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## An analysis of Iraq's pre-import inspection, testing & certification program: A'WOT analysis

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### Abstract

The Pre-import Inspection, Testing and Certification program became an important factor to get a market share in Iraq. Verification of Conformity (VoC) of products before shipment to Iraq was started in May 2011 by Iraqi government. The objectives of this program are; protection of consumers and environment, assurance of conformity, transparency in commercial activities and releasing goods faster at Iraqi customs with the appropriate certificate of conformity. After several months of preparation, today this program is being executed actively for countries all over the world that wants to export in Iraq. In this study, an analysis of Iraq's new pre-import inspection, testing and certification program is tried to determine by A'WOT hybrid multi-criteria method. A'WOT is a combination of the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis and Analytic Hierarchy Process (AHP). As a result of this study, possible risks and solutions of the program are pointed out.

*Keywords:* Strategic management, A'WOT, international trade, Iraq

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### 1. Introduction

In the last fifty years, Iraq had many political and economic difficulties. The wars and other problems that Iraq had, made this country not to have a sustainable development in this period. Moreover, all problems occurred in this country has been causing many confusions based on religion, ethnicity and tribes. These conflicts have been adversely affecting Iraq at many areas like political, economic, cultural, security and so on. After the war between USA and Iraq, it is building itself from zero nowadays and wants to integrate to the world as soon as possible. This rebuilding activity brings many business opportunities in the country from which many local companies and international corporations get benefit. As a result of development and interest of international corporations; legal, financial and many other fundamental infrastructure systems should be reorganized. In order to improve the system of customs in Iraq, government has signed an agreement with two international companies to execute pre-import inspection, testing

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& certification program to benefit from these companies' human resources, know-how and experience that they gained from other parts of the world (Özmen, 2012).

In this survey, it is aimed to get a general view of Iraq's pre-import inspection, testing & certification program and to answer whether this program functions efficiently in Iraq. To analyze this program, A<sup>2</sup>WOT method is preferred due to its effectiveness in decision-making process. In the first phase SWOT methodology is used to determine possible positive and negative factors with opportunities and threats. Secondly, AHP pairwise comparisons among criteria and factors are done in order to improve quantitative side of the strategic planning.

## 2. Materials and Methods

### 2.1. IRAQ and its pre-import inspection, testing & certification program

Iraq is a country in Middle East with population of approximately 31 million that consists of diverse religions like Islam (Sunni-Shia), Christianity, Yazidi etc. and nations like Arabs, Kurds, Turkmens and so on. Its area is 438.317 sq. km with many natural sources as oil, natural gas, phosphates, sulfur etc. (Ministry of Foreign Affairs – Romania, 2013).

At the beginning of 20th century Iraq, the former part of Ottoman Empire was occupied by Britain. In 1932 Iraq attained independency as a kingdom. Several dictators till 2003 governed it. After USA took down Saddam Hussein's regime, US troops stayed in Iraq till 2009. Nowadays, there is stability in economic development in Iraq although political and security problems keep continuing (Central Intelligence Agency–USA, 2013).

The export of natural sources like oil and natural gas supplies necessary funds in the rebuilding period. The country has approximately eight percent of known oil reserves in the world. Industry is still in development process and agriculture activities have about the nine percent of GDP. Because of security and infrastructure problems, tourism sector develops so slowly (Ministry of Foreign Affairs – Turkey, 2013).

Because Iraq's human resources and technical infrastructure are not enough to build and manage a new custom system, government agreed with international companies in order to get outsource services for customs (Özmen, 2012). By this program, it is aimed to have more control on import in order to protect the country, consumers and local manufacturers from substandard products that may endanger public health, safety or the environment, counterfeit or unsafe products and unfair competition of imported goods which do not comply with the approved standards (SGS, 2013).

The number of product type regulated was extremely high at the initial phase of program application. But as it was predicted in the previous study of Özmen (2012), some difficulties were experienced in managing this huge range by the time so it was decided to downsize the range. Now, the program regulates fewer products as: (Bureau Veritas, 2013)

- Toys
- Electrical and electronic products
- Vehicles, tires and spare parts
- Construction related products
- Consumer products including cosmetics and personal hygiene
- Household hardware
- Kitchenware
- Chemicals
- Textiles and footwear
- Household fuel burning appliances

The proposed testing program covers these limited product types due to insufficient human resources and technical capabilities. These product types are the ones that affect the health and living standards of Iraqi people.

### 2.2. Methods

SWOT (the acronym standing for Strength, Weakness, Opportunities and Threats) were started to use in researches of business and policy in US universities at the end of the 1960's (Pesonen et al., 2001; Yılmaz, 2007). It is a common used tool that analyzes internal and external environments in order to achieve a systematic approach for strategic decision situations (Wheelen and Hunger, 1995; Hill and Westbrook, 1997; Kangas et al., 2001).

The factors that are realized by SWOT analysis are Strengths, Weaknesses, Opportunities and Threats. Strengths and weaknesses are the internal factors that occurred in the environment and they are interfered easily. Opportunities and Threats are external factors that are caused by environment and they couldn't be interfered. Thus, in process of strategic planning, internal and external factors are tried to be balanced by SWOT analysis (Gürbüz, 2010) in order to build and implement a good fit strategy (Pesonen et al., 2001).

There are some major weaknesses related to the use of SWOT analysis such as only pinpointing factors and general nature and brief descriptions of factors (Hill and Westbrook, 1997). Moreover, lack of ranking the importance of the factors and being based on the capabilities and expertise of the persons participating in the process are other weak points (Kangas et al., 2001). In order to avoid this kind of weaknesses of SWOT analysis, a hybrid method named A'WOT has been developed by integrating Analytic Hierarchy Process (AHP) (Kurttila et al., 2000; Pesonen et al., 2001).

The quantitative information basis of strategic planning processes is improved by this hybrid method. In the standard version of A'WOT, SWOT analysis is executed by integrating the AHP (Saaty, 1980) and eigenvalue calculation technique (Kajanus et al., 2004).

Analytic Hierarchy Process was developed for the need of multiple criteria decision making applications (Saaty, 1980) that are used in many cases like government, education, political, sports and so on (Vaidya and Kumar, 2006). AHP makes us to practice pairwise comparisons between factors and criteria in order to prioritize them. AHP is a useful approach that can combine with other methods to form a hybrid model. Mathematical programming, QFD, meta-heuristics, SWOT analysis and DEA are some of the most common tools that are integrated with AHP and used widely in scientific studies (Ho, 2008).

AHP is a multicriteria decision making technique that is used to determine relative priorities by making several comparisons in multilevel hierarchic structures of objective, criteria and alternatives (Saaty and Vargas, 1996; Görener et al., 2012). AHP helps SWOT analysis to be executed more analytically by performing pairwise comparisons between SWOT groups and factors and then analyzing them by means of the eigenvalue technique (Kangas et al., 2001). The means of importance are calculated by pairwise comparison that are determined by Saaty's 1-9 scale (Yüksel and Dağdeviren, 2007)

Table 1. Saaty's 1–9 scale for AHP (Saaty, 1980).

Intensity of Importance	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one over another
5	Strong importance	Experience and judgment strongly favor one over another
7	Very strong importance	Activity is strongly favored and its dominance is demonstrated in practice
9	Absolute importance	Importance of one over another affirmed on the highest possible order
2, 4, 6, 8	Intermediate values	Used to represent compromise between the priorities listed above
Reciprocal of above non-zero numbers	If activity i has one of the above non-zero numbers assigned to it when compared with activity j, then j has the reciprocal value when compared with i	

The hybrid A'WOT model is executed in three main phases; realizing SWOT analysis in order to list factors in every SWOT group, then applying AHP process in order to determine the weights of each SWOT group and finally applying again AHP process in order to prioritize all factors within SWOT groups. The overall factor priority rank is also calculated by multiplying specific group weight by the factors local weight (Gallego-Ayala, 2011).

A'WOT is one of the most preferred approaches for AHP (Ho, 2008). It was applied in different areas such as environment; cases of Finnish forestry (Kurttila et al., 2000; Pesonen et al., 2001; Leskinen et al., 2006), Nyungwe forestry (Masozera et al., 2006) and water resources of Mozambique (Gallego-Ayala et al., 2011), tourism; cases of Ylä-Savo and Kassel (Kajanus et al., 2004) and Sri Lanka (Wickramasinghe and Takano, 2009), information technology; case of construction (Stewart et al., 2002), education; case of innovation system (Nästase and Kajanus, 2008), agriculture; case of silvopasture adoption in south-central Florida (Shresta et al., 2004), manufacturing; cases of machine tool industry (Shinno et al., 2006), consumer electronics (Şeker and Özgürler, 2012), cooker hood (Görener et

al., 2012), chemistry (Taşkın and Güneri, 2005) and textile (Yüksel and Dağdeviren, 2007), business; cases of sport marketing (Lee et al., 2011) and marine casualties at the Strait of Istanbul (Arslan and Turan, 2009).

The hybrid method A'WOT proceeds as follows (Gallego-Ayala et al., 2011):

- The SWOT analysis is executed by identifying the most important factors from internal and external environment.
- AHP technique is applied to get the weights of each SWOT group.
- AHP technique is applied to get the comparative weights of each factor within the SWOT group.

Finally, overall factor priority rank is calculated by multiplying the weight of group by the weight of factor.

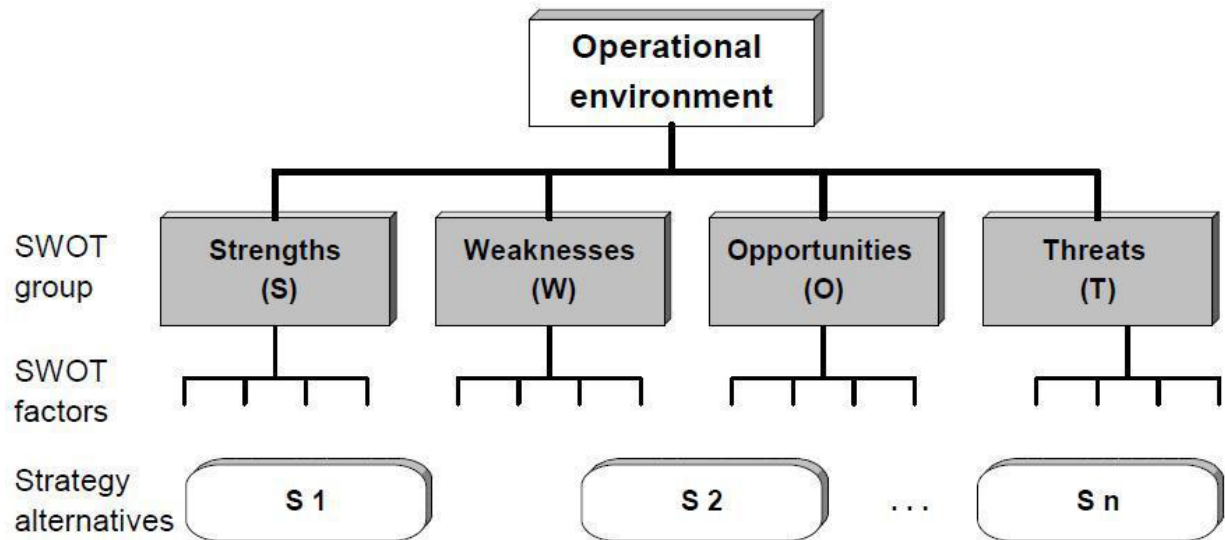


Fig 1. Hierarchical presentation of the A'WOT analysis (Leskinen et al., 2006).

### 3. Case Study

In this research paper, SWOT analysis, as based on previous study (Özmen, 2012), is performed by an expert team that is constituted from four academicians, three bureaucrats from Ministry of Economy of Turkey, two managers from international implementing companies of pre-import program, a foreign trade manager and a general coordinator from private sector and two bureaucrats from Commercial Office of Consulate General of Turkey in Erbil. Moreover, Ibrahim Khalil Custom Facility was visited and observations are inserted into the SWOT analysis.

As a result of literature review, expert meeting discussions and field visit the most important internal and external factors of pre-import program was identified and classified. (Table 2)

Table 2. SWOT matrix

Strengths	Opportunities
(S1) Preventing substandard, counterfeit or unsafe products (S2) Transferring know-how and experience to Iraq's less developed custom system (S3) Both international implementing companies of pre-import program are recognized and accredited by major international organizations (S4) Updating and reorganizing the production and quality managements of exporting companies (S5) Meeting the short term need of custom organization in Iraq	(O1) Possibility to build an effective custom system in future (O2) By preventing substandard, counterfeit or unsafe products, Iraq will be able to build its own industries (O3) Exporting companies that respects laws and standards may increase their market share in Iraq
Weaknesses	Threats
(W1) Only two international companies are implementing this pre-import program (W2) Increasing the cost of all goods imported into Iraq (W3) This pre-import program is generally operated just on documents (W4) Both international implementing companies of this program haven't built a sufficient service infrastructure (W5) Laboratory testing/analysis is carried out for also unnecessary items	(T1) Political and economic instability in Iraq (T2) Additional cost and time problems may cause corruption or some other illegal problems in Iraqi customs (T3) The focus of international implementing companies on collecting fee may damage the seriousness of program

The SWOT factors identified in figure were used to develop a questionnaire model in Expert Choice v.11.5 software for pairwise comparison in order to combine SWOT analysis with AHP method. The respondents of survey performed pairwise comparisons independently so comparisons are based on judgments of experts. They firstly made pairwise comparisons of the SWOT groups and then compared the factors within the related SWOT group. The respondents were asked to evaluate groups and factors using a 1-9 Saaty's scale in order to calculate the priorities. Throughout the study if consistency ratio was bigger than 0,1 , the respondent were kindly asked to remake the questionnaire again.

Table 3. General characteristics of the questionnaire respondents

Characteristics	Number	Percentage of total sample (%)
Gender		
Female	3	23,08
Male	10	76,92
Institutions		
Academic and research institutions	4	30,76
Government agencies	5	38,48
International pre-import program companies	2	15,38
Private sector	2	15,38

The data obtained from respondents were analyzed to calculate group priority, factor priority within the SWOT group and overall priority of factor. The overall priority of factor is calculated by multiplying the group priority by the factor priority within the group.

Table 4. The priorities of the SWOT factors and groups

SWOT group	Group Priority	SWOT factors	Factor priority within the group	Overall factor priority
Strengths	0.331	(S1) Preventing substandard, counterfeit or unsafe products	0.221	0.073
		(S2) Transferring know-how and experience to Iraq's less developed custom system	0.301	0.100
		(S3) Both international implementing companies of pre-import program are recognized and accredited by major international organizations	0.194	0.064
		(S4) Updating and reorganizing the production and quality managements of exporting companies	0.189	0.063
		(S5) Meeting the short term need of custom organization in Iraq	0.095	0.031
Weaknesses	0.236	(W1) Only two international companies are implementing this pre-import program	0.234	0.055
		(W2) Increasing the cost of all goods imported into Iraq	0.248	0.059
		(W3) This pre-import program is generally operated just on documents	0.189	0.045
		(W4) Both international implementing companies of this program haven't built a sufficient service infrastructure	0.172	0.041
		(W5) Laboratory testing/analysis is carried out for also unnecessary items	0.157	0.037
Opportunities	0.240	(O1) Possibility to build an effective custom system in future	0.357	0.086
		(O2) By preventing substandard, counterfeit or unsafe products, Iraq will be able to build its own industries	0.259	0.063
		(O3) Exporting companies that respects laws and standards may increase their market share in Iraq	0.384	0.092
Threats	0.193	(T1) Political and economic instability in Iraq	0.367	0.071
		(T2) Additional cost and time problems may cause corruption or some other illegal problems in Iraqi customs	0.382	0.074
		(T3) The focus of international implementing companies on collecting fee may damage the seriousness of program	0.251	0.048

The results reveal that the strength group is influential compared with other three SWOT groups. The priority score representing the strength group is 0.331 (Table 4), followed by opportunities (0.240), weaknesses (0.236) and threats (0.193). The most important strength is *transferring know-how and experience to Iraq's less developed custom system* with a factor priority within the group 0.301. The most serious weakness factor, with a factor priority 0.248, is *increasing the cost of all goods imported into Iraq*. It is followed very closely by *only two international companies are implementing this pre-import program* (0.234). This result is expected because our field visit gained us the observation that if a Turkish origin company/institute takes role in this program as the third implementing company, it minimizes costs and time spent for certification. *Exporting companies that respects laws and standards may increase their market share in Iraq* has the highest factor priority within the opportunity group (0.384). With a priority score of 0.382, *additional cost and time problems may cause corruption or some other illegal problems in Iraqi customs* is shown to be the major threat factor.

#### 4. Conclusion

In conclusion the present paper shows a real application of SWOT Analysis and AHP methods combination. SWOT Analysis and AHP methods are two fundamental and popular decision making methods that are used commonly in the literature of multi-attribute decision-making. There are two phases in the proposed hybrid model, in the first phase SWOT is used in order to find factors with its opportunities and threats. In the second phase pair wise comparisons of AHP is used in order to rank the factors. In this paper, A'WOT method that is the combination of both SWOT and AHP methods is utilized in order to analyze Iraq's new pre-import inspection, testing and certification program. The present research has a considerable importance for the businesses whose business areas are within the list given in introduction section. Such kind of businesses should pay more attention while trying to export their products to Iraq because Pre-import Inspection, Testing and Certification program of Iraq became an important factor to get a market.

A'WOT hybrid method is applied in Iraq's new pre-import inspection, testing and certification program in order to get a general view and to find out if this program functions efficiently. Results show that this program is useful to protect the country, consumers and local manufacturers from substandard products that may endanger public health, safety or the environment, counterfeit or unsafe products and unfair competition of imported goods which do not comply with the approved standards.

Unfortunately, we find out that the number of implementing companies is not enough and both European origin implementing companies of this program haven't built a well-organized service infrastructure and don't serve efficiently so this causes exporters to lose time and money. We realized that the instability in Iraq and possible corruption or other illegal activities are the most serious external unfavorable factors. It can be referred that this program may help Iraq to build a well-developed custom system in future. Finally, exporting companies that work seriously and respect laws and standards have the chance to increase their market share in Iraq.

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