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IN THE LONG-RUN, FORECASTING OR SCENARIO?

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Özet: Öngörüleme teknikleri, dönüm noktalarını tahmin etme ve karar vermede ki köprü rolünde gereksinimi karşılayamamaktadır. Bu çalışma, senaryo planlamasını bir alternatif yöntem olarak tartışmaktadır. Senaryo planlamasının güçlü ve zayıf yönlerini belirtmektedir. Aynı zamanda, öngörüleme teknikleri ve senaryo planlamasını karşılaştırmaktadır. Senaryo planlamasının stratejik karar verme sürecindeki önemi belirtilmiştir. Sonuç olarak, senaryo yönteminin özellikle uzun vadede yararlı bir araç olduğunu söyleyebiliriz.

Abstract: Forecasting techniques have failed in some respects such as predicting turning points as well as serving as a link between forecasting planning and decision making. This paper covers an assessment of the literature on scenario analysis as an alternative approach. It points out the advantages and disadvantages of scenario planning. It also compares traditional forecasting techniques and scenario analysis. Scenario planning's value to the strategic decision making is also argued. As a result, it can be argued that scenario approach is a useful tool especially in the long run.

I. Introduction

We live in an ever-moving environment. Not only do we experience month-to-month variation in business activity when things are going smoothly, but we are also beset by apparently unpredictable events such as the Gulf War. Businesses around the world continue to treat predicting the future as a high profile activity, many large companies apply to forecasting techniques. So why do these companies around the world set such store by forecasting? The main reason is to plan for the future, whether that plan relates to the general shape of the company or the number of widgets to order from the supplier of this month. Forecasting provides the bridge between the known past and the unknown future. A major of successful forecasting is that we stand to gain competitive advantage. Hence, the accuracy of forecasting activities becomes crucial for companies when they prepare their future strategies. Makridakis (1990:170) suggested that,

"The ability to forecast accurately is central to effective planning strategies. If the forecasts turn out to be wrong, the real costs and opportunity costs...can be considerable. On the other hand, if they are correct they can provide a great deal of benefit -if the competitors have not followed similar planning strategies."

Makridakis and Hibon (1979:115) argued that certain repetitive patterns may be predictable. However, when it comes to one time events, discontinuities, such as technological innovations, price increases, government

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legislation and so on, forecasting becomes practically impossible. In their opinion, very little or nothing can be done, "other than to be prepared, in a general way, to..... react quickly once a discontinuity has occurred". Mintzberg (1994) argues that since there are discontinuous developments in the environment the future can be predicted only by extrapolating from the past, corporations cannot predict the future with confidence. It is clear that the accuracy of forecasting techniques will decrease in the long run. Then which approach should companies use in the long run? Some researchers (Porter 1985, Wack, 1985) introduce scenario planning as another tool.

Scenarios are a powerful device for taking account of uncertainty in making strategic choices. They allow a firm to move away from dangerous, single point forecasts of the future in instances when the future cannot be predicted. Scenarios can help encourage managers to make their implicit assumptions about the future explicit, and to think beyond the confines of existing conventional wisdom. In the light of the above discussion, we might ask the question that in which circumstances scenarios are an alternative of forecasting techniques and what are their benefits to the strategic planning. Therefore, the main objectives of this paper is to describe scenario method and to contrast it with other planning tools. The second objective is to discuss its value to strategic planning.

II. What is Scenario Approach?

The first time scenario planning emerged after World War II as a method for military planning. Its theoretical roots were mainly explained by Godet (1987) and was pioneered in the industrial field by Royal Dutch/Shell in the early 1970s under the tutelage of Pierre Wack. According to Huss (1988) "a scenario is a narrative description of a consistent set of factors which define in a probabilistic sense alternative sets of future business conditions". Kahneman and Tversky (1982) define a good scenario as "one that bridges the gap between the initial state and the target event by a series of intermediate events... A scenario is especially satisfying when the path leading from the initial to the terminal state is not immediately apparent, so that the intermediate stages actually raise the subjective probability of the target event" As can be seen these definitions, scenarios provide a long term macro view which serves as a backdrop for more traditional forecasting approach. While some researches consider scenarios as one of the forecasting techniques in strategic planning (Shearer 1994), others state scenarios as another technique used for long-term planning. This work approves the latter approach. The first reason is that, scenario usually provides a more qualitative and contextual description of how the present will evolve into the future, rather than one that seeks numerical precision. Second, scenario analysis usually tries to identify a set of possible futures, each of whose occurrence is plausible, but not assured.

Strategic planning process assumes that, managers select the best alternative (Altunoglu, 2000). It is clear that the problem of selecting the best alternative revolves around uncertainty. When everything is uncertain then we will not be spending energy and time to predict future. Scenario planning assumes that there are elements in any situation which are to a degree predictable. An effective scenario therefore does two things.

- to improve knowledge of what is predetermined
- to develop awareness of what is not predetermined

Scenario planning is premised on the assumption that it is only in the full light of these two aspects of the situation that trying to improve the effectiveness of decisions makes sense. Scenario analysis emphasise the link between planning and forecasting. Scenario approach provides a practical solution to some of the problems inherent in assessing and describing an unpredictable environment. They help companies to evaluate their market position with respect to their outside environment. The benefits of scenario planning can be summarised as follows:

- scenarios generate procedures can be user friendly
- scenarios can incorporate the results derived from other forecasting techniques
- subjective "soft" variables, such as possible shifts in consumer lifestyles, can be introduced and integrated with harder, more quantitative measures, such as populations age distributions so that they can be used in forecasting techniques
- scenarios offer a vehicle for environmental assessment rather than offering forecast per se.
- provides insights into business dynamics
- encouraging intra-corporate communications
- multiple scenarios help management visualise the extent of possible uncertainty
- builds team spirit and consensus (Huss, 1988; Linneman and Klein, 1985)

Even though scenarios are useful tools, they have some shortcomings as well. As Mandel (1983) argues scenarios are;

- expensive, hard to use
- skilled staff is required
- more qualitative than quantitative, more concerned with perceptions than with facts, more exploratory than extrapolative, and more a product of imagination than of scientific method
- planners are disappointed with the results since they are not specific solutions.

III. Scenario vs. Forecasting

Van der Heijden (1996) argues that scenario planning differs significantly from traditional approaches to strategic development, namely

rationalistic and evolutionary. It can only be understood in retrospect. In order to underline the difference we need to discuss these approaches.

a. Rational approach to strategy

The first of these approaches holds an implicit belief that the business world is predictable, and if we could only find the right tool we would be able to accurately predict the future, and then develop a strategy to guarantee our success. This approach focuses on rational analysis and largely relies upon data and information to communicate its message. This approach has undoubted attractions for managers, as it perpetuates the belief that it is possible to be 'in control' of strategy (van der Heijden, 1996). Unfortunately, this approach to strategy lets us down just when we need it most, when an unforeseen event occurs that makes our strategy obsolete.

b. Evolutionary approach to strategy

The evolutionary approach advocated by Henry Mintzberg (van der Heijden, 1996) suggests that strategy emerges retrospectively, and that when people talk about their strategy they usually do so as a way of attempting to make sense of the series of events that resulted in 'our strategy'. Van der Heijden (1996) feels that managers dislike this approach as it suggests they are powerless proactively to effect strategy.

c. Processual approach to strategy

Scenario planning is a processual approach (van der Heijden, 1996) to strategy that takes the view that the business world is indeed unpredictable, but that certain events are predetermined.

Van der Heijden (1998) argues that rationalist's view can be called a variance theory. This theory argues that the world exists independent of the observer, all relations are basically unequivocal, and uncertainty is due to measuring and computing constraints, leading to error which can be minimised to any degree desired by investment in time and resources. The processualist adopts a process theory, which includes relationships which are indeterminate by nature. Prediction is not possible, the future is uncertain in a fundamental way, and can only be expressed in multiples, called scenarios. According to him, the forecaster thinks in terms of variance theory, the scenario thinker in terms of process theory. The forecaster looks for a model of reality containing the necessary and sufficient conditions to pin down the future, the scenario thinker is satisfied to work with only necessary conditions, and is happy to explore the multiple possibilities these lead to. Having discussed the theoretical background, we can now detail the major differences. The Table 1 summarizes the differences.

Table 1: *The Differences of Forecasting and Scenario Planning*

Forecasting	Scenario
Quantitative, statistical summary of expert opinion	Qualitative, verbal description of the future
Passive attitude to the future (sources of uncertainty not specified)	Active attitude towards the future
Assumes future can be predicted with confidence	Assumes it is not possible to predict the future
The future is the result of the past	The present explains the future
Directly usable as input to decision process	Require further judgements
Future is single and certain	Future is multiple and uncertain

(Adopted from Meristo, 1989. p:350)

1. Forecasts are a statistical summary of expert opinion. Forecaster may give just one number or a range. The result is always a reflection of expert opinion based on probability assessment. However, a scenario is much more a conceptual description of a future, based on cause and effect.

2. A forecaster's sources of uncertainty are generally not made specific. The sources of uncertainty become obscured in an analysis. On the other hand, scenarios address key uncertainties through chains of cause and effect. Scenarios allow the decision maker to look not just at the outcomes, but also at the driving forces. Scenarios try to highlight the reasoning underlying a forecast, with explicit attention to sources of uncertainty (Schomaker, 1991)

3. Forecasting assumes that it is possible to predict the future. It takes the rationalist view and is based on its assumption that there is one right answer and the art of strategy is to get as close as possible to it. The task of forecasting must therefore be given to the people with the best capacity in terms of intelligence and computer power as this will ensure that the answer will be as close as possible. On the other hand, scenario planning has a different, more processual oriented, starting point, based on the assumption that there is no one best answer, and there is a point beyond which accuracy cannot be improved. This means that it is important that risk is faced up to by the people who carry the accountability and responsibility for taking the strategic decisions. Scenario planning assumes the future cannot be predicted and therefore uncertainty must not be ignored. Making a prediction where there is fundamental uncertainty is seen as a basically dangerous notion as it takes away from the decision maker the insights needed to come to a responsible conclusions.

4. Forecasting techniques describes the future according to past. The methods used in the process use the past data and predict the future accordingly. In contrast scenario planning considers the present and makes multiple projections about future.

5. Forecasting is efficient in reducing rich information into a simple form in which it can be passed on easily for operational purposes. Scenarios have much more information, they are richer because they give the whole cause and effect story, culminating in an understanding of why things happen. However for this reason they are inefficient as input to yes/no type decision making. It is less straightforward to make a decision on the basis of a set of scenarios than a forecast. Scenarios require further judgements. Scenarios do not normally produce conclusions in a mechanistic way. Thinking and analysis will be required before an action emerges.

6. There is only one outcome of the forecasting process. Therefore, one can compare what has come out with what was happened. On the other hand, scenarios cannot be proven or disapproved since they do not claim that the future stands certainly as predicted. Instead, it displays multiple possible futures. Therefore, they are not meant to be tested against what will happen.

IV. Application of Scenarios

Scenarios are by no means a magical device for helping make all kinds of decisions. Scenarios can be applied especially in the following situations.

a. When an industry is in a state of relatively slow incremental change, forecasting is an effective way of planning. It projects the future on the basis of what was seen in the past. The problem with forecasting is that people start to believe that this situation will continue forever (Makridakis, 1990). However there is always a point in time for a while but forecasters need to be aware of the variables which could suddenly break the relationship with the past and create a trend break. Forecasts may work very well for a while, but forecasters need to be aware of the variables which could suddenly break the relationship with the past and create a trend break. So, how does the accuracy of forecasting methods affect planning period? As Mintzberg (1994) argues in unstable environments planning becomes shorter-term, and policies must exhibit a higher degree of flexibility. The comprehensiveness of the strategy should depend on the degree of uncertainty in the environment. The complexity in the business situation faced by most organisations suggests that the time horizon should be short, months rather than years. Then, if forecasting is not the answer, how does the companies formulate their strategies in uncertain environments? Van der Heijden (1996) argues that in the short term predictability is high and forecasting is a useful tool for planning. In the long term since everything is uncertain, the projections about future are just the hopes of planners. In the middle term, scenarios are essential tools as there is a level of predictability but also considerable uncertainty. Businesses working with long-term plans in a highly volatile environment find scenario approach very useful.

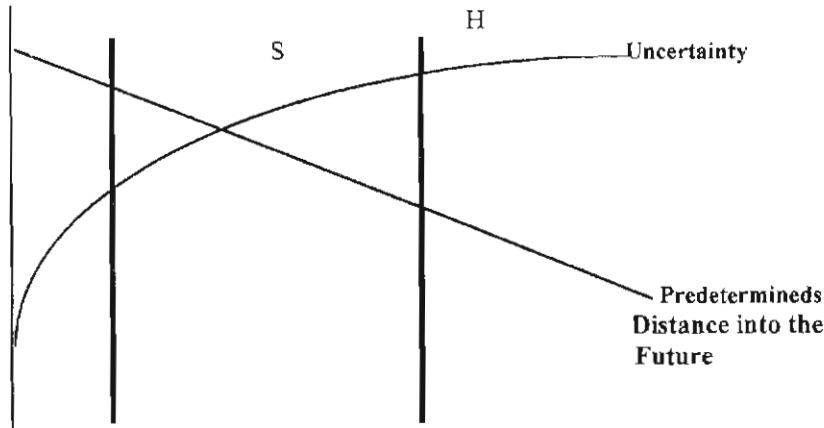


Figure 1: *The use of Forecasting (F), Scenario (S) and Hope (H)*
adopted from Van Der Heijden (1996:92)

b. Scenarios are very effective as a context for guiding and evaluating other long-term forecasts. In effect, they provide a background description of societal forces and conditions for considering the assumption, the interactions, and the outcomes of other kinds of projections. As such analytic (trend analysis, econometric modelling) and conjectural (Delphi, cross impact analysis) techniques can be used to arrive at scenario content.

c. A scenario framework is usually essential when long-range risk and vulnerability analyses are conducted. Formal vulnerability analyses done without explicit consideration of plausible changes in the macroenvironment will likely identify only those problems that will emerge were the future much like the present. A complete scenarios are not necessarily needed for such analysis, but at least scenarios that cover major points are needed.

d. A number of companies today pay close and continual attention to forces in the macroenvironment that will soon or eventually affect them (Porter, 1985). Scenarios focused on the broad strategic concerns of the company are an ideal mechanism for identifying crucial uncertainties for environmental monitoring. The process of monitoring the environment is itself an important step in revising scenarios and reviewing strategic plans.

V. Conclusion

This paper has covered the literature concerning with scenario planning. However, it has discussed nothing about the formulation of scenarios since the topic is well covered elsewhere (Schnaars, 1987). Rather it has addressed the issues of whether there is a difference between scenario approach and forecasting and if there is which one is superior in the long-run. It is stated that

scenarios can offer a type of insurance for important decisions that would be hard to obtain via traditional forecasting techniques. This article has shown how the scenario planning approach to strategy development differs from more traditional approaches in two important areas. First, scenarios are constructed from the basis that the future cannot be predicted, but that some end-states are predetermined dependent upon the presence of an interaction of identified events. Second, scenario planning is described as processual, having a strong process focus, which is continually reviewed and amended based upon new insight and the acquisition of new knowledge.

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