained as a traditional job in the locality. The local trees on the western slopes of Mt. Ida are used in the production of quality charcoal. Forestry is an important

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activity in the villages located in the upper section of the basin, while it comes after agriculture, animal husbandry, fishing and tourism in other basins. Three factors can account for the importance of forestry as a source of income in the upper basin: (i) it is located at the border of the forest area of Mt. Ida; (ii) agricultural fields and pastures are inadequate because they are located on the hillside; and (iii) the Tahtaci-Turkmens living in these villages have been executing this job as a tradition that has been handed down from the past.

Because agricultural fields are few, the yield obtained per unit area is low and there are no additional opportunities of income, they are poor or their incomes are limited.

SWOT and QSPM Analyses

The results of the SWOT analysis and the rural development strategies are prepared in Tables 4 and 6 by using household surveys and interviews with the headmen. 8 strengths, 8 weaknesses, 8 opportunities and 8 threats were confirmed for the rural development of the Tuzla Basin. The most effective strength was organic farming; the weakest ones were low productivity of the agricultural fields, traditional cropping, agriculture for local consumption and no concept in cash crops; the greatest opportunity was growth and supporting of tourism in the Tuzla Basin by new arrangements; and the most threatening factor was the lack of funds and technical knowledge in agricultural fields of development. The SWOT table includes four subjects:

1. Identify growth potential and development opportunities.
2. Identify infrastructural inadequacies and limiting factors.
3. Identify limiting factors inhibiting development.
4. Identify problematic socio-demographic factors and coordinate development actions.

Table 4. Internal (Strengths and Weaknesses) and External Factors Opportunities and Threats) of Rural Development in Tuzla River Basin

	Internal factors		**External factors**
	STRENGTHS		OPPORTUNITIES
S1	Natural resources in forestry and agriculture	O1	Development potential of the international trade sector
S2	Diversity of landscape, history and heritage (Assos, Apollon Smintheion, Ottoman architecture, etc.)	O2	Promotion of different livelihood opportunities in dairy, farming practices, poultry, fisheries and other sectors.
S3	Richness of culture and tourism assets and their high potential in respect of tourism	O3	Sales of organic foods were the most rapidly growing sector of the market in cities in the past decade
S4	Eligibility for organic farming and	O4	Tourism and energy investments in the

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S5	livestock (olive grove, tomato, red meat, etc.)	O5	Tuzla geothermal area
S6	Fisheries		Improvement of the transportation network connected with the consumption markets in the environment
S7	Gathering wild plants: thyme, valonia and mushroom	O6	
S8	Tuzla Geothermal resources	O7	Increasing consumer consciousness and demands for healthy, quality and organic products
	Mt. Ida and convenient climate	O8	Construction of irrigation dams
			An increase in demands for alternative tourism
	WEAKNESSES		THREATS
W1	Inadequate physical infrastructure development	T1	Poor quality of rural infrastructural networks
W2	Inadequate coordination between public institutions providing services to rural population	T2	Loss of social cohesion through demographic change
		T3	Impact of continuing agriculture and forestry sector reform and retrenchment
W3	Few water sources are desiccating (Rainfed agriculture, irrigation problems and drought), erosion and salinization risk of the basin	T4	Lack of funds and technical knowledge in agriculture
		T5	Low rainfall and dry season for crops
	Low productivity, traditional cropping, and agriculture for the local market.	T6	Inadequate and variable livestock policies
W4	Dispersed, highly fragmented and small-lot agricultural areas and inadequacy of quality natural pastures	T7	Developments in the tourism sector pose a threat for olive groves
W5		T8	Closing of the village school
W6	Villages are dispersed, small and unplanned in the basin		
	Problems of garbage collection		
	Rural depopulation of young population		
W7			
W8			

The QSP (Quantitative Strategic Planning) matrix is designed to prioritize or determine the attractiveness of the strategies generated in the EFE and IFE matrices (Xinfei et al. 2008). The QSP Matrix is established to value strategic factors of the development of the Tuzla Basin. The value of each weight should be between 0 and 1. Zero means the factor is not important. One means that the factor is the most influential and critical one. The total value of all weights altogether should equal 1. Rating should be between 1 and 4. Rating captures whether the factor represents a major weakness (rating = 1), a minor weakness (rating = 2), a minor strength

(rating = 3), or a major strength (rating = 4). Rating captures whether the factor represents a major threat (rating = 1), a minor threat (rating = 2), a minor opportunity (rating = 3), or a major opportunity (rating = 4). If you use the rating scale from 1 to 4, then strengths must receive a rating 4 or 3 and weaknesses must receive a rating 1 or 2.

Internal (strengths and weaknesses) and external (opportunities and threats) factors that affected the rural development of the basin were evaluated. On the basis of respondents' views, the coefficient ratio of each item was determined according to its significance. Add all weighted scores for each factor. If the sum of all effective factors is less than 2.5, one can conclude that weaknesses are more than strengths. However, sums more than 2.5 indicate that strengths dominate over weaknesses. Based on the results, the scores of external and internal factors were 2.33 and 3.88. The results of the analysis are shown in Table 5.

Table 5. Internal and External Factors Evaluation Matrix (IFEM and EFEM)

Internal factors				External factors			
S	**Weight**	**Rating**	**Weighted Score**	**O**	**Weight**	**Rating**	**Weighted Score**
S1	0.06	3	0.18	O1	0.05	3	0.15
S2	0.07	4	0.28	O2	0.07	4	0.28
S3	0.08	3	0.24	O3	0.07	3	0.21
S4	0.06	4	0.24	O4	0.04	3	0.12
S5	0.03	3	0.09	O5	0.04	3	0.12
S6	0.02	3	0.06	O6	0.07	4	0.28
S7	0.03	3	0.09	O7	0.08	3	0.24
S8	0.04	3	0.12	O8	0.06	3	0.18
	Weight	**Rating**	**Weighted Score**		**Weight**	**Rating**	**Weighted Score**
W1	0.07	2	0.14	T1	0.06	1	0.06
W2	0.08	2	0.16	T2	0.05	1	0.05
W3	0.08	2	0.16	T3	0.07	2	0.14
W4	0.1	2	0.2	T4	0.08	2	0.16
W5	0.07	1	0.7	T5	0.07	1	0.07
W6	0.05	1	0.5	T6	0.06	1	0.06
W7	0.05	1	0.5	T7	0.05	1	0.05
W8	0.11	2	0.22	T8	0.08	2	0.16
Total	1		3.88	Total	1		2.33

Using the results of the analysis (EFEM and IFEM), we numerically evaluate the strategies coming from SWOT analysis to find out their attractive force. The process of calculation is not described in detail, and the results are shown in descending order as follows: WO, 2.97; SO, 2.67; WT, 1.83; and ST, 1.74 (Table 6, Figure 4).

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Table 6. SWOT Strategies matrix: Derivation of the key strategies in the basin

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SO1. *Natural and Cultural Representation:* Maintaining of natural resources and the diversity of cultural landscapes and historical value (forest, olive grove, the Tuzla River, ancient city, Ottoman architecture, rural stone house and carpet and rug weaving). **SO2.** *Marketing of Regional Image:* Marketing of agricultural products with a regional image (branding) such as organic livestock farming: red meat, sheep&goat meat and milk; and organic farming: bean, tomato and olive. **SO3.** *Rural Industry:* Farm-based processing of producer goods and marketing at regional level (tomato paste, cheese, yoghurt, olive oil and soap, pickle, thyme honey and dehydrated thyme).	**WO1.** *Effective Management*: Protection and development of natural resources. **WO2**. *Agricultural Development Plan*: Reclaim of cultivated and pasture areas, to avoid soil erosion and to prepare a plan for rural land use. **WO3**. *Local Marketing Network:* Regular marketing of fresh, semi-processed and processed crops to local markets and supermarkets in close range such as Canakkale, Ayvacik, Ezine, Edremit, Altınoluk and Kucukkuyu (about 100 km).
ST1. *Investments dependent on local raw materials:* Investments to increase the value of local natural resources **ST2**. *Regional Marketing:* Short food chains from producer to consumer; and high quality food products (e.g. fresh vegetable and olive for Istanbul) **ST3.** *Development of alternative/ecotourism tourism*: Using the potential of the tourism attractions. Effective enforcement of ecotourism/alternative tourism regulations.	**WT1.** *Prevention of Migration:* Migration of young and qualified labor force from rural areas, the loss of productive factors, and an ageing population **WT2.** *Support for Community*: Voluntary participation in local development **WT3**.*Village-Based Infrastructural Investments:* (e.g. cooperatives, garbage collection and transports)

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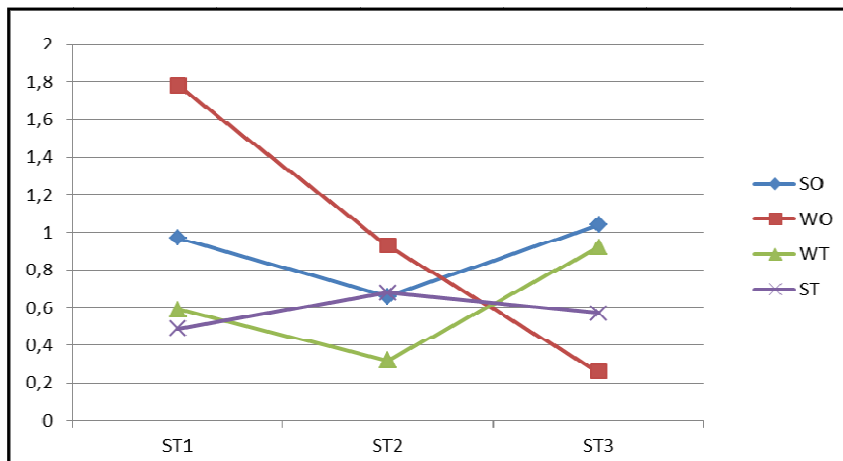
Figure 4. Rural development strategies based on QSPM score.

Conclusion

After the SWOT analysis of the basin, a complete exercise was done to develop a shared community vision for the development of villages. Based on this exercise, the following five categories were identified and prioritized by villagers for their village development for future.

1. Conservation and utilization of natural resources (with particular reference to water and forest)
2. Development of tourism, agriculture and livestock sectors
3. Improvement of sources of livelihood
4. Development of vocational skills of local people
5. Promotion of environmental auditing and education
6. Development and supporting of agricultural development cooperatives

Tourism is an essential development-providing factor for rural localities. Nevertheless, rural tourism should be considered complementary to agriculture, but not an alternative to it (Ahipaşaoğlu and Celtek, 2006). Primarily forest villages and those villages which are impossible to develop through agriculture must be manipulated to alternative activities on the basis of local resources. It is necessary to create and develop opportunities of *rural industry* (such as dried product and packaging, mushroom, canned food, tomato paste, pickles, cheese, olive oil and soap) (Özözen et al, 2010)

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The presence of rural areas' potential that has not been well identified or activated in the basin, the lack of opportunities of health and education and the carrying out of agriculture and animal husbandry with outdated methods have caused a reduction in the rural population. An approach to development as a multi-faceted (economic, social and environmental) and multi-target process ensures individual awareness and empowerment.

The quality of agricultural products lags rather behind the EU standards. Therefore, the produced products fail to exceed the local consumption network. In order to increase the quality and quantity of production and to start planned agriculture, first of all it is necessary to save land lots from being scattered. For this purpose, it is necessary to join small and scattered agricultural areas and turn them into larger and orderly lots and each lot should be organized to have access to road and water.

Integrated land use plans should be prepared and implemented in all rural area arrangements intended for protecting the environment, preventing soil erosion and developing forestry, organic agriculture and organic animal husbandry that will be carried out in the Tuzla River Basin.

REFERENCES

Ahipaşaoğlu, S. ve Çeltek E. (2006). *Sürdürülebilir Kırsal Turizm*. Ankara: Gazi Kitabevi (in Turkish).

Bilgin, T. (1969). *Biga Yarımadası Güneybatı Kısmının Jeomorfolojisi*. İstanbul: University of Istanbul No:1433 (in Turkish).

Buta, R. (2007). The Swot analysis in the geographical research, with applicability in the study of the human settlements from Moldova valley. *Present Environment and Sustainable Development*, (1), p. 239-248.

Elands, K. and Wiersum, K.F. (2001). Forestry and rural development in Europe: an exploration of socio-political discourses. *Forest Policy and Economics*, (3), p. 5-16.

Kayan İ. (2001). "Kuzey Ege Kıyılarımızın Kuvaterner Jeomorfolojisi". *Türkiye Kuvaterneri Workshop*, 80-90, 21-22 May 2001, ITU Eurasia Institute of Earth Sciences, Istanbul (in Turkish).

Ommani, A. R. (2011). Strategies of Rural Development in Shoushtar Township of Iran (Applying SWOT method). *Journal of American Science*, 7(1), p. 969-972.

Özden, S., Mendes, M. (2005). The usage of multiple correspondence analysis in rural migration analysis. *A Mediterranean Journal of Economics, Agriculture and Environment*, V. 4, p. 36-41.

Özözen Kahraman, S., Çalışkan, V. and C. Akbulak. (2010). "Impact of spatial differences on demographic characteristics: a comparative survey in Tuzla river basin". *The 2nd International Geography Symposium*, Antalya.

SPO. (2008). *Ulusal Kırsal Kalkınma Stratejisi (2007-2013)*. State Planning Organization (in Turkish).

USDA. (2008). SWOT analysis a tool for making better business decisions. United States Department of Agriculture Risk Management Agency.

Xinfei, W. Zhenxiang, Z., Jianlong, M. and Zhao Jianwei. (2008). Strategic Choice of Cities in the Process of Regional Development, *IEEE*, p. 1-4.

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