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ASSESSMENT OF NATIONAL RURAL DEVELOPMENT STRATEGY WITH R'WOT TECHNIQUE SAMPLE OF TURKEY

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ABSTRACT

The study was focused on investigation of National Rural Development Strategy: 2014-2020 document of Turkey. The document had entered into force on 21 February 2015 with Official Gazette no:29274. The strategy was prepared under collaboration of five ministries. Agriculture and Forestry (formerly Food, Agriculture and Livestock), Development, Foreign Affairs – EU Directorate (formerly European Union (EU) Affairs, Environment and Urbanization and Internal Affairs. The prioritisation of rural areas in Turkey was analyzed and assessed with R'WOT (Ranking SWOT) technique of SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis within the scope of determined strategies. According to the R'WOT analysis results, it was detected that infrastructure and irrigation investments, forestation and land consolidation need to be increased. The National Rural Development Strategy has five strategic objectives. 'Betterment of the rural environment and maintaining the sustainability of natural resources', which is the second strategic objective, should be prioritised due to the results retrieved.

KEYWORDS:
R'WOT, Rural development, National Rural Development Strategy, Turkey.

INTRODUCTION

The rural areas are not just determined regarding physical endowments, but they also stand for a complicated structure indicating economic and social differences compared with the urban districts. It is not fair to define rural areas as places which provide job and living environment for the population living there; the rural areas are multi-functional areas where ecological balance is provided as well [1].

The initiatives that are taken to sustain rural areas' existence and to improve the living conditions of rural society, which has less economic and social opportunities compared to urban one, are generally called "Rural Development" [2]. Taşcıoğlu [3] defines rural development as "all moral and material support, training initiated for the betterment of people or communities living and working in rural areas".

Rural development policies cover all policies that include advances as a result of attempts executed by the society and public authorities as a whole to improve economic, societal and cultural opportunities for individuals living in rural areas, to increase their welfare level and to maintain the participation of rural population to the national development. The main objective of rural development strategy and policies is to maintain development of backward societies in economic and socio-cultural areas through self-help or external help method [4].

The development plans for five years had started to be prepared and put in issue in Turkey since 1963. The *Rural Development* concept was mentioned directly in the eighth development plan (2001-2005), upon legal preparations made before the plan. The policy documents for the first rural development were released in the 9th Development Plan (2007-2013). These documents are the National Rural Development Strategy and Rural Development Plan.

The National Rural Development Strategy Document aims to increase the awareness on development in rural and urban areas, decrease unfavourable effects of migrations on rural area, and strengthen rural policy management on central and local levels and to contribute to EU accession process [5].

There are various studies conducted on the field. Before proceeding, it is essential to overview these researches.

Oddershede et al. [6] assessed the priorities of training, infrastructure, economy and environment sub-factors for tourism, service, industry and maritime sectors with Analytical Hierarchy Method (Analytical Hierarchy Process) for Chile's rural areas. Regarding the use of analytical hierarchy method in rural development in their study conducted at areas. Hu et al. [7] assessed population, area, industry, social and environment criteria with AHP by using Rural-Urban Development Index and Rural-Urban Change Index between 1994 -2010. Another study including the use of AHP in rural areas was

conducted in solar system houses in rural areas of Bangladesh [8].

The R'WOT technique was used in Turkey for the first time by Yılmaz [9] in assessment of project success status regarding the development of beekeeping. Sönmezler [10] applied R'WOT technique for evaluating alternatives for a festival project and selection of the most suitable alternative.

Öztürk and Tonuk [11] stated in their study conducted for Devrekani Basin that the central government and the local public should consider solid waste disposal facilities, residential and industrial wastewater treatment plants as the most important threat.

Gürbüz and Öztürk [12] found out in the R'WOT technique applied for shipping department of the textile industry. The analysis revealed that possessing sufficient technological and business facilitator equipments (forklifts, pallets, shelves, palm, etc.) was the most important priority of SWOT factor within the SWOT group. Öztürk [13] pointed out in their study conducted at Sarıkum Conservation Area that "existence of other natural areas for Sinop" was the most important priority within opportunities revealed as factors of SWOT analysis. Stavroulakis and Riza [14] used R'WOT technique in their study on the health sector.

In this study, prioritization the SWOT analysis in the "National Rural Development Strategy: 2014-2020" document prepared by the Ministry of Food, Agriculture and Livestock by the RWOT technique and evaluating the strategic objectives within the scope of the determined strategies were conducted.

MATERIALS AND METHODS

The main material of the study is National Rural Development Strategy: 2014-2020 document, which was prepared by the Agriculture and Livestock Ministry and entered into force with 21 February 2015 dated and 29274 numbered Official Gazette. The SWOT analysis prepared within the scope of National Rural Development Strategy: 2014-2020 and the determined strategically purposes constitute the material of the study.

In this study, R'WOT Technique was used as a hybrid method in which SWOT Analysis, Ranking Analysis and Linear Combinations analysis are used together. SWOT analysis was prioritised by 40 experts working on rural development.

Analysis Used within the Scope of R'WOT Technique. SWOT Analysis, which is in use since 1970s with the purpose of business management, has been considered as a tool of analysis and planning for various policy fields in the following years. SWOT is an abbreviation consisting of the first letters of strengths, weaknesses, opportunities and threats. With this method, which has the analysis principle to examine the parameters of the existing structure, analysis of both quantitative and qualitative properties can be done and a strategic view can be created with the examination of SWOT matrix regarding the existing situation [15].

The opportunities are properties of the external environment preparing advantageous conditions for a place or objective out of a pre-determined objective or objective group. In addition, the threats are also external factors as environmental development creating problems against reaching the objective or objectives of the SWOT matrix. The specific opportunities as the strengths of superior properties helping to reach these determined objectives and weaknesses that prevent reaching these objectives and including limited experience in some subjects are the internal factors of the matrix [16].

In determination of policies for rural areas of a country, internal (strengths and weaknesses) and external (opportunities and threats) factors of the potential of the rural areas in the focused country can be determined with the help of the SWOT technique. The technique helps selection of an appropriate strategy set in conformity with the country's objectives to explicitly know and analyse the strengths and weaknesses of rural policies of a country. The methodology encompasses two phases as follows.

Ranking Analysis. In this analysis, the ranking is conducted to determine the relative priority values of SWOT groups and SWOT factors within each SWOT group. This ranking operation is conducted using "nine-point scale". In this scale are accepted accordingly;

1- Weakly important
3- Low importance
5- Important at a medium level
7- Very Important
9- Extremely important

Additionally, "2, 4, 6 and 8 values" can be used as medium values [17].

Linear Combinations Analysis. In this technique, relative priority values of each SWOT factor are multiplied with the relative priority values of SWOT group connected to these factors. In this way, the relative priority values of SWOT factors are put into the same scale, and they can be compared with each other. In conclusion, the order of importance is obtained by multiplying relative priority values of SWOT factor with the relative priority values of SWOT group connected to this factor. Accordingly, 'linear combination' analysis was conducted mathematically [18].

The linear equation used in this technique can be indicated as follows:

TABLE 1
Stages of R'WOT Technique

1. Stage	SWOT Analysis	SWOT analysis is conducted for Superiorities, Weaknesses, Opportunities and Threats.
2. Stage	Comparisons for Each SWOT Group	4 SWOT Groups, consisting of Superiorities, Weaknesses, Opportunities and Threats, are compared with each other.
3. Stage	Comparisons for SWOT factors within Each SWOT group	For each SWOT group, SWOT factors found within these groups are compared.
4. Stage	Determination of final priority value of each SWOT factor	Here, the relative priority values of each SWOT group calculated based on the comparisons of 2nd Stage are multiplied separately with the relative priority values of each SWOT factors found in this group according to the 3rd stage comparisons.

Pji= Wji Xji

Here,

Pji = (j) SWOT group (i) final priority value in SWOT factor,

Wji = (i) SWOT factor included by (j) SWOT group's relative (at the same time, final) priority value,

Pji = (j) SWOT group (i) relative priority value in SWOT factor [17].

Stages of R'WOT Technique. R'WOT technique consists of four stages. The first stage is SWOT solutions; the second stage is comparisons for SWOT group, the third stage is comparisons for SWOT factors within each SWOT group, and the last stage is determining the final priority of each SWOT group (Table 1).

Subsequent to prioritisation with R'WOT technique, strategic objectives stated in National Rural Development Strategy (2014-2020) were assessed.

The strategies of National Rural Development Strategy (2014-2020) are given below;

Strategic Objective 1. Improvement of rural economy and increasing employment opportunities. Under this title, it is intended to improve the institutional capacity of producer organisations for agriculture and food sector, to process and market agriculture-food products, to maintain training and consultancy services for producers. In addition, following objectives are to modernise agriculture and food enterprises and to increase rural and national food security. It is planned to improve rural tourism to diversify the rural economy and water aquaculture additionally.

Strategic Objective 2. Developing the rural environment and maintaining sustainability of natural resources'. It is planned with this strategy to popularise environment-friendly agricultural practices, to improve organic farming, to prevent environmental pollution caused by agricultural activities and to reform the pasture. Improvement of the irrigation infrastructure, promoting land consolidation, developing income generating activities for forest products, reforming forests, promoting forestation and supporting income generating activities in and around the protected areas are the following objectives under this title.

Strategic Objective 3. Developing social and physical infrastructure of rural settlements. Under this title, it is planned to improve the transport network, to develop drinking water infrastructure, to improve waste management system, to cope with potential natural disasters, to encourage local architecture in the settlement and to develop infrastructure to protect cultural heritage.

Strategic Objective 4. Developing human capital of rural society and reducing poverty. It is planned to facilitate formal and non-formal education services to rural areas, to increase accessibility to preventative health and to strengthen the social services for disadvantaged individuals under this orientation.

Strategic Objective 5. Improving the institutional capacity for local development. The primary goals of this strategic objective are creating national and rural development cooperation, developing innovative approaches in provision of public services, improvement of service delivery capacity of town, village neighbourhood and municipalities.

RESULTS AND DISCUSSION

By reviewing the SWOT analysis conducted by Food, Agriculture and Livestock Ministry (formerly), a total of 51 SWOT factors, consisting of 15 strengths, 12 weaknesses, 12 opportunities and 12 threats as SWOT groups, were determined. The results of R'WOT technique, applied to 40 persons, were provided in Table 2. Accordingly, while the most important priority in SWOT groups is strengths (0.2744), the lowest priority is threats (0.2372). The group members were indicated consecutively below.

Strengths. Increasing forestation (S1), infrastructure investments (S2), increasing land consolidation (S3), diversity of crafts and local products (S4), existence of young population despite the

immigration (S5), diversification of non-agricultural economic activities and household income (S6), foundation of Development Agencies (DA) (S7), existence of rich natural resources, increasing protected areas and unpolluted agricultural area (S8), experience of cooperatives (S9), potential of organic farming (S10), existence of sample enterprises and practices (S11), increase of mechanization in agriculture (S12), wideness of grasslands (S13), increasing awareness about agricultural organization (S14), foundation of Agriculture and Rural Development Support Institution (ARDSI) (S15).

Weaknesses. Soil erosion threat due to the increased fallow land (W1), existence of scattered and small agricultural parcels (W2), insufficient statistics in rural areas (W3), scattered and sectional settlement of many villages due to topography and climate (W4), lack of coordination among institutions (W5), lack of modern agricultural knowledge and absence of professional management in producer organizations, unconscious practices in agricultural irrigation (W6), lack of social facilities and activities (W7), free family labor in agriculture, social security problem (W8), lack of investment due to non-accumulation of capital in agricultural enterprises (W9), low productivity in agricultural production (W10), Lack of storage and marketing infrastructure of products W11), lack of accessibility to elderly care services (W12).

Opportunities. Increase of legal regulations regarding treasury lands in rural areas for conformity with the EU legislation (O1), increasing supports for pressurized irrigation (O2), popularization of information and communication technology (O3), increasing interest on nature tourism (O4), longing for traditional village life (O5), size of internal demand and existence of close external markets (O6), strengthening women labor (O7), development of innovative approaches in service provision to rural areas (O8), diversification of grant programs towards rural areas and improving capacity of institutions and citizens to prepare and apply projects (O9), heading for branding in agricultural production due to the increased demand for qualified agricultural products (O10), maintaining financial support from international institutions and experience sharing and cooperation (O11), heading for renewable energy (O12).

Threats. Increasing natural factors damaging infrastructure (T1), rising regional differentiation in development levels of rural areas (T2), pressure of energy demand on natural resources (T3), declining interest of youth in agriculture (T4), drought risk caused by climate change (T5), environmental pollution caused by manufacturing industry facilities (T6), neglecting implementation of urban-focused social policies in rural areas (T7), aging of rural population due to the immigration to urban districts (T8), rising pollution in water resources (T9), high input cost (T10), lack of regulations of the local administration units (towns-headmen) (T11), increased use of productive agricultural lands for non-agricultural purposes (T12).

While the highest priority in strengths is existence of youth population despite immigration (0.0864), the lowest priority is developing infrastructure and irrigation investments (0.0467), while the highest priority in weaknesses is lack of modern agricultural knowledge and absence of professional management in producer organisations. Unconscious practices in agricultural irrigation (0.0975). The lowest priority is existence of scattered and small agricultural parcels (0.0723) (Table 2).

Longing for traditional village life (0.1012) is the top priority in opportunities. Declining interest of youth in agriculture (0.0956) is the top priority in threat factor within all SWOT sub-factors. While the most important priority in opportunities group is longing for traditional village life (0.02439). The least priority in strengths group is developing infrastructure and irrigation investments (0.0128) (Table 2).

CONCLUSION

The National Rural Development Strategy (2014-2020) has 5 Strategic Objectives (SO). These are “Improvement of rural economy and increasing employment opportunities (SO 1)”, “Developing the rural environment and maintaining sustainability of natural resources' (SO 2)”, “Developing social and physical infrastructure of rural settlements (SO 3)”, “Developing human capital of rural society and reducing poverty (SO 4)” and “Improving the institutional capacity for local development (SO 5)” when these strategies are examined with R’WOT technique's priorities. The steps to be taken according to the priority order were given below.

45% of the municipalities found in rural areas do not have a solid waste treatment system in Turkey. 80% of the villages do not have a sewage system. The internet is limited in rural areas [20]. Solid waste storage facilities, internet accessibility, and sewage system need to be completed in rural areas. Furthermore, completion of infrastructure in places, where there is no sufficient agricultural infrastructure, is essential. In addition, project designing for irrigation systems to promote pressurised irrigation and closed conduit systems instead of open systems for minimising the water distribution loses are essential as well (SO 2).

TABLE 2
Priorities of SWOT sub-categories

SWOT Groups Priority		SWOT Sub-categories	Total Point	Priority Within Group	Priority Within General	Priority Within Order
Strengths	**0.2744**	S1	92	0.0501	0.0137	50
		S2	86	0.0467	0.0128	51
		S3	103	0.0561	0.0154	49
		S4	148	0.0804	0.0221	8
		S5	***159***	***0.0864***	***0.0237***	***3***
		S6	155	0.0842	0.0231	4
		S7	140	0.0761	0.0209	14
		S8	114	0.0648	0.0178	39
		S9	127	0.0691	0.0190	34
		S10	104	0.0565	0.0155	48
		S11	128	0.0697	0.0191	33
		S12	119	0.0647	0.0178	40
		S13	119	0.0647	0.0178	41
		S14	126	0.0685	0.0188	35
		S15	108	0.0619	0.0170	46
		Total:	**1,839**	**1.0000**	**0.2744**	
Weaknesses	**0.2478**	W1	129	0.0778	0.0193	31
		W2	120	0.0723	0.0179	38
		W3	146	0.0879	0.0218	11
		W4	130	0.0783	0.0194	30
		W5	150	0.0903	0.0224	6
		W6	***162***	***0.0975***	***0.0242***	***2***
		W7	133	0.0802	0.0199	26
		W8	139	0.0837	0.0207	17
		W9	131	0.0789	0.0196	28
		W10	138	0.0832	0.0206	18
		W11	140	0.0843	0.0209	13
		W12	142	0.0856	0.0212	12
		Total:	**1,660**	**1.0000**	**0.2478**	
Opportunities	**0.2406**	O1	148	0.0918	0.0220	9
		O2	133	0.0825	0.0198	27
		O3	129	0.0801	0.0192	32
		O4	140	0.0868	0.0208	16
		O5	***163***	***0.1012***	***0.0243***	***1***
		O6	135	0.0837	0.0201	23
		O7	117	0.0725	0.0174	44
		O8	135	0.0838	0.0201	21
		O9	135	0.0838	0.0201	22
		O10	118	0.0732	0.0176	43
		O11	140	0.0868	0.0208	15
		O12	119	0.0738	0.0181	37
		Total:	**1,612**	**1.0000**	**0.2406**	
Threats	**0.2372**	T1	121	0.0762	0.0181	7
		T2	134	0.0844	0.0200	25
		T3	134	0.0844	0.0200	24
		T4	***152***	***0.0956***	***0.0227***	***5***
		T5	113	0.0712	0.0169	47
		T6	136	0.0855	0.0203	20
		T7	147	0.0925	0.0219	10
		T8	149	0.0937	0.0222	7
		T9	131	0.0824	0.0195	29
		T10	116	0.0731	0.0173	45
		T11	137	0.0862	0.0204	19
		T12	119	0.0748	0.0177	42
		Total:	**1,589**	**1.0000**	**0.2372**	
		General total: 10,445				
			Total: **4.0000**		**1.0000**	

The forest existence is approximately 21.7 million hectares in Turkey. 1.65 million hectares of forest area had been destroyed within 98653 forest fires between 1937, when fire statistics record-keeping had started and 2014 [19]. Fight with forest fires should be increased and rehabilitation of degraded forest areas should be focused on (SO 2).

Agricultural lands' being scattered and agricultural production in Turkey has been declining sectionally. It is scattered and fragmented agricultural land in Turkey caused a reduction in agricultural production. Land consolidation needs to be widespread to increase the productivity of agricultural land (SO 2).

The organic farming lands and lands suitable for organic farming constitute a small share of total agricultural lands. The ratio of organic farming in total agriculture is approximately 0.5% [20] (SO 2).

Eliminating insufficiencies in product processing of farmers, taking criminal actions against those involved in unlicensed production and increasing research and development studies are among the main things to do for improving organic farming.

Turkey needs to determine objectives to decrease greenhouse gas emissions and consumption of fossil fuel, to increase energy efficiency, to protect and improve forests and to take the active role in international climate policies (SO 3) [21].

Even though the ratio of female participation in the labour force is higher in developed countries, this ratio is low in many developing countries and Turkey. Due to SO 4 empowerment of women in the rural areas should be considered and supported [22]. The empowerment refers to increasing potential of women employment via training programmers and development projects. Increasing registration of women farmers to the official system, providing opportunities to market their products and promising payment equality with males should be considered within the strategy for young females as well as the middle and old aged women farmers.

Considering the priorities of R'WOT technique conducted within the scope of the study. It is seen that the prior strategy to be implemented to develop rural development in Turkey is "Improvement of the rural environment and maintaining the sustainability of natural resources."

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