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Do we have wicked problems and solutions in strategic decision making?: A review of literature

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Abstract

In today's complex world, most businesses and companies experience different confusing strategy issues. Most of these problems are not just persistent or severe but are labelled as "wicked" in some areas of practice such as urban planners. In this context, the term 'wicked problems' refers to those issues which companies and businesses cannot resolve definitively. This paper proposes that applying wicked solutions to wicked problems might be an effective strategy that requires an appropriate decision-making approach by senior leaders of business organisations. It also provides ways of measuring outcomes of some strategic decisions. The paper will use the existing body of knowledge and different conceptual models to investigate the research idea empirically in a sample of senior leaders and CEOs.

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**Do we have wicked problems and solutions in strategic decision making?: A
review of literature**

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ABSTRACT

In today's complex world, most businesses and companies experience different confusing strategy issues. Most of these problems are not just persistent or severe but are labelled as "wicked" in some areas of practice such as urban planners. In this context, the term 'wicked problems' refers to those issues which companies and businesses cannot resolve definitively. This paper proposes that applying wicked solutions to wicked problems might be an effective strategy that requires an appropriate decision-making approach by senior leaders of business organisations. It also provides ways of measuring outcomes of some strategic decisions. The paper will use the existing body of knowledge and different conceptual models to investigate the research idea empirically in a sample of senior leaders and CEOs.

Keywords: Wicked problems, wicked solutions, mixed method, Strategic decision-making, strategies, conceptual models.

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INTRODUCTION

In today's business world, wicked problems mainly revolve around scenarios associated with issues or challenges involving several stakeholders who have conflicting priorities, those which people cannot evaluate if a specific remedy can work, and has roots that are tangled. Wicked problems can also be those issues that have never been faced before or those that change when different efforts are put in place to address them. The need for firms to grow or develop faster is also considered as a wicked issue. Some of the traditional linear processes associated with solving different problems that companies and organisations face including identifying the problem, choosing a specific strategy, studying all available options, and gathering data often fail to work with most wicked problems. Managers and senior leaders play an import role in decision-making (Marchisotti, Domingos, & Almeida, 2018, p. 3). Making decisions is one of the most critical roles in companies (Negulescu & Doval, 2014, p. 859). Firms require strong corporate identities since they serve as rudders, which help them to navigate or reconsider different choices (Buil, Catalán, & Martínez, 2016 p. 4). Firms should come up with different wicked solutions that will help in successfully coping with some of the wicked strategy issues. Based on the different characteristics of wicked problems, not all issues that are hard-to-solve are considered to be wicked. Wicked problems are those issues that have several interdependent factors which make them hard or seem impossible to resolve. An excellent example of a wicked problem is the issue of global climate change. Having the right strategy is vital for most companies and organisations since most problems and challenges that they face emanate from not having the appropriate strategy or strategic decision-making process by senior leaders. Senior leaders who incorporate the right strategy help their firms to actualise and rationalise change and come up with the most effective solutions to different issues. Given this background, the objective of this paper is to explore the relevance of strategic decisions, abstract thinking and metacognitive ability, and measurement of the strategic decision to wicked problems.

METHODOLOGY

Since this is a conceptual paper, a review of literature, focusing more on strategic management issues is presented. Conceptual arguments were developed using various academic articles published mainly in the fields of management, economics, psychology, and social and behavioural sciences. Also, textbooks and reports were used to supplement these journal articles. Some of the general theories used in the argument include those that revolve strategic management, psychology, general management, and ethics. These theories are fundamental in this argument because they create a foundation based on previous research findings.

THE RELEVANCE OF STRATEGIC DECISIONS

Since identifying the options that are appropriate and those that are not is difficult for most senior leaders. They should stop examining them and instead go ahead to experiment them. The heads of the firm should consider the different methods and principles they can use to manage different scenarios (Aven, 2016, p. 1). The leaders of the firms should make progress through experimentation and muddling through (Schraeder, Self, Jordan, & Portis, 2014, p. 51). Identifying moves and envisioning some of the future possible outcomes from the implementation of different strategies can help in uncovering various promising remedies (Khan & Khaliq, 2014, p. 54). A strategic decision is essential when providing solutions to different problems because it is associated with the environment that firms use to operate their resources. For this reason, senior leaders should be able to adapt different strategic decisions to solve various problems encountered within the business environment.

Strategic Decisions

Strategic decisions involve procedures that lead to the creation of values to gain competitive advantage and establishing appropriate missions, objectives, and goals for organisations. Determining or deciding on the particular action plan that a firm may use to reach come up with a strategic decision, may involve the alteration of its strategies concerning various observed outcomes (Belia & Koustelios, 2014 p. 452). The implementation of strategic decision-making helps to transform organisations and companies into

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large industries or groups (Papulova & Gazova, 2016, p. 573). Strategic decision-making processes utilise metrics which provide realistic pictures of the associated firms which in the end creates the appropriate motivation associated with the development or effectiveness of strategic decisions (Bryson, Edwards, & Van Slyke, 2018, p. 330). In most cases, processes associated with strategic decision making are carried out in few steps, and the preferred strategies should be robust to allow the firm to perform different activities differently when compared to its competitors or rivals more competently (Punt & Anderson, 2015, p. 502). Having the right steps and timing is essential for senior leaders when engaging in strategic decision-making processes.

Strategic decisions mostly revolve around resource allocation (Maritan & Lee, 2017, p. 2412). If a firm's resources are limited, strategic decisions would be irrelevant (Babafemi, 2015, p. 44). Financial resources, performance, and goals tend to play critical roles when it comes to making strategic decisions, more so, when the process is at the implementation stage (Van der Hoek, Groeneveld, & Kuipers, 2018, p. 475). It is crucial to evaluate abstract thinking when it comes to strategic decision-making. Abstract thinking is the capability of thinking about principles, objects, and physically absent ideas. Failures or flaws realised in strategic decision making may end up affecting a firm's economic decisions and the process associated with corporate strategic decisions (Marzuki, 2015, p. 21). Failures can influence the success of different firms (Amankwah-Amoah, Boso, & Antwi-Agyei, 2018, p. 648). By observing how other firms are executing strategic decisions, a firm can quickly come up with successful outcomes by retaining relevant information which it can replicate later if a similar problem emerges.

Some leaders have the capability of making different strategic decisions easily and quickly, and sometimes, when they have limited information (Ejimabo, 2015, p. 2). The senior leaders should be the agents of change (Azad et al., 2017, p. 1). When businesses are taking calculated risks, they must set thresholds to qualify their different decisions (Zinn, 2019, p. 3). When firms are faced with wicked issues, they should mitigate them through design by using empathy, rapid prototyping, and abductive reasoning (Peters, 2017, p. 386). Most strategic leadership and management styles are associated with strategic decision making that might result in lucrative or profitable consequences. Wicked problems have many different causes and have no correct answers (Crowley & Head, 2017, p. 540). These problems can, however, be tamed by the right approaches which will make them easily manageable. Most leaders tend to have different ideas associated with their chosen industries and can also prove to be professionals in it. To solve some of these problems, some senior leaders seek outside assistance when it comes to different strategic decision-making processes (Wellstead, Evans, & Sapeha, 2018, p. 1183). Most of these mentors can turn out to be relevant sources of advice. It is therefore important for senior leaders to be knowledgeable of the firms' current affairs so that they can provide strategic decisions.

The Role of Abstract Thinking and Reasoning in Strategic Decision

Metacognitive ability is a central component associated with leader developmental readiness, and it works through control and monitoring (Najmaei & Sadeghinejad, 2016, p. 61). Leader development readiness in this context refers to the motivation and ability of senior leaders to make meaning of, and attend to relevant new leadership skills, knowledge, attributes, and abilities into knowledge structures (Black, Soto & Spurlin, 2016, p. 86). A leader's metacognitive ability is referred to as his or her capacity to participate or engage in the second order thinking process (Black, Soto & Spurlin, 2016, p. 86). The capacity of knowing what people know helps to accelerate leader development by allowing them to be aware of their cognitive weaknesses and strengths, the ability to adapt and monitor their learning, and understanding (Black, Soto & Spurlin, 2016, p. 86). Abstract thinking and reasoning play essential roles when it comes to strategic decisions. Abstract thinking is the capability of thinking about principles, objects, and physically absent ideas (Markovits, Thompson & Brisson, 2015, p. 683). Abstract reasoning, on the other hand, is the ability to examine information, detect relationships and patterns, and solve different problems that are on an intangible and complex level (Markovits, Thompson &

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Brisson, 2015, p. 683). People who possess these different abilities can help to explain and provide an understanding of different strategic decision-making processes.

As managers and senior leaders climb up the corporate ladder, the complexity, and degree of decision-making responsibility increases. Hence, the intellectual and cognitive demands associated with the decision-makers naturally alter or change their characters. Abstract thinking and reasoning capacities rewarded and learned at early stages of people's managerial careers can be ill-adapted to the distinct requirements or demands of future-oriented and strategic decisions (Thompson & Johnson, 2014, p. 216). Abstract thinking and reasoning are essential in strategic decisions because they help senior leaders to frame the problem space, assess or evaluate different requirements, and commit to meaningful choices which galvanise them to action. When managing wicked problems, senior leaders' metacognitive abilities allow them to regulate and understand their thought processes since they contribute to problem-solving (Black, Soto & Spurlin, 2016, p. 86). When leaders use their metacognitive abilities, they will be able to come up with effective ways of mitigating wicked solutions since they are associated with creative decision making, problem-solving, leadership performance, and critical thinking. Abstract thinking and reasoning, and metacognitive abilities help leaders of different firms to gain advantages that lead to less maladaptive processing and greater self-insight, which can help to accelerate developmental readiness.

GAP ANALYSIS IN THE LITERATURE

Wicked Problems and their Resistance to Resolution

According to Thollander, Palm, & Hedbrant (2019), the term 'wicked problems refer to those issues that have resistance to resolution since they are incomplete, need changing requirements, or are contradictory (Thollander, Palm, & Hedbrant, 2019, p. 1569). The authors argue that wicked problems serve as critical models associated with the understanding of different challenges that affect or relate to society including climate change mitigation (Thollander, Palm, & Hedbrant, 2019, p. 1569). They focus on analysing how the concept of wicked problems contributes to an improved understanding of energy efficiency. Waddock, Meszoely, Waddell, & Dentoni (2015) argue that the idea of efficacious organisational changes should be reexamined to include the need for simultaneous and significant change to achieve greater social justice and sustainability (Waddock et al., 2015, p. 994). Alegre, Berbegal-Mirabent, Guerrero, & Mas-Machuca (2018) argue that typical problems that have defined statements also have predefined solution sets (Alegre et al., 2018, p. 457). The senior leaders should be ready to manage their workforce effectively (Shaban, 2016, p. 77). Agility and flexibility have become important in management theory, more so, in the complexity theory. Although wicked problems are resistant to resolution, senior leaders should come up with strategic decisions that can help to manage them.

Scope of Wicked Problems

Head & Alford (2015) argue that most wicked problems require social processes which continuously engage senior leaders and stakeholders who explore and reevaluate the definition of the problem, issues related to the description, and reconsider their different assumptions (Head & Alford, 2015, p. 713). Wentzel (2016) argues that most wicked problems cannot be measured and it is hard to claim their success because in most cases they result in other issues and cannot be defined or articulated (Wentzel, 2016, p. 120). Head & Alford (2015) argue that that wicked problems emanate from other issues and are invented by humans (Head & Alford, 2015, p. 712). In most cases, wicked problems do not have practical characteristics. Even though wicked problems do not have practical characteristics, the senior leaders of different firms should be able to identify and manage them.

STRATEGIC DECISION FACTORS

The different characteristics associated with wicked problems necessitate the use of different approaches for the taming of such issues. The different procedures that lead to the creation of values, missions, objectives, and goals for organisations in strategic decisions and how executives require more

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than the ability to prevent common biases such as selection and confirmation biases are what bring about the differences when evaluating the relationship between normal and strategic decisions (Belia & Koustelios, 2014 p. 452). Wicked problems are issues that are difficult to resolve because they lack linearity that is present in the change from the definition of the problem to the solution (Yawson, 2015, p. 74). When addressing wicked problems, it is crucial to consider some of the strategic decision factors. Senior leaders and CEOs top management team can employ different prescriptive and descriptive elucidations of a variety of principles and strategies to manage the wicked characteristics of problems (Pretorius, 2016, p. 81). It is challenging to find different solutions that will help to solve a wicked problem, but senior leaders and CEOs top management teams can learn to manage them. The most straightforward techniques are often the best. According to Esty and Bell (2018, p. 80), businesses can manage issues associated with climate change by addressing their greenhouse gas emissions, which in this context is a straightforward technique. It is important to note that some of the strategic decision factors that should be considered when managing a wicked problem revolve around the characteristics of the issue.

Some of the things that should be considered in this context include, whether the problem has a definitive formulation or not, if it can be easily measured, if its solution is clear, if there is a guide that can be used to tackle it, if it has an explanation, or how unique it is (Lavery, 2018, p. 163). All these factors greatly determine the strategic decision that can be used to eliminate the wicked problem. It is also possible to eliminate problems in organisations since the different solutions associated with wicked problems may only be bad or good, false or not true, approaches used to manage wicked problems must be docile ways that help to manage the situation instead of solving them (Dancken, Dribbisch, & Lange, 2016, p. 20). People who are in charge of solving wicked problems have to make up different things as they continue to manage them because they do not have practical characteristics.

When coming up with strategic decisions to solve wicked problems, senior leaders and CEOs top management teams should always know that there exist several explanations that depend on their different perspectives (Kerns, 2016, p. 62). Wicked problems emanate from other issues and are invented by humans. The various interventions that are used to provide solutions to wicked problems and help to change the issue's design space to reduce the probability of trial and error effectively. The people who are in charge of addressing wicked problems should make sure that they take full responsibility for their actions. This also happens in pure science in particular. For example, for a simple issue such as cold, different doctors of the same qualifications and experience provides different prescriptions. In most cases, no one evaluates the long-term impact of these medicines on individual patients. Similarly, nobody can identify 100% relevant causes of the problems in social science such as management. If somebody uses the term practice, it means many things, not just one solution; nobody can talk about best until they see all the possible consequences and implications in the long. Therefore, what is happening in nature and practices in people behaviour is to go for an acceptable or feasible solution rather than thinking about imaginary best.

Managing Strategy's Wickedness

The senior leaders are responsible for setting and implementing the strategic direction of a firm to ensure its long-term performance in different environments (Judge & Talaulicar, 2017, p. 52). Wickedness in this context refers to the quality of a problem being morally wrong or evil. Companies can cope with the strategy's wickedness by using different social-planning processes (Shu-Hsiang, Jaitip, & Ana, 2015, p. 3708). The senior leaders, CEOs and top management teams should organize different sessions that they can discuss some of the ways that they can identify the various aspects associated with wicked problems, share their perspectives, develop future scenarios, and organizing design charrettes that help to gain and develop acceptance for some of the probable strategies (Lopez-Fresno & Savolainen, 2014, p. 137). Social-planning helps to foster a shared understanding of the issue at hand and joint obligation to conceivable ways that can help to resolve wicked problems (Huber, 2017, p. 5). The leaders might fail to agree on the nature of the problem but should be in a position to understand each other (Heemskerck, Heemskerck, & Wats, 2017, p. 234). By getting different opinions, leaders can develop

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various novel perspectives and become innovative (Distanont & Khongmalai, 2018, p. 1). The downward behaviour of senior leaders has an impact on the firm's commitment (PM Chong, 2014., p. 55). Tactic commitment and knowledge often assist senior leaders and CEOs, top management teams, to develop various innovative strategies. There is no rule or mechanism in any country to take responsibility for the outcomes of the decisions made by social planning processors in organisations. That is why some CEO's salary is 700% more than the average salary of an employee. Therefore, different countries should establish different rules or mechanisms to take responsibility for the outcomes of decisions in organisations.

The process associated with documenting the ideas, assumptions, and concerns of the senior leaders may appear trivial but is very important (Bagire, Byarugaba, & Kyogabiirwe, 2015, p. 963). This process assists enterprises to understand the hidden assumptions of senior leaders while gauging whether their actions are effective. An excellent idea, cannot be found in practice because documentation about real issues, and thus real causes themselves are avoided as much as possible in systematic, formal and civilised societies, by they need to investigated and somebody has to take the responsibility. Therefore, the practice has been, give senior managers a call, and it does not matter how severe the problem is. Different planning processes act as vehicles that help in the process of communication with associated employees between and at all levels of business units (Islami, Mulolli, & Mustafa, 2018, p. 94). Senior leaders should value documentation processes since they can help in generating new ideas.

Firms or organisations can deal with different wicked problems by defining their corporate identities (Michaels & Grüning, 2018, p. 2). The senior leaders and the CEOs top management teams can experiment with various strategies as they remain faithful to the firm's or the organisation's sense of purpose. The mission statements of the firms should be upheld because they act as the strategies' foundations. The identity of the firm can serve as a criterion that can be used in evaluating its decisions since it is a statement with a strategic intent (Mathias & Williams, 2017, p. 894). The strategy used in this context depends on the characteristics associated with the wicked problem. It is important for firms to define their corporate identities when they are managing wicked problems because it provides them with a sense of purpose.

MEASURING THE STRATEGIC DECISION

The measurement of the value of strategic decisions requires the combination of different traditional valuation methods with others which include the real options and future scenarios for the project to be carried out (Khaw et al., 2019, p. 2). Measuring the strategic decision used to manage different wicked problems involves techniques which help to reinforce the critical relationship that exists between economic value creation and decision making. To create value, firms, and firms should understand the different economic advantages that exist while making and implementing decisions which make sure that uses a specific level of profitability which surpasses the costs associated with the used resources. The leaders should create value for the firm and the shareholders (Costin, 2017, p. 170). This strategy can underscore the connection that exists between economic value creation and strategy, but it is a hard thing to measure. Firms can measure economic value creation by assessing product differentiation or vertical integration strategies. Firms can measure product differentiation strategies by positioning the item against those of their competitors based on excellence and timely delivery in manufacturing. For vertical integration strategies, firms or researchers can either utilise ratios including the value added over the firm's sales or assessing its percentage of total products. It is important for senior leaders to pay attention to the requirements of the firm when selecting a suitable approach for measuring strategic decisions.

Senior leaders and CEOs top management teams can derive the economic value from discounted cash flows, although it has different limitations. Financial reporting is, therefore, an essential element in this context (Widarti & Pramajaya, 2018, p. 46). This process is referred to as operational flexibility, and it may involve a high value (Silva & Ferreira, 2017, p. 13). The senior leaders and CEOs top management can incorporate the value associated with operational flexibility by discounting the estimated cash flows

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based on probabilities, which the scenario will materialise (Copiello, 2016, p. 196). Operational flexibility can be incorporated through the development of different dynamic budgeting systems, promotion of corporate systems, and reviewing decision strategies regularly. Managers can measure their value by combining mix and volume flexibility while deriving the lowest and highest limits. The indicators of this measurement are a firm's associated costs and operative data, including firm's workforce, creditors, direct competitors, information on customers, and suppliers. The traditional discounted cash flows can become dynamic because they factor in some of the probabilities related to the occurring scenarios (Adamczyk & Zbroszczyk, 2017, p. 7). The strategy used should be analysed and the possible scenario associated with the development of the firm classified as either optimistic, normal, or pessimistic. The different strategies will generate some economic value but will have different probabilities. The strategy used should be analysed by the management or researchers and the possible scenario associated with the development of the firm classified as either optimistic, normal, or pessimistic. Data on traditional discounted cash flows can be available for researchers and investors. A firm's website can be used to obtain data on discounted cash flows. Investors or firms may be contacted to help in calculating discounted cash flows. It is crucial to come up with a weighted economic value that will be used as a reference point (Sabol & Sverer, 2017, p. 22). In most firms, weighted economic value is calculated by chief accountants, chief financial officers, head bookkeeper, and comptrollers. The senior leaders can analyse or assess the value creation related to the cash flows and the different actions which are taken depending on the predicted events. The leaders analyse value creation in this context by calculating the present value of every cash flow and adding them all up. Some leaders are reluctant to share such information with outsiders, while others do not mind. Discounted cash-flows and budgeting in strategy implementation can be used to assess the realisation of different firms' visions in the future. It is also possible for a firm to assess or evaluate the impact of its competitors' reactions and actions on its cash flows. It is important for senior leaders to factor in any considerations when measuring strategic decisions.

The quality of the different strategies can be measured using different methods. For the value of a strategic decision of qualitative analysis, the Lickert-Type scale can be used via surveys whereas, for quantitative analysis, one can examine some particular type of return on investment depending on the units used (Joshi, Kale, Chandel & Pal, 2015, p. 396). Another alternative that can be used to measure strategic decisions for qualitative analysis could be surveying the opinions associated with stakeholders on different parameters including acceptability by different stakeholders, the associated qualitative benefits, ease of implementation, sustainability, and change in the dissatisfaction and satisfaction levels of stakeholders. For quantitative analysis, the value of the strategic decision can be measured using different factors, including the cost of implementation and tangible benefits such as income growth, market share, and revenue growth. When assessing the quality of different strategies, it is essential to derive a relative weight for each factor.

CONCLUSION

In conclusion, having the appropriate, feasible, an acceptable strategy is essential for firms and organisations because most problems and challenges that they face originate from not having the appropriate strategies and strategic decision making by senior leaders and CEOs top management teams. Strategic decisions help firms to be proactive, increase operational efficiency, define their direction, and make them more durable. Based on the different characteristics of wicked problems, not all problems or issues that are hard-to-solve are considered to be wicked. Although this research paper

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provides relevant information on how strategic decisions help to manage wicked problems, it fails to explore the mitigation of such issues in the different sectors of the economy, including the healthcare setting. Some problems have indeterminate scales and scopes, such as inequality. Wicked problems are difficult to fix, but senior leaders and CEOs top management teams can play an important role in mitigating the different negative consequences that result from such issues. The mitigation process is not a quick, solitary, and easy exercise. Designing and strategic decision-making for impact involve maintaining the course through rigorous and systematic iteration. Senior leaders require perseverance and interdisciplinary collaboration when they are managing wicked problems.

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