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PROPOSING A TRANSITION STRATEGY FORMULATION BASED ON BUSINESS MODEL: A CASE STUDY IN GENERAL CONTRACTOR COMPANY

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ABSTRACT

Environment is the head player in businesses life cycle because of changes that it dictates during the companies evolutions. The modality of responding to alterations leads enterprises to successfulness or failure. The more essential changes are, the more accommodations are required. This article describes such circumstances for a general contractor company which encountered a sudden change and proposes a simple approach based on business model, environment assessment tools and risk analysis in order to formulate strategies for relocating the business to the new position.

INTRODUCTION

As time passing through twenty first century enterprises face increasing in rate of business changes and how they choose to adapt with this dynamic environment become more critical and controversial. Occasionally, changes are unpredictable or haven't been deal properly which then need emergency decisions. In the case of encountering such suddenness, it must be chosen whether accepting unsuccessful or taking approach in order to coordinate which almost lead to review in business execution immediately. Responding to changes means reformulation current strategies and redesigning business model subsequently.

This research is conducted to study an Iranian general contractor working in constructing steel plants as a case that has faced an alteration rooted in political environment. The Company was placed behind a strong barrier in its contracted projects because of the change and decided to choose a new strategic goal by developing its value chain and becoming a technologist in the class of designing steel plants. But the main question is *how does this company alter his business model and strategies quickly?* Or in more comprehensive point of view *how does this company deal with changes?* Some studies have done around this concept by applying future approach in business model and assess the external environment but the fact that has been missed is the effectiveness of internal environment because its factors must also be readjusted. This article proposes a simple model consisting of performing SWOT analysis, IE matrix and risk assessment in business model components in order to formulate guidelines as transition strategies.

Literature review

Internal-external analysis

SWOT as a technique provides a frame work for identifying the enterprise situation in a particular industry from both internal and external points of view. The four letters of SWOT stand for Strengths, Weaknesses, Opportunities and Threats. Concept of this analysis came first from the study conducted at Stanford Research Institute from 1960-1970 to find out what had gone wrong with corporate planning and to create a new system for managing change [1], from that time it has been widely used in researches.

This tool has some limits which have been discussed in many articles; the most important is its disability of categorizing and prioritizing strategies. For overcoming the constraint, decision making approaches have also been applied. The process of this technique contains two steps as following:

- Identifying key factors in each four categories by Delphi analysis or brainstorming among a group of industry professionals and creating SWOT matrix.
- Combining identified factors to define four pair wise SO, ST, WO and WT groups of strategies.

Other tools which have usually exerted with SWOT are EFE (External Factor Evaluation), IFE (Internal Factor Evaluation) and IE (Internal-External) matrices. EFE allows strategists to evaluate economic, social, cultural, demographical, environmental, political, governmental, legal, technological and competitive

KEY WORDS

Business model, SWOT analysis, IE matrix, Risk analysis, Transition strategies

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information when IFE assesses the major strengths and weaknesses in the functional areas of a business [2]. As a concluding approach, IE matrix positions an organization's various divisions in a nine cell display [2] based on IFE and EFE total weighted scores as illustrated in [Fig. 1].

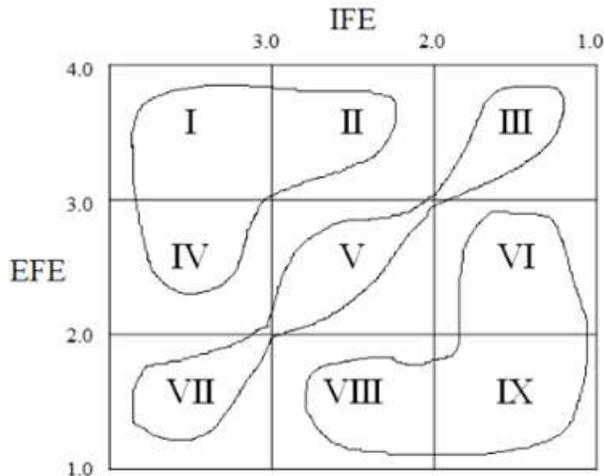


Fig. 1: IE Matrix. Source: [2]

Those cells can be considered through three main regions with different strategy. First, the prescriptions for divisions that fall in to cells I, II, or IV can be described as grow and build. Intensive (market penetration, market development, and product development) or integrative (backward integration, forward integration, and horizontal integration) strategies can be most appropriate for these divisions. Second, divisions that fall in to cells III, V, or VII can be managed best with hold and maintain strategies; market penetration and product development are two commonly employed strategies for these types of divisions. Third, a common prescription for divisions that fall in to cells VI, VIII, or IX is harvest or divest.

Some recent related studies are cited below:

- [3] defined and prioritized the Iran's scrap strategies with ANP-SWOT approach.
- [4], formulated strategy using SWOT technique combining with important-performance analysis.
- Christopher M.Cassidy et al 2013, suggest visual mapping of the External Competitive Profile Matrix (ECPM) and Internal Competitive Profile Matrix (ICPM) in a manner similar on the Internal-External (I-E) matrix to enable greater comparative understanding of the relative strengths, weaknesses, opportunities, and threats of the respective companies.

Business model

Business Model which in this study is abbreviated to BM is a story that explains how enterprise works. A good model answers Peter Drucker's age old questions: Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost? [6]. From this definition main players of this model reveal which are customer and proposed value to them, cost and revenue and channels for following through.

Business theoreticians have organized these items in to different taxonomies applicative to their purposes. Mahadevan [5] defined three streams for his model; value, revenue and logistical. Afuah and Tucci [6] decomposition their model to eight components: customer value, scope, pricing, revenue source, connected activities, implementation, capabilities and sustainability. Osterwalder [7] named his model Canvas and framed it based on nine components: customer segments, value propositions, channels, customer relations, revenue streams, key resources, key activities, key partnerships and cost structure. Bouwman et al (8) named their model as STOF which is stand for Service, Technology, Organization and Finance.

Among mentioned models, Canvas is the most comprehensive template [9]. Osterwalder and Pigneur [10] published a book to visualize and describe this model and also suggested assessing

BM components in detail by using SWOT analysis and utilize the results as a foundation for its change.

Risk

Risk is related to what can happen in the future [11] whether positive or negative which has roots in internal and external enterprise circumstances and managing risk is about managing effectively in a risky and uncertain world [12] to maximize merits and diminish demerits. The central part of risk management is risk analysis that is a proactive approach with three main steps:

- Identifying and categorizing risks by sources of them [13]. SWOT analysis is one of the practical techniques for defining the sources of risks.
- Assessing them with qualitative or quantitative analysis
- Planning how to response to risks with strategies

The concept of risk was used by many scholars from different industries and in various fields from safety to supply chain and business model. Sisodia et al [14] proposed model for business risk in renewable energy segment with Monte Carlo and net present value techniques. Ghazinoory et al (15) applied qualitative risk analysis with decision making tree in order to develop scenario for finding business model orientation. Yao Zhang et al [16] focused on risk interdependence and constructed an optimization model for selecting risk response strategies.

METHOD

The chosen approach by this article as illustrated in [Fig. 2] in the case of changing in company existing BM because of its new strategic aim is proposing a transition strategy formulation to fulfill the gap between first and second BM to prepare company at least for being alive before the stage of development. This formulation includes three steps:

- First: Applying SWOT analysis in BM components separately for internal and external market before strategy proposing stage and mapping company position in each part on IE matrix
- Second: Identifying risks based on weaknesses and threats from SWOT matrix and preparing risk break down structure based on BM then analyzing them with qualitative approach
- Third: Designating risks responses as transition strategies



Fig. 2: Chosen Approach for Considering Changes.

Defining the position of each BM component

An expert team from inside and outside of company analyzed the potential customer segments in internal and external markets for near future and the other eight components were arranged on the basis of existing abilities and minimum requirements of this new business part. Another team comprises of ten expertise familiar to this industry and also the considering company were invited to contribute in this research for applying SWOT analysis as [Fig. 3].

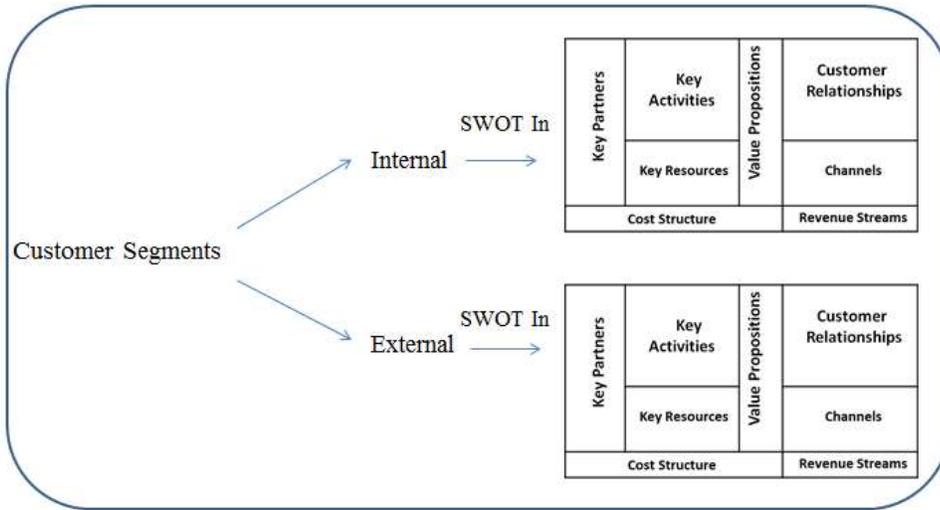


Fig. 3: Pattern of Applying SWOT Analysis.

In the phase of identifying SWOT factors Delphi analysis and semi structured questions were put in and for weighting them expert team answer to structured questionnaire with five selection switch to be conform to likert scale. The next step is ranking each SWOT elements that was done by 100 company masters in related disciplines. Figure 4 and 5 demonstrates the position of company respectively in interior and exterior markets in each building block of BM which are labeled as VP for value propositions, CR for customer relationships, CH for channels, KR for key resources, KA for key activities, KP for key partners, CS for cost structure and lastly RS for revenue stream.

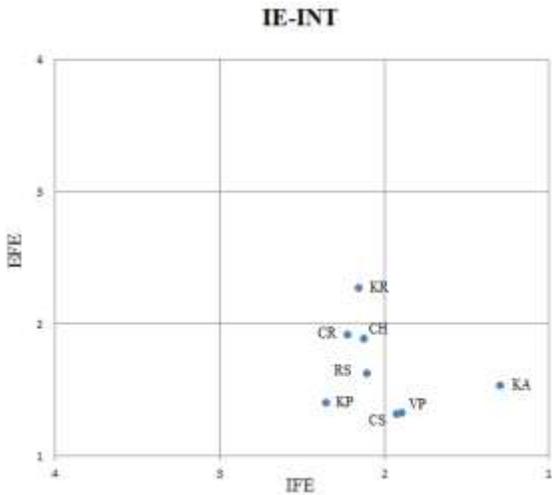


Fig. 4: Map of BM Components in Internal Market Segment.

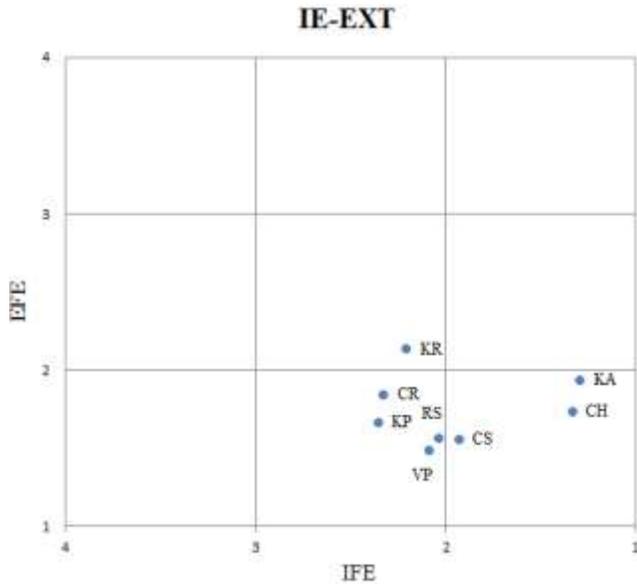


Fig. 5: Map of BM Components in External Market Segment.

As it can be seen, almost all elements positions except key resources are in third division of IE matrix with harvest and divest strategy recommendation. For further assessment this article suggests risk analysis in each BM building block.

Assessing risks with qualitative analysis

In this step with regard to company position expert team was requested to draw main risks out from weaknesses and threats in a brainstorming meeting which led to two scenarios based on sanctions against Iran. Then a risk break down structure was provided for categorizing uncertainties based on their potential causes in BM components as illustrated in [Table 1]. The risk areas haven't got the same divisions so sub levels are defined after level 3.

Qualitative risks analysis assesses the priority of identified risks using their relative probability or likelihood of occurrence and the corresponding impact (PMBOK 5th) on each element's function if risks occur. For performing these analysis two questionnaires with five responses likert scale were prepared to cover BM components risks in both customer segments.

Every risk has selection switches from very probable to not probable for likelihood and very high to very low for impact. Each of the scales is converted to the numerical measures and the score of risks are calculated by equation (1). These measurements can be depicted by 5x5 matrix as shown in [Table 2] and [Table 3] shows the maximum results of risk assessment in BM components by summing risk rates in each part. Equation (1) $R_i = P_i \times I_i$

Where R_i is the score of risk i , P_i and I_i are respectively the average of probability and impacts from the experts responses.

Table 2: Probability-Impact Matrix

Impact	Very Low	Low	Moderate	High	Very High
Probability	(1)	(3)	(5)	(7)	(10)
Very Probable (10)	10	30	50	70	100

Some What Probable (7)	7	21	35	49	70
Neutral (5)	5	15	25	35	50
Some What Improbable (3)	3	9	15	21	30
Not Probable (1)	1	3	5	7	10

Table 3: Results of risk assessments

Components	Internal Market Rate $\max(\sum x)$	External Market Rate $\max(\sum x)$
Value Propositions	230.3	214.8
Customer Relationship	15.1	9.4
Channels	46.9	207.5
Key Resources	162.2	205.1
Key Activities	50.4	119.3
Key Partnerships	10.0	23.5
Revenue Streams	29.4	56.2
Cost Structure	39.7	78.4

According to [Table 3] the orders of BM building blocks from the most risky to the least one in market segments are:

Internal Market: Value Propositions > Key Resources > Key Activities > Channels > Cost Structure > Revenue Streams > Customer Relationship > Key Partnerships

External Market: Value Propositions > Channels > Key Resources > Key Activities > Cost Structure > Revenue Streams > Key Partnerships > Customer Relationship

For determining the criterion of top risks, this article suggests using weighted arithmetic mean between averages of risks ranks as a representative of each BM components for including both important factors: the risks ranks and also the number of uncertainties in each element which are not the same. [Table 4 and 5] shows the calculation of top risk indicator.

Table 4: Internal market top risk indicator

Components	Average*	Number of Risks (n)	Top Risk Indicator** (TRI)
Value Propositions	25.6	9	$TRI = \left(\frac{\sum_{j=1}^8 Ave_j \times n_j}{\sum_{j=1}^8 n} \right) = 16.2$
Customer Relationships	7.6	2	
Channels	11.7	4	
Key Resources	14.7	11	
Key Activities	12.6	4	
Key Partnerships	5.0	2	
Revenue Streams	14.7	2	
Cost Structure	19.9	2	

* Average as a representative character of each component which is abbreviated to Ave

** Top risk indicator calculated from weighted mean which is abbreviated to TRI

Table 5: External Market Top Risk Indicator

Components	Average*	Number of Risks (n)	Top Risk Indicator** (TRI)
Value Propositions	26.9	8	$TRI = \left(\frac{\sum_{j=1}^8 Ave_j \times n_j}{\sum_{j=1}^8 n} \right) = 22.3$
Customer Relationships	4.7	2	
Channels	34.6	6	
Key Resources	14.7	14	
Key Activities	29.8	4	
Key Partnerships	11.8	2	
Revenue Streams	28.1	2	
Cost Structure	26.1	3	

* Average as a representative character of each component which is abbreviated to Ave

** Top risk indicator calculated from weighted mean which is abbreviated to TRI

Designating transition strategies

By categorizing uncertainties with ranks more than top risks indicators beyond the BM classifies as action needed parts and prioritizing them based on their ranks the considering list was prepared. Then strategic team responded to the list in brainstorming meeting in the way that is shown in table 6 and 7. As mentioned in PMBOK standard replications to different risks can be classified in four main strategic groups: Avoiding, Mitigating, Transferring and Active acceptance.

DISCUSSION

SWOT analysis and IE matrix were applied to define the BM component's positions by assessing current capabilities of the company from the view point of new BM. As illustrated all building blocks except key resources are in third portion of IE matrix with harvest or divest strategy that is not appropriate situation for a company chooses new strategic goal. Being alive generally means at least be in cells VII, V and III with maintain strategy. These positions of components can be explicated in two ways:

- First, existing BM is in the maintain stage not in the development so the company is not mature enough for this change.
- Second, the first BM is in the developing stage but the occurred change was more than its throughput and this also means that the company is not enough grown up for responding to the change.

For key resources results are different and they are in cell V which enunciates that although it is not appropriate time for this company to change, resources are enough for performing new BM. It is a fact that in IE matrix for this case as much as the positions are further from the maintain portion, the bigger strategic gaps are and they need more modifications, So just as depicted in figure 4 and 5 for internal market KA, CH and CS and similarly KA, VP and CS in external market are visually the critical elements. These components need urgent solutions for both IFE and EFE aspects.

Risk analysis was also done to assess the BM components more precisely and prioritize the required strategies for transferring company to new BM. Inferences drawn from analysis show that in internal segment; value propositions and key resources are the most critical parts whilst for external market exigent parts are value propositions, channels and key resources. Comparing results from IE matrix and risk analysis reveals that although key resources are enough for executing new BM, its benefits can be lost because of risks it has, So IE matrix can't define the guide route solely.

Whereas the different number of risks were defined in each building block, not only risk ranks but also the multiplicity of them is important because medium or low rank risks can be occurred concurrently so weighted mean was applied for defining top risk rank in order to reflect the influence of this issue. Then top risks were defined and expert team responded to them in four main groups depend on company abilities and capabilities. The outcome show that despite the fact that in many researches external factors were assumed to be the most risk drives, as displayed intra organizational factors has also considerable number of top risks in each market.

CONCLUSION

It has been inevitable for firms to be confronted with changes from their outside environment so they must dispose them properly and modify their business model and strategies. The first step of this alteration is about finding the company position with in the new condition and evaluate the distance between what it is and what it need to be for at least being in maintain situation. Therefore factors from inside of company as well as outside forces must be dealt with. Prioritized list of strategies can show the guideline through this transition and in rapid alterations risk analysis can be an appropriate tool. In order to expanding mentioned concepts this article recommends agility analysis in business model which can consider both internal and external factors in business.

CONFLICT OF INTEREST

There is no conflict of interest.

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None

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