

Strategic Decision-Making Mode for Make or Buy Decision

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Abstract— Purpose: The aim of this study is to analyses factors that are related to make or buy decisions. Within this research, a tool is created for make or buy decision-making which can be used as a help to evaluate outsourcing analytically. **Design/ methodology/ approach:** This research is case study research to develop a make or buy decision making tool via literature review. **Findings:** The finding of the study is a model for developing make or buy decisions. The model is based on the make or buy triggers, competitive factors, McIvor's outsourcing framework, Tayles and Drury's outsourcing decision model and balanced scorecard. **Research limitations/ implications:** This research is focused on making a decision-making model in the manufacturing industry supply chain. In the future, more empirical study is needed. **Practical implications:** The results can be utilized when developing make or buy and outsourcing decision-making in the supply chain. **Originality/ value:** The research results bring additional value to the previous studies regarding make or buy decision-making models.

I. INTRODUCTION

Purchasing ought to be accounted for as a big operate, that must be thought-about as an area of the company coming up with method to confirm that provide conditions are mirrored in it (McIvor et al., 1997). Strategic approaches for a selected operate, for instance sourcing, ought to be coupled to different purposeful methods, coupled to methods for specific business units and coupled at the company level wherever their square measure perceived synergistic advantages. The build or get issue has been underneath discussion since the commercial revolution. Yet, its strategic role has not been admitted thus far, at constant time because the strategic role of sourcing has begun to be appreciated. most likely the legendary and therefore the most classical theoretical approach to a build or get decision-making is dealing price theory created by Williamson (1985).

According to dealings value economic science, a corporation can build the outsourcing call on the idea of reducing production and dealings prices. Production prices talk over with the direct prices concerned in making the merchandise or service and embody labour and infrastructure prices. dealings prices embody the prices of choosing suppliers, negotiating costs, writing contracts, observation performance, yet because the potential for self-interest from suppliers. the most factors for transfer dealings prices out at markets are: finite rationality, self-interest, little numbers of cut price and data impactedness. (Williamson, 1985, 1981, 1991).

The analysis goal of this study is to analyse factors that square measure associated with build or get selections. This analysis can facilitate to grasp however outsourcing and subcontracting will affect to company's business, operations and profitableness.

This analysis creates a tool for build or purchase

decision-making which may be used as a facilitate to judge the reasonableness of outsourcing analytically. For the meanwhile this type of tool has not been created and there's no consistently thanks to build these choices. The analysis goal of the study is to produce a tool for build or purchase decision-making

The research questions are:

- What are the effects of the MOB to competitive performance?
- How to make MOB decisions systematically?

II. THEORETICAL BACKGROUND

It is inconceivable to limit the premise of create or obtain selections alone to economic or value parameters albeit they'll be accurately and fairly assessed. Such AN analysis takes no account of the potential future behaviour of the parties to the arrangement, or however the shopping for organisation sees its role within the marketplace (Steele and Court, 1996). Probably, the celebrated and most classical theoretical approach to form or obtain decision-making is group action theory coined by Williamson. group action value social science specifies the conditions below that AN organisation ought to manage AN economic exchange internally among its boundaries.

According to group action value social science, a corporation can create the outsourcing call on the premise of reducing production and group action prices. Production prices ask the direct prices concerned in making the merchandise or service and include labour and infrastructure prices. Group action prices embody the prices of choosing Strategic decision-making model for create or obtain selections 207 suppliers, negotiating costs, writing contracts, watching performance, also because the potential for self-interest from suppliers (McIvor, 2000, 2003, 2008). Williamson (1985) introduces variety of things involving

group action prices.

Main factors for transferral group action prices out at markets are:

- Bounded rationality. individuals have restricted recollections and restricted psychological feature process power. we have a tendency to cannot assimilate all the data at our disposal, we have a tendency to cannot accurately compute the results of the data we've.
- Opportunism: individuals can act in an exceedingly self-interested approach 'with guile'. individuals might not be entirely honest and truthful regarding their intentions, or they could conceive to benefit of unforeseen circumstances that offers them the prospect to use another party.
- Small numbers talk. several talks things are sporadic or involve little quantities wherever the value of getting full data is prohibitor, i.e., as in associate market.
- Information impactedness. The party that has additional data and data

The central theme of group action prices theory is that the properties of the group action confirm the governance structure. The group action prices and also the issues grow once the following variables are involved: frequency, uncertainty and quality specificity. These three variables can, in step with the speculation, confirm whether or not the group action value can be lowest in an exceedingly market or in an exceedingly hierarchy (McIvor, 2003).

The issue in uncertainty is however laborious it's to foresee the eventualities that may occur throughout the course of group action.

According to Williamson (1985), there are two forms of uncertainties: uncertainty exhibit by atmosphere wherever the corporate has no ability to have an effect on and uncertainty derived from the behaviour of the catching party.

These two shapes of uncertainty are interrelating with one another. If external, atmosphere caused uncertainty is zero or little, the uncertainty derived from the behaviour of the catching party is additionally little. that's to mention, the catching party doesn't expertise the case as threatening and it doesn't ought to act opportunistically. Uncertainty doesn't essentially produce group action prices, if alternative variables are favourable. Closely connected prices with uncertainty are for instance policing and coordinating prices (Michael, 2007). quality specificity is maybe the foremost vital component in Williamson's theory. He argues that wherever group action prices involve assets that are solely valuable within the context of a selected group action, group action prices can tend to be reduced by consolidation.

Asset specificity will vary from general limitedness of the capability to the product's individualised investment desires. If assets are extremely specific the shift prices are high and suppliers usually act opportunistically. Williamson (1985) recognised four completely different quality specificities:

- *dedicated assets* – specialised investments
- *physical asset specificity* – technology advantages
- *human asset specificity* – know-how advantages
- *site specificity* – resource immobility.

III. MAKE OR BUY TRIGGERS

According to Moschus's (2007), the foremost necessary create or get triggers area unit price and quality issues. Typically, reasons for outsourcing are also lack of capability, lack of knowing, economic problems, organisational culture problems, life cycle of the merchandise or for instance organisational changes. The abstract model highlights the link between the importance of every trigger and variations with organisational characteristics still like characteristics of the item/service below create or get investigation.

Organisational theory suggests that companies unionized to wear down reliable and stable markets won't be as effective in complicated, speedily dynamical and unpredictable environments. There are a unit two apparently conflicting views of the link between environmental uncertainty and organisational structure. per contingency theory, firms ought to adopt 'organic' structures that area unit less dependent on formal management, area unit suburbanized and operate with fewer layers and narrower spans of management. In distinction, another read is that at high levels of setting uncertainty, organisational decision-making processes area unit characterized by a constriction of authority. This means decisions area unit created at higher levels of the organisation by a smaller variety of organisational members. There are controversial views concerning the importance of operations technology to organisational structure. Some researchers counsel that organisations ought to structure their activities in accordance with the strain of their Strategic deciding model for create or get selections 209 transformation technologies. Conversely, others say that operations technology isn't vital to organisation structure (Moschuris, 2007).

create or get problems is also triggered because of quality issues, price concerns, lack of capability, unsatisfying provider performance, sales fluctuations, introduction of a brand-new product associated modification of an existing product (Moschuris, 2007). that the trend toward outsourcing activities within the price chain will be attributed to the subsequent reasons (Mantel et al., 2006; McIvor, 2003):

- Most competent supply. Outsourcing policy relies on the simplest out their supply (internal or external) being chosen to hold out the activity or cluster of activities.
- Increased flexibility. the corporate believes it will be a lot of versatile by outsourcing a lot of activities instead of playacting activities internally by being during a higher position to react speedily to plug modifications and be a lot of aware of client change.
- *Reduced risk exposure*. Through outsourcing, the company is reducing its level of risk (converting fixed costs into variable costs). It is argued that suppliers are better able to cope with demand

fluctuations through economies of scale and have more scope for alternative sources for this excess capacity.

- *Cost reduction.* In some cases, the activity can be performed at a lower cost by outside suppliers.
- *Supplier management.* It is argued that it is possible to reduce the level of risk associated with high bought-in content by employing effective supplier management and partnership building approaches.

IV. COMPETITIVE FACTORS

A company may articulate its position in the market in a number of ways. It might compare itself with a competitor or alternatively they might associate themselves with the needs of a particular customer group. In the end companies define their market position in terms of a number of dimensions, for example range, price, quality of service etc.

These dimensions on that a corporation desires to contend square measure referred to as competitive factors. Different dimensions and type of operation and their relative importance will change depending on how the company wishes to compete. In Table 1, the competitive factors of two different operations are illustrated (Slack and Lewis, 2002; Slack, 2005).

Different operations will see quality (or any other performance objective) in different ways, and emphasise different aspects. Each of the performance objectives represents a cluster of competitive factors classified along for convenience. Different from other performance objectives is cost. While most competitive factors are clear manifestations of their performance objectives, the competitive factors of price are related to the cost performance objective. An improvement in value performance doesn't essentially mean a discount within the worth charged to customers. corporations World Health Organization come through lower prices could select to take some, or all, of the improvement in higher margins rather than reduced prices (Slack and Lewis, 2002).

The idea of generic performance objectives is that they can be clearly related to some aspects of external market positioning, through their connection with competitive objectives, and can be connected to the internal decisions which are made concerning the operations resources. It is also noticeable that different product groups require different performance objectives, which means that different competitive factors have a different priority level at different product groups (Slack and Lewis, 2002).

One way to determine the relative importance of different competitive factors is dividing the factors between order-winners and qualifiers. Different authors use different terms, so order-winners can also be called, for example, competitive edge factors, critical or primary factors, motivating factors and enhancing factors. Qualifiers also can be called, for example, hygiene factors or failure preventers. To put it simple order-winning factors are things that directly and significantly contribute to winning business. Therefore

they are the most important aspects of the way a company defines its competitive stance.

Qualifiers are not the major competitive determinants of success, but those are the factors where the operation's performance has to be above a particular level just to be even considered by the customer. So, even if order-winning factors would perform really well, the company will not win the business if qualifying factors are below this 'qualifying' level (Morash, 2001; Slack and Lewis, 2002).

V. BALANCED SCORE CARD

The term balanced scorecard (BSC) was born about 15 years ago in 12 projects, the aim of which was to improve performance measuring, that were executed mainly in USA and Canada. Kaplan and Norton are seen to be the creators of the BSC. BSC is a simple and easily outlined, but at the same time extensive indicator. With the help of it, it is possible to improve competitive advantage and broaden the examination of the business from short-term to long-term planning. The objective of the BSC is to measure those things on which success is depending. According to Kaplan and Norton (1992) the complexity of management requires managers to observe performance in several fields of business at the same time (Kaplan and Norton, 1992, 1996; Kaplan, 1993, 1996). BSC includes economic indicators which reveal how well the organisation has done. Company must compensate economic indicators with operative indicators which relate to customer satisfaction, internal processes and organisation's learning. For companies operating in a market economy, economic indicators are kept the most determinant but three other perspectives are needed to give pre-signals about effects that are seen in market economy with delay. At the base of the BSC is company's vision and strategy. From those the essential perspectives, which are wanted to be followed and measured, are created. The necessity for company's operating and developing is economic success. The aim of the economical perspective is to measure those things that owners are interested in (Kaplan and Norton, 1992). Process perspective's indicators should measure those processes in which the company must perform excellently. So, the processes are describing what should be done to identify customer needs and fulfilling them. Depending on competition strategies the measured processes may vary. Identifying all core and supporting processes is not reasonable. Strategy should define which processes are under examination and when (Kaplan and Norton, 1992).

Innovation and learning perspective's indicators should be able to answer questions: Is the organisation able to improve in the future? Is the organisation able to create value for its owners? This perspective should describe what kind of infrastructure the organisation should aim for, so that success would be assured also in the future. To put it simply, the organisation's learning consists of three factors: people, systems and the workings of the organisation. In practical applications exactly this perspective is considered as the most

challenging one of the BSC (Kaplan and Norton, 1992). The indicators of the customer perspective can be divided into two groups. Another group can be called as basic-indicators because those are very similar in different organisations. Market share, customer satisfaction, customer profitableness, customer loyalty and number of new customers are very usual indicators. Those indicators reflect the company's point of view of how well it has managed in markets and in customer interface. Another group of indicators in customer perspective is called as customer promise-indicators. Those should answer, for example, the next questions: What the company should offer its customers? How is it possible to achieve the desired market share? How to tempt new customers? These factors may be the characteristic of the products or service such as quality or price. From these, it should be clearly seen what it is that is going to lift the company into success in competition (Kaplan and Norton, 1992).

VI. RESEARCH METHODOLOGY

Eisenhardt (1989) defines case study analysis as a quest strategy that aims at understanding the inner dynamic of a private case. Case study analysis is aiming at understanding comprehensive and relevant phenomena of world, in this case the endeavour is to review the phenomena in their real context. Interface between the phenomenon and context aren't usually clear, that complicates the work of a scientist (Yin, 2009). Case-study analysis is one in all the foremost difficult analysis strategies. the tactic is employed in psychological, social science, and political likewise as in business economy researches. the utilization of the tactic isn't delimited in sure analysis areas. Case study analysis is fitted to following through whole study and it may be simply custom-made wide and in versatile analysis areas. not like it's usually thought case study analysis technique will embrace not solely quantitative however additionally qualitative looking out. The aim of the case study analysis is to widen and generalise theories, to not specify them (Yin, 2009).

There are a unit 3 case study analysis models: alpha, descriptive and informative. In alpha analysis it's meant to urge info regarding development, notice new concepts and potential analysis issues. the thought is to gather and organize existing info. In descriptive analysis it's meant to present as specific an image of the development as possible. during this reasonably analysis the connections and informative factors aren't straight out, however solely describing things. the aim of informative analysis is to straighten out the relation of the phenomena and pilot the connected hypothesis (Yin, 2009). Case study analysis technique is that the suggested analysis technique once (Yin, 2009):

- research downside is created with queries 'how' and 'why'
- researcher cannot dominate the case object Define abbreviations and acronyms the primary time they're employed in the text, even when they need already

been outlined within the abstract. Abbreviations like SI, ac, and dc don't have to be compelled to be outlined.

- it is targeting coexisting events real time.

Case study analysis starts with analysis coming up with. per principle (2009), it'd be sensible to incorporate the subsequent 5 parts just in case study analysis planning: analysis question, statement (if possible), unit of analysis, and logic on how to connect empirical data to the statement and criteria which are the base for interpreting empirical data. This should also include a theory section to be complete research. The researcher should create a framework for research to help planning. It is worthwhile to make the effort for the theory framework because it helps the research worker to decide what information should be gathered and analysed and how the results can be generalised (Yin, 2009).

Data for case study research can be collected in several different ways. Six commonly used ways to collect data are: documents, archive, interviews, straight perceptions, participatory perceptions and items/devices. None of the ways for data collection are better than the others but they all have their own function in the study. The ways can be used separately but it is not desirable because of reliability and internal and structural validity. Using several sources of information makes the final result of research more plausible and exact. One of the strengths of the case study research method is that several information sources can be used in the same research. Using several sources of information gives the researcher both historical and prejudiced as well as human behaviour-related information. While collecting information from various sources the aim should be that the collected information is promoting the same task or case. Using various sources of information may be expensive and challenging (Yin, 2009).

For the sake of reliability of the research, the filing of the collected data is important. To interpolate reliability the researcher should be able to constitute an evidence chain.

Analysing the collected information is one of the hardest work stages. The analysing will succeed better if the researcher has an analytical strategy, which he uses when analysing. There are three commonly used strategies: theoretical presentation, competitive explanations and creating description of the case. The most popular strategy is to follow theoretical statements. The second analytical theory, competitive explanations, tries to define and test competitive explanations. The third possible strategy is to create a descriptive body, over which the case and analysing will be built. This strategy is used when the above-mentioned two strategies are not possible and the case is descriptive. The descriptive approach may help to identify different contexts thus objects for analysing (Yin, 2009).

Case study research is regarded as a good research method when the research problem can be described with the help of questions how and why. The method is very useful when a researcher cannot control the target. There are three types of

case study research: explorative (seeking to find out more about a phenomenon) research, descriptive research and explanatory research. The purpose of explorative research is to obtain information regarding a phenomenon, find new ideas and possible research problems. In explorative research, already existing information is collected and sorted.

The aim of descriptive research is to provide as accurate an image of an individual, group, situation or phenomenon as possible. In the research the focus is not on clarifying connections between phenomena or factors interpreting behaviour, but only in describing a situation. The aim of explanatory research is to explain causal relations between phenomena and testing related hypotheses (Yin, 2009).

The hermeneutic view perceives knowledge as soft, often subjective and experience-based as well as insights of a personal nature, whereas the positivist perceives knowledge as hard and real, and considers it possible to transmit knowledge in a tangible form (Burrell and Morgan, 1979). The divinity read is approached within the study within the sort of qualitative and quantitative analysis. Qualitative research is a method of inquiry practiced in humanities in addition to quantitative research. The aim of qualitative research is to understand the phenomenon being studied. The point of view of this study is a more qualitative one. In qualitative research, discretionary sampling is normally used. Only a small number of units is selected for the study and they are studied in depth which makes the quality of the data important. In this study, qualitative methods are used to collect information regarding the case under study. These methods include observations, interviews, questionnaires and reports (Burrell and Morgan 1998). Inductive reasoning, a.k.a. induction is a method of reasoning that starts from an individual group of observations and forms a generalisation or a theory regarding it.

Deductive reasoning a.k.a. valid reasoning is a method of reasoning in which the true premises are necessarily followed by a true conclusion (Ghauri and Grønhaug, 2005).

Empirical case study to develop strategic make or buy decision-making model

The principal reasons for undertaking make or buy-decisions are for example, price competition, lack of capacity, skills shortage, need to increase responsiveness, need to increase quality and need to reduce time to market. The main factors considered for make- or buy-decisions are for example, total acquisition costs, complexity, technologies and skills. The key characteristics of a practical decision-making tool and framework were need of easy usage and generic enough to cover a broad range of products.

The empirical case studies are small and medium-sized companies located in Europe and Asia. Both of the companies are operating in manufacturing industry producing sub-assemblies for engineering solution business globally. Typically, companies produce products includes part manufacturing, welding, machining, painting and assembling. The products are tailor made and every product

is customised according to customers' needs.

Case companies supply chain strategy is to have their own manufacturing, which is concentrating on its core competencies and other items are sourced from a wide supply chain. The supply chains are managed globally because of the need to supply products to worldwide sales channels Case corporations were elite as a result of these businesses represent the most challenging business environment where there is a need for strategic make or buy decision-making model. According to the literature review and empirical case study it is able to develop strategic make or buy decision-making model. The developed model was empirically validated in empirical case study.

McIvor's outsourcing framework consists of four stages. Because of the strategic role of the decision, it is essential to somehow measure the effects of the made decision.

Case corporations were elite as a result of these businesses Model used because the mensuration and evaluating base of this MOB decision-making tool are BSC and company's competitive factors. BSC suit make or buy decision-making not only because of its strategic role but also because it takes into account internal as well as external factors. By unifying the use of competitive factors and BSC it is possible to size up MOB decision-making more specifically and perceive the internal and external factors of the make or buy decision-making. In innovation and learning perspective the company should define the core competencies and capabilities. In process perspective the used factors in make or buy decision-making are efficiency and value chain activities. In the economical perspective the competitive factors are cost and the total cost analysis of core activities. All of these perspectives should be analysed using BSC customer perspective at the same time as analysing other perspectives. Customer perspective is extremely important to have, because the customer is in many cases extremely close involved and interested in those perspectives and factors. Competitive factors should be analysed also from quality, service ability and delivery reliability point of view. Finally, stage is relationship analysis which will be the final conclusion of the model. Every approach and views within the strategic build or obtain decision-making model ought to be used as in original theory of McIvor, BSC and competitive factors. described the connections between McIvor's outsourcing framework, BSC and the competitive factors.

McIvor's outsourcing framework:

There are solely many frameworks within the literature for the create or get decision-making model. McIvor's (2000, 2003) outsourcing framework integrates three concepts associated with the decision-making process: worth chain analysis, core competence thinking and supply base influences. The framework proposes that all non-core activities should be outsourced but that also core activities can be outsourced. It is important to notice that the framework is not a panacea for all of the problems associated with making an effective outsourcing decision (McIvor et al.,

1997; McIvor, 2003, 2008).

The first stage is involved with identifying the core and non-core activities of the organisation. A core activity is perceived by the customers as adding value and therefore being a major determinant of competitive advantage. Distinguishing between core activities and non-core activities is a complex task. The process of identifying the core competencies and activities should be carried out by top management along with inputs from teams from lower levels in the organisation. Each team should encompass a broad section of members functionally, divisionally and hierarchically. The team has to identify the major determinants of competitive advantage in the markets, the industries, or the strategic groups in which the organisation competes or might wish to compete. The framework proposed above assumes that, in general, all non-core activities will be outsourced (McIvor, 2000, 2003).

After all the core and non-core activities have been identified, the next section is concerned with analysing the competencies of the company in these core activities in relation to potential external sources. So, the next stage is to evaluate the relevant value chain activities. Each selected core activity must be benchmarked against the capabilities of all potential external providers of that activity. This will enable the company to identify its relative performance for each core activity along a number of selected measures. Stage three, total cost analysis of core activities, involves attempting to measure all the actual and potential costs involved in sourcing the activity internally or externally. It encompasses all costs associated with the acquisition of the activity throughout the entire supply chain and not just the purchase price (McIvor et al., 2000; McIvor, 2003).

The last stage, relationship analysis, is not included in the decision-making tool created during this paper however it's introduced here shortly. many problems have to be compelled to be self-addressed before outsourcing a core activity. the corporate might need to keep up the data that enables the technology of the activity to be exploited, even once it's being provided by another partner. Therefore, dominant the new development and style process is vital. the corporate might establish a buyer-supplier relationship move from partnership to competitive bidding. From this analysis of potential suppliers, the company can separate out any potential suppliers that area unit unsuitable (McIvor, 2000; McIvor, 2003).

VII. CONCLUSION

Make or buy is one way to develop a more agile supply chain. Working in collaboration with suppliers and by outsourcing and subcontracting it is possible to achieve a more flexible, more efficient and more agile supply chain. The aim of this study was to analyse factors that are related to make or buy decisions and increase understanding on how outsourcing and subcontracting can affect a company's business, operations and profitability. Within this research a

tool was created for make or buy decision-making which can be used as an aid to evaluate the reasonableness of outsourcing analytically. The first step to make outsourcing analysis is usually identifying a company's core competence. Traditionally outsourcing decisions have been bounded between core and non-core competencies while the latter can be considered for outsourcing. However, this is a really simplified point of view for there are many companies which have successfully outsourced functions which are also crucial to their core business.

There square measure solely few frameworks within the literature for build or purchase decision-making models. McIvor's outsourcing framework integrates 3 ideas related to the decision-making process: price chain analysis, core ability thinking and provide base influences. The framework proposes that all non-core activities should be outsourced but that also core activities can be strategically outsourced. Another sourcing model is made by Tayles and Drury. This model does not make the actual decision, but it rather develops a decision logically. While not seeking the automatic decision, it ensures that wider issues are considered in a logical manner, that the process is transparent and that strategic thinking is transformed into practice. The biggest difference between these two models is that Tayles and Drury model suggests that core activities or products are not outsourced in any situation. BSC is also introduced as a one framework for make or buy decision-making. Its objective is to measure those things from which the success is depending and it includes indicators from four internal and external perspectives customer, innovation and learning, process and economical. Strategic decision-making model is based on BSC, McIvor's outsourcing framework and for competitive factors The aim of the strategic model is to think about the create or obtain issue via four views of the BSC, in order that all the factors relevant to call are thought-about. Innovation and learning perspective cover core competency identifying and thinking, process perspective is about processes and resources and economical perspective covers the cost calculations and estimates. The fourth perspective, customer perspective, considers customer's interests: quality, delivery reliability and accuracy, service ability etc.

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