OPERATIONAL DECISION-MAKING: DIFFERENCES IN PRIMARY AND SECONDARY PERCEPTION

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ABSTRACT

This paper outlines the differences in perception between the person making an operational decision within an SME (Primary) and someone who is knowledgeable of the decision being made, but not directly involved in the process (Secondary). An empirical rating mechanism is used to ascertain a participant's attitude to a specific set of operational decisions. Over 130 interviews were carried out in 25 SMEs. The Primary and Secondary responders were assessed and the differences in decision rating outlined and discussed. The difference in attitude to a decision within an SME is not a new topic in literature. Nicholson and Cannon [2000], discuss the differences in how CFO's and MD's view top team dynamics, where differences are elucidated in interviews between the different groups. In this paper the differences in perception are based on a decision taxonomy methodology, which allows for the empirical rating of one operational decision over another. The delta in perception can thus be deduced and plotted graphically for analysis and discussion.

JEL clasiffication: D7, D81

Keywords: Operational, Decision-making, Perception

INTRODUCTION

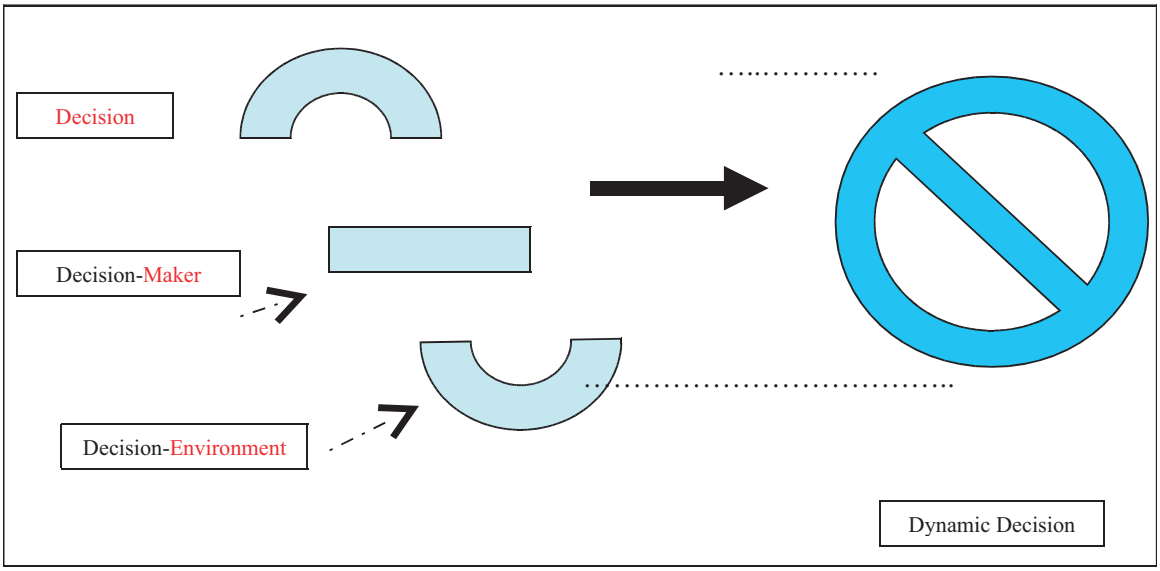
Classification, particularly in a scientific sense, deals with the description of an entity and applies observed characteristics to a taxonomy key, thus placing the entity into its natural 'home' or category. For the purposes of this paper the enterprise in question is a Small to Medium Enterprise (SME) as defined by the European Union [EU Commission, 2003]. Within an SME, many decisions must be made. Some occur regularly, some less frequently; many involve multi-disciplinary

skills, while more still are made in the 'normal' function of the role in question. All of these decisions, however, need to be made. Within a functional enterprise, the ability to make decisions, frames the success or otherwise of the company. An operational decision within an SME can take many guises. Take for instance the case of the following two decisions: the decision to make or buy a particular component within a manufacturing process and the decision to paint walkway lines on the factory floor. The make-buy decision would appear to most people to be more 'important'. If you manufacture a component that could be bought for less than your own manufacturing costs, then failure to do so, would run the risk of inefficiency, and cost you customers and possibly your business. Alternatively, in the spirit of the Chinese butterfly proverb, an argument could be made for the 'importance' of the latter decision. While walkway lines on the factory floor may not initially seem critical, their absence may result in an accident, which if serious enough could result in the temporary closure of the factory, the same subsequent loss of customers, and ultimately of the business itself. Clearly this logic could in theory be applied to all decisions and any proposed methodology must overcome this aspect of decisions analysis.

The effectiveness of information systems, formal or otherwise, is difficult to evaluate in an independent manner. It would be quite problematic to qualify a statement that a particular decision has been made 'easier' by virtue of the introduction of a new methodology or information delivery technique. While colloquial evidence may suggest this is indeed the case, an empirical evaluation eludes the modern practitioner. There is still no method of classifying a decision in an empirical manner. Such a classification would allow an enterprise to assess the number of 'difficult' decisions, specific to the enterprise in question. The more of these an organisation has, the more difficult the operation will be to manage. The value of this aspect of the research lies in the provision of a tool, which can be used to evaluate the effectiveness of a management improvement plan (e.g. an ERP implementation). The number of 'difficult' decisions would now be measurable and a reduction or delta can be ascertained on behalf of the organisation after a DSS implementation program.

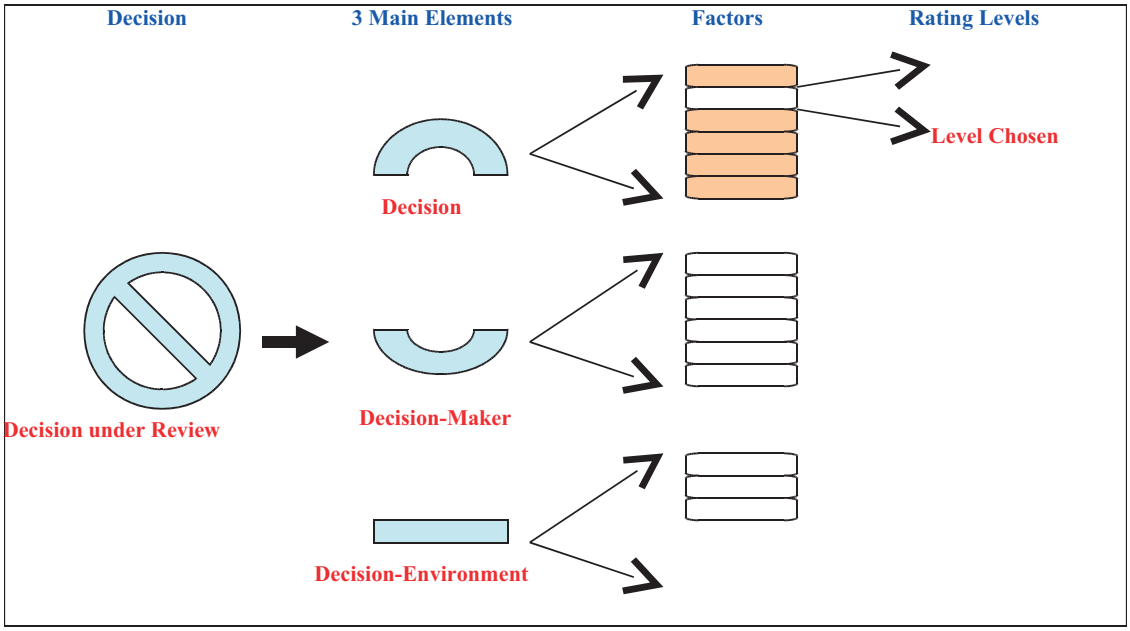
It is also noted at this point that a decision does not exist in a vacuum. Interactions are required to qualify a decision. decision to jump out of an aeroplane could be taken as an illustrative example. The decision itself is different in classification terms from decision about what breakfast cereal to have before one gets into the plane. A rather simple classification system would separate these decisions

instinctively and the taxonomy process could proceed. There are, however, other considerations outside the essence of the decision itself. Now consider the input or effect a decision-maker can have on these two selected decisions. The decision to jump out of an aeroplane is different for an experienced parachutist and a first-timer. By the same token, the cereal selection decision would be made one way by a dyslexic who is allergic to nuts and another way by a linguist who is not. So in the classification process we must allow not only for the essence of the decision itself, but also for the effect of the decision-maker who is interacting with said decision. There is, however, another consideration: the environment in which the decision and decision-maker find themselves.To extend the analogy of the parachutist, the decision to jump from a plane at 20,000 feet and the decision to jump from one that was sitting on the runway are to markedly different!



Dig. 1.0. Elements of a decision

This proposed methodology mirrors the basic concept of biological classification, in that a sufficient number of factors are evaluated in order that separation or classification can be carried out.



Dig. 2.0. Relationship between Decision Elements and Factor Levels

Consider two decisions. One decision which is made by an operator, in the ordinary process of the job, without the need for input from anyone else, under no time pressure, or urgency, requiring no past experience, where there is a limited number of options and where the outcomes are well known to the decision-maker. This can now be empirically separated from a very different decision - one which is made by the Managing Director, requiring adaptive novel thinking, and input from senior management or from a board, which is made under a time constraint, with urgent connotations, and where the outcomes to different options are not known by the decision-maker(s) at the decision point. While one would expect such decisions to be readily separated, the considerable grey area between them is also within the classification granularity. This methodology allows such classification to be empirically assessed, with weightings allocated on the different levels within the factors outlined.

In the case of the decision itself, twelve factors were relevant for the decision evaluation process: Organisation level, Nature, Format, Time, Urgency, Frequency, Learnt experience, Support decisions, Accumulation, Number of Options, Type and Outcome Profile. In the case of the decision maker, the seven factors were: the Number of Reports, Portfolio Profile, Experience, Attitude to Risk, Exposure to DDS, Impact on Decision-maker, and finally Risk to Decision-Maker due to Inaction.

For the decision environment the factors included were: Impact on the Company, Risk to the Company, Decision Measurement, Visibility within Company, Sector, Company Change Profile, Political Environs and Scorecard Applicability

METHODOLOGY

A series of operational decisions associated with a number of SME departments were assessed. The departments in question were (in no particular order); Production, Quality, Sales & Marketing, Purchasing and Accounts. Three decisions were chosen for each department to allow the rating system to rank the individual decisions within each of these areas. A survey was constructed which addressed the three main elements of a decision: the decision itself, the decision maker and the decision environment and the factors associated with each. The primary decision maker was asked to consider a particular decision. A number of statements were read, which reflected various levels within a factor for that decision. The participant indicated the statement, which in his/her opinion reflected the most accurate representation for that factor. The process was repeated for a secondary participant who was not directly responsible for making the decision. The results were collated with the other primary and secondary participants' findings and a median calculated for each factor. The resultant median for each of the factors was then summed to give an overall rating for that particular decision, for each of the two groups (primary and secondary).

The survey was loaded onto a web-based survey support system (Survey Monkey®) to which access was restricted by password control. Over 130 individual surveys were carried out across key decision makers in 25 different SMEs. While the survey was facilitated, it had a defined key and support document to explain the decision under review and the factors being considered. The results were either put directly into the web-based program or recorded by the analyst to be plugged into the system at a later date. A number of observations are made at this point. In the first iteration of the survey, the decisions under review were not sufficiently defined. When asked to consider the decision on the level of stock, for example, respondents would query the level of importance of the material itself (e.g. stationary or a key component). While the initial selection of the departmental decisions was based on their perceived range of complexity (easy – complex), more work was clearly required to define the actual decision being considered. In the example taken, the final version read – Decision on the month-to-month stock levels of a high usage,

low value component. The participants themselves were chosen to reflect the decision-making responsibility within the department in question. A given participant was restricted to answering for two departments, in order to reduce bias within the overall results. Each participant identified a level he/she thought most reflective for each of the factors identified in the survey. The responses for all participants within a factor were isolated and a median found. The resultant median totals were then summed and an overall rating level for a particular decision was calculated. The decision ratings were then plotted, for both the primary and secondary decision makers and the differences observed.

RESULTS:

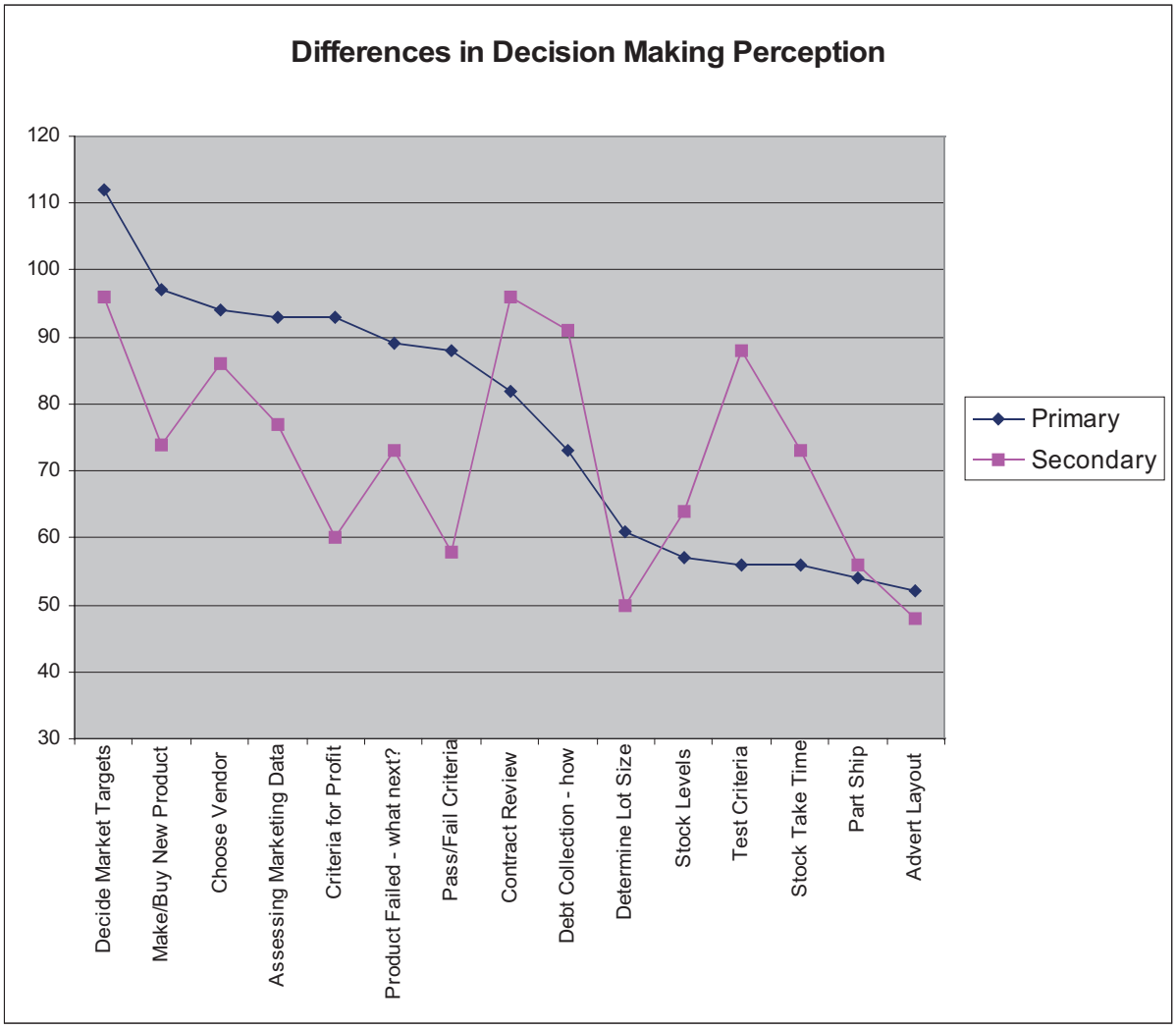


Fig 3.0. Differences in decision-making perception, between primary and secondary decision makers.

DISCUSSION:

Fifteen decisions across 5 departments of an SME were assessed under this research. The primary decision maker in each case indicated the best-fit statement for each of the decisions in their area. The same decisions were then assessed by a person knowledgeable in the decision, but not primarily responsible for making it (the secondary respondent). The mean average for each was then plotted, to assess the differences in perception by both these stakeholders. This is represented in figure 3.0.

The secondary respondents considered 9 of the decisions reviewed 'easier' then indicated by the primary decision maker. One decision (Part ship) was considered the same by both parties, while, the balance of 5 were considered more difficult by the latter grouping. Notably in the secondary respondents, the test criteria and the contract review and the debt collection were considered considerably more difficult than that perceived by the person responsible for making the decision itself.

CONCLUSION:

Decision making in the SME is a wide a varied activity. Decisions are often made with incomplete information and under pressures of both time and risk. The perception of a decision will vary depending on the relationship one has with the decision being undertaken. Generally a decision maker will perceive a decision to be more difficult or important, than a person who is not directly making the same decision. A wider study across more operational decisions would yield more accurate results in future research studies.

ACKNOWLEDGEMENT:

The information obtained as part of this paper was pursued in order to fulfil the requirements of an EU framework 6 project. This project is entitled Enterprise Performance Optimisation for Small and Medium Enterprises (EPOSME) and its purpose is to pursue research for the benefit of SMEs.

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