

Maximizing Decision Making Style and Managerial Effectiveness: Understanding How Maximizing and Locus of Control Impact Managers' Performance on the Job

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This study investigates the impact of maximizing decision-making style on managerial effectiveness with a group of 319 working managers in the US. Findings suggest that managers who apply a maximizing decision making style were more effective than those who satisfice. It was also found that locus of control plays a mediating role in this relationship. Maximizers who have an internal locus of control were significantly more likely to be effective in their positions. The results suggest that the combination of maximizing and internality of control provide a powerful recipe for managerial success. Results, implications, and future research directions are discussed in relation to the current findings.

Key Words: maximizing, satisficing, decision making, managerial effectiveness

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Introduction

As individuals face overwhelming amounts of information, they are less likely to find the optimal solution due to information processing limitations (Simon 1972). At the time, bounded rationality was proposed as a cognitive constraint hindering decision makers from finding the best choice. Research has recently built on Simon's earlier work to show that individuals differ in their preference toward finding the optimal solution (see Schwartz et al. 2002; Diab, Gillespie, and Highhouse 2008; Lai 2010). Maximizers prefer to spend more time and energy to find the best possible choice, while satisficers tend to settle for 'good enough' options that meet their minimum criteria (Schwarz et al. 2002).

For example, a maximizer may search extensively to find the best camera by browsing many different consumer reports and product features before selecting. On the other hand, a satisficer would be less likely to investigate as many products, and more likely to select the first product that meets their minimum standards. Because of their intensive search, maximizers sometimes experience negative psychological outcomes associated with a decision because they may look at what could have been done differently. This ‘grass is greener on the other side of the fence’ philosophy may cause maximizers to be less happy with their decision outcomes (Bergman, Nyland, and Burns, 2007; Polman 2010; Schwartz et al. 2002) and experience more post decision regret (Schwartz et al. 2002; Parker, Bruine de Bruin, and Fischhoff 2007; Purvis, Howell, and Iyer 2011).

However, there are also some benefits to a maximizing approach. Maximizers prefer to have more options available when making decisions (Chowdury, Ratnershwar and Mohanty 2009) and identify a greater number of potential outcomes of those options, both positive and negative (Polman 2010). Their additional effort to seek out more options pays off in the career search process by landing better jobs. By applying for more jobs, maximizers ended up with starting salaries of about \$7,500 higher than satisficers (Iyengar, Wells and Schwartz 2006). Maximizers play an important role as devil’s advocate since they are more likely to compare options (Schwartz et al. 2002) and engage in counterfactual thinking to produce alternative arguments (Leach and Patall 2013). They also have a more optimistic life view as they see positive results within their reach (Lai 2010). Although most of the work on this topic thus far has focused on psychological processes and outcomes, this study provides a first look at how this decision-making preference impacts managers’ performance. Specifically, it investigates the relationship between decision making styles and managers’ effectiveness on the job using a sample of 319 working managers in the US. The data suggest that managers who apply a maximizing decision making style are more effective than those who satisfice. In addition, this study identifies the role of locus of control in mediating the relationship, finding that the combination of a maximizing decision making style and internal locus of control provides a powerful recipe for effective managers.

Maximizing and Managerial Effectiveness

Broadly, effective managers deliver results and add value to the company. They do this by tackling many different challenges and roles within

the company. Mintzberg (1973) observed that all managerial jobs share similar characteristics and can be described by three broad roles: interpersonal, informational, and decisional. He noted that managers can be effective in different jobs by exuding various combinations of skills in these categories. Others have identified that effective managers work on both current and future performance issues simultaneously. For example, Gupta (1996, 399) has defined managerial effectiveness as 'the ability of a manager to carry out the activities required of his position while achieving the results both current and in terms of developing further potential.' This forward-thinking mentality helps managers develop future strategies to achieve long-term performance.

Personal characteristics that make it easier to get along with others increase managerial effectiveness (Nair and Yuvaraj 2000). Successful managers are able to find a match between their personality type and managerial role. For example, Rastogi and Dave (2004) found that type B personalities are more effective at managing production departments, and type A personalities are better suited to manage marketing departments. They note that constructive management requires a clear formulation of goals and specific steps to achieve them, including motivating others to work toward those goals. Interestingly, they found that type B personalities are often more successful than type As in top management positions because they are more patient and take a broader perspective on problems (Rastogi and Dave 2004).

In the last few decades, management scholars have applied positive psychology knowledge to management in order to better understand how people can flourish in organizational context. Positive organizational behavior shifted leaders' focus from fixing problems and weaknesses to leveraging strengths, and positive psychological resources have been considered to have desirable outcomes on work performance (Luthans 2002; Youssef and Luthans 2007).

The social and emotional climate of the workplace has a large influence on how people interact and engage with their work. Positive environments increase motivation, allowing managers to achieve superior performance. On the other hand, negative environments make workers uncomfortable, leading to worse performance. Because of this, conscientious leaders have more productive exchanges with their subordinates, allowing them to be more effective (Deluga 1998). A successful manager knows how their workforce is feeling at any given time. Emotional intelligence is the ability to control one's own and others' emotions in so-

cial situations (Mayer et al. 1997). A study of 305 managers showed that emotionally intelligent managers are more effective than those who are not (Gupta 2010). The ability to empathize with others and control their own emotions during heated situations allows managers to better navigate complex social interactions, creating positive and productive working environments.

Managers need to understand how their decisions will impact those around them in addition to themselves. They must take a broad focus to understand how different alternatives may impact various stakeholder groups, and their business moving forward. Individuals who are emotionally intelligent are more likely to apply a maximizing decision making style as they search for more information to identify the best solutions for themselves and others over time (Soltwisch and Krahnke in press). Thus, those who take more time to analyze their options may be more in tune with how their decisions impact their own and others' emotional states. This is a critical skill for successfully leading teams through difficult projects where the results may not be achieved for some time. Being aware of their own actions and the impact of their decisions is an important skill for leaders facing increasingly complex challenges. Taking time to reflect on their options and possibilities would allow us to put ourselves in the shoes of others who operate in other systems. Senge and Krahnke (2013) call this ability transcendent empathy.

Effective management has also been associated with specific decision making processes. Understanding counterarguments and others point of view allows managers to make more informed decisions. Research has found that the practices of dialectic inquiry (Mason and Mitroff 1981) and devil's advocate (Cosier and Rechner 1985) have produced better decision making results than consensus building (Schwenk 1988). The basic idea is that analyzing competing ideas and understanding different perspectives or arguments helps the decision maker to discover the truth. Managers who ignore counterarguments are more likely to overlook significant obstacles that may hinder performance. Others have linked decision making process to effectiveness, showing that a more rational decision making process leads to more effective decision outcomes. In a longitudinal field study of 52 major decisions in 24 companies, Dean and Sharfman (1996) found that managers who applied procedural rationality, meaning that they took more time to collect information and use that information in making a choice, were far more effective in making strategic decisions that met performance objectives. Applying a rational process allows decision makers to form theories about which strategies will be successful

as they gather information about different options (Dean and Sharfman 1996).

Maximizers tend to utilize a rational decision making process as they search for more information to reach optimal solutions (Schwarz et al. 2002). They engage in more counterfactual thinking by producing multiple arguments to inform their decisions (Leach and Patall 2013). This role of devil's advocate may help them more accurately evaluate the opportunities and threats in their environment before making a decision. Maximizers prefer to have additional options available when making decisions (Chowdury, Ratnershwar, and Mohanty 2009), and identify more potential outcomes of those options (Polman 2010). Doing so is not easy in our fast-paced society, but maximizers take the time to look at issues more deeply and critically. They practice mindfulness by not making reactive, quick judgments and jumping to premature conclusions. In addition, maximizers are more emotionally intelligent (Soltwisch and Krahnke in press), allowing them to have more positive interactions with colleagues and build support to achieve their goals. Because of this, it is predicted that managers who apply a maximizing decision making style will achieve superior performance than those who satisfice:

H1 *Managers who maximize will be more effective than those who satisfice.*

Locus of Control and Leadership Behavior

Locus of control plays an important role in individuals' behavior and decision making, and its effects have been studied in a number of disciplines. Rotter (1990) defined the internal locus of control as 'the degree to which persons expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics' and the external locus of control as 'the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable' (p. 489). In other words, those with internal locus of control tend to believe that they can make a difference and also accept the blame for negative situations or failures. People with external locus of control may assume that they cannot do anything to control the situation and attribute both their successes and failures to the external circumstances or luck.

Studies conducted to date have revealed that internal locus of control is associated with positive leadership behavior. Leaders with internal locus of control were found to cope with stress better and use task-centered coping behaviors more than those with external locus of control

(Anderson 1977). Miller and Toulouse's (1986) empirical investigation on the relationship between CEOs personalities and their performance indicated that CEOs with internal locus of control were more innovative and future-oriented. A more recent study by Howell and Avolio (1993) discovered that transformational leadership measures; such as charisma, intellectual stimulation, and individualized consideration; were associated with high internal locus of control and positive business unit performance. Baldacchino et al. (2016) investigated the impact of organizational culture and individual audit personnel characteristics on dysfunctional audit practices. People with external locus of control tend to feel powerless because they perceive that they have no control. A possible explanation is that these individuals may manipulate or deceive others to practice some control over the environment (Gabe and Dangelo 1994). Baldacchino et al.'s study (2016) confirmed the earlier research and concluded that external locus of control was a significant predictor of dysfunctional audit behavior, meaning that individuals with external locus of control are more accepting of dysfunctional audit behavior than those with internal locus of control.

Forte's study (2005) investigated managers' locus of control and the likelihood of each individual's engaging in unethical behavior in an organization. The study revealed that managers with internal locus of control thought that they themselves decided what was ethical and appropriate but those with external locus of control relied on others to determine what was appropriate (Forte 2005). Implications of this study are significant. Internal or external locus of control in managers influences their moral reasoning and ultimately their ethical decision making. Looking to others for moral reasoning can be a concern.

Internal locus of control has also been found to be positively linked to concern for global warming (Mostafa 2016), and this finding is consistent with previous studies. Individuals with internal locus of control believe that their actions will make a difference and have demonstrated more concern for the environment than those with external locus of control who tend to feel lack of control. Generally, research has shown that internal locus of control is associated with positive behavior in managers and leaders.

Locus of Control and Culture

Although cultural discussions are not within the scope of this paper, it is important to keep in mind that locus of control and its effects can have

different meaning in other parts of the world. Individuals' need for control over their environment varies from culture to culture (Adler 2000). For example, Japanese are more likely to adjust their feelings and reaction to the environment in stressful situations, while Americans tend to change the environment (Morling, Kitayama, and Miyamoto 2002). Americans generally believe that they have direct control over what happens in their lives, while people in other cultures think that they have little control over what happens to them. They attribute life's events to circumstances. One of the values in the American culture is creating one's own reality and building one's future. We make things happen. It's a 'doing' culture. In such cultures, individuals are encouraged to be the 'doer,' who can control the environment and the outcome. On the other hand, in 'being' cultures, people value relationships and believe that they do not have much control over the environment. In planning, 'being' people tend to believe that change occurs at its own pace and feel that things will happen if and when they are meant to happen. Evans' (1981) study using word association responses examined the phenomenological dimensions of locus of control among Japanese and American students, and the results showed that Japanese students gave more external word associations. Although research to date has found internal locus of control to be associated with positive behavior, there may be exceptions. External and internal locus of control may manifest differently from culture to culture. Japanese people are known to cope with traumatic natural disasters in an orderly, stoic manner (Rees 2011). They may accept fate more readily (external locus of control) than those in most Western cultures, but with an emphasis on the sense of community, Japanese people accept what has already happened and do the best they can to move forward and rebuild their community. A Japanese phrase, 'Shikata ga nai' meaning 'It can't be helped' or 'It is what it is. We can't do anything about it,' is often heard after an undesirable or unfortunate incident. It may sound weak or helpless in a Western mindset, it may be the sense of accepting fate and constant change in nature, which is an underlying concept in Buddhism (Rees 2011).

Locus of Control and Managerial Effectiveness

Managerial effectiveness can vary depending on the nature of industry and the type of organization. Although Mintzberg's (1973) ten managerial roles in three categories (interpersonal, informational, and decisional) suggest a common set of skills in all managerial jobs, managerial effec-

tiveness is considered to be different in various settings and based on different needs. Both organizational culture and national culture should influence the norms and expectations of an effective manager. National culture, for example, significantly influences what constitutes managerial effectiveness, and it is an important variable in determining managerial and leadership effectiveness (Javidan and Carl 2004). An effective manager in Japan is a manager who focuses on both goal attainment and social stability (Misumi 1989). In Taiwan and Mexico, directive leadership style has positive impact on employees according to a study by Dorfman et al. 1997). There is a plethora of models of managerial effectiveness that focus on managers' skills and competencies. Locus of control has gained some attention as a personality trait that impacts managerial effectiveness.

Being entrepreneurial and innovative is an increasingly important aspect of managerial effectiveness. Mueller and Thomas' study (2001) examined two entrepreneurial traits, internal locus of control and innovativeness, with culture as a contextual factor. The results of this study conducted in nine countries showed that people in individualistic cultures, who generally have an internal locus of control, were more entrepreneurial and innovative. Similar results were found in a study by Miller, Kets de Vries, and Toulouse (1982), and they noted that chief executives with internal control pursue innovation, take more risks, and lead competitors. Brownell's study (1981) with a group of undergraduate accounting students and a group of managers from a large manufacturing company found that budgetary participation has a positive effect for people with internal locus of control. The result implies that being able to participate appeal to the internal locus individuals' sense of ownership and control over the outcome. Brownell (1981) also noted in his study that managers were far more internal than students, which leads us to ask the question about the effects of age on locus of control. One age-related study on locus of control by Bradley and Webb (1976) found that individuals over 60 were more external and those who were 35–50; therefore, locus of control may be affected by age. It can be explained by the fact that we are physically and emotionally affected by inevitable effects of aging, over which we have no control.

A maximizer attempts to find the best option rather than settling for 'good enough' solutions (Schwartz et al. 2002). In doing this, they exude more effort and energy during the search process. Managers who expend more energy to find the best results would be likely to expect that out-

comes are related to their own doing rather than by happenstance. Therefore, the following hypothesis is offered.

H2 *Managers who maximize will have a more internal locus of control than those who satisfice.*

Several studies have correlated locus of control with organizational variables. Individuals having an internal locus of control are more motivated to work (Lief and Pritchard 1976), more involved in their work (Nair and Yuvaraj 2000), and more likely to emerge as leaders (Schneier 1978). Another study investigated the relationship between locus of control and managerial effectiveness using the Managerial Effectiveness Questionnaire (Gupta 1996). The data from 72 executives and managers found that those with an internal locus of control were significantly more effective than those with an external locus of control (Nair and Yuvaraj 2000). The authors note that 'since internals believe in their own skills and abilities, feel more responsible and exercise more control in situations, they are more likely to be effective managers.' (Nair and Yuvaraj 2000, 44). In line with this finding, it is expected that internality of locus of control will be significantly related to managerial effectiveness (Nair and Yuvaraj 2000):

H3 *Managers who have an internal locus of control will be more effective than those who have an external locus of control.*

Taking hypotheses 2 and 3 together suggests that locus of control may mediate the relationship between maximizing decision making style and managerial effectiveness. A manager who exudes additional effort to find the best option (maximizer) and believes that they are in control of following through on that option to produce results (internal locus of control) may provide a powerful combination for getting things done. Therefore, it is predicted that internal locus of control will mediate the relationship between maximization and managerial effectiveness:

H4 *Locus of control will mediate the relationship between maximizing and managerial effectiveness.*

Methods and Results

Data was gathered from a sample of 319 working managers in various fields including: food service, sales, entertainment, logistics, government, and healthcare. Respondents had an average of 10 years of experience as a manager and were in the age group of 21 to 78, with a mean age of 40. Thirty eight percent of the responding managers were female. The Managerial Effectiveness Questionnaire (Gupta 1996) was used to measure

TABLE 1 Correlations of Key Variables

Variables	1	2	3	4	5
1. Gender	1				
2. Maximization	0.069	1			
3. Locus of Control	0.011	0.554**	1		
4. Managerial Effectiveness	0.116*	0.460**	0.564**	1	
5. Happiness with Position	0.061	0.254**	0.283**	0.118*	1

NOTES * $p < 0.05$, ** $p < 0.01$.

managerial effectiveness. Respondents were asked to indicate how frequently they behave or act in a specific way using a five point Likert scale with ratings (5 = Always; 4 = Usually; 3 = Doubtful; 2 = Sometimes; 1 = never). A high score indicates high overall managerial effectiveness. This scale has shown satisfactory reliability and validity (Gupta 1996; Nair and Yuvaraj 2000). Managers were also asked how satisfied they were with their current position on a scale of (0 = not at all satisfied, 100 = very satisfied). This Maximization was measured using the Maximization Tendency Scale (Diab, Gillespie, and Highhouse 2008). Example items on this scale included: (1) No matter what it takes, I always try to choose the best thing; (2) I never settle; (3) My decisions are well thought through (1 = completely disagree; 7 = completely agree). This scale has shown satisfactory reliability and validity (Diab, Gillespie, and Highhouse 2008). A high score indicates maximizing and a low score indicates satisficing. Locus of control was measured using the Internality subscale of Levenson's (1981) Internal, Powerful Others and Chace (IPC) Scale. This scale has shown good reliability (Judge et al. 2002) and has been used to predict outcomes in a variety of samples (Levenson 1981; Judge et al. 2002). Example items included (1) When I make plans, I am almost certain to make them work. (2) My life is determined by my own actions (1 = strongly disagree; 7 = strongly agree).

Multiple regression analysis was used to test the hypotheses. Gender was controlled for in the model as it was significantly correlated with managerial effectiveness. Hypothesis one investigated the relationship between maximization and managerial effectiveness. Results indicate a significant positive relationship between maximizing and managerial effectiveness ($\beta = 0.45$, $p < 0.01$). Thus, hypothesis 1 is supported suggesting that managers who apply a maximizing decision making approach are significantly more likely to be effective than managers who apply a

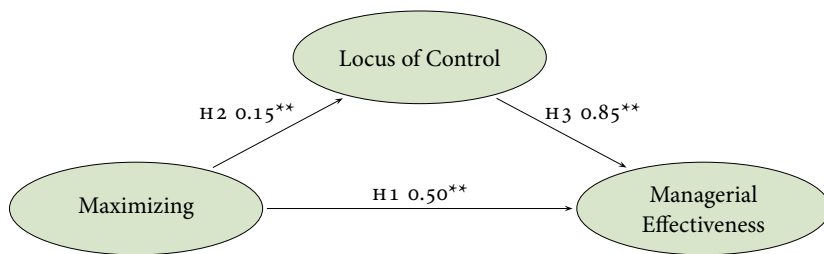


FIGURE 1 Mediation Model – Locus of Control Mediating the Relationship Between Maximizing and Managerial Effectiveness

satisficing style. Maximizers were significantly more likely to apply an internal locus of control ($\beta = 0.55, p < 0.01$), suggesting support for H2. Results indicate that managers who have an internal locus of control are significantly more likely to be effective ($\beta = 0.56, p < 0.01$), supporting H3. Preacher and Hayes (2013) mediation analysis was conducted using Process. Sobel's test indicated a significant decrease ($z = 6.71, p < 0.01, k^2 = 0.17$) in the relationship between maximizing and managerial effectiveness when locus of control was added. Thus, indicating support for H4.

Conclusions, Implications and Future Research Directions

This study has several implications for management theory and practice. First, this study extends the existing literature on maximizing and satisficing by investigating the relationship between decision making styles (maximizing or satisficing) and managerial performance using a sample of working managers in the field. Prior studies have recognized that maximizers land better jobs post-graduation (Iyengar, Wells, and Schwartz 2006). This study extends this work by looking at the upper echelon of organizations to understand how decision making styles impact managers' performance. The results suggest that managers who maximize are significantly more effective because they spend additional time and effort to find optimal strategies. Since maximizers are more emotionally intelligent (Soltwisch and Krahnke in press), it is likely that they utilize this forward-thinking ability to build support and commitment for projects early on, making them more likely to succeed.

Interestingly, a spotlight analysis revealed that managers were significantly ($p > 0.05$) more likely to apply a maximizing decision making style than a sample of 218 college students. This suggests that those who are decision optimizing are more likely to advance through the ranks within

their organizations. The question of whether this is the product of self-selection or performance needs to be further examined. A longitudinal field study could improve our understanding of how managers utilize this information competency to get things done by investigating managerial decisions over time.

This study also explores the role that locus of control plays in assisting maximizers to be more effective. The results suggest that maximizers are more likely to have an internal locus of control. Thus, managers who are looking for more information are also more likely to follow through on that information as they see themselves personally responsible for their own outcomes. Managers with internality of control were also more likely to be effective, replicating previous work by Nair and Yuvaraj (2000). These findings together suggest that maximizers with an internal locus of control provides a powerful recipe for managerial performance. This makes sense from a logical standpoint. Managers who spend more effort to find the 'best' option will be more likely to follow through on that option if they feel in control of their own destiny. Since implementation is so critical to success, following through on the best option will likely produce better results.

This study may open many new outlets of inquiry in the management field. For example, the length of time available to decide could be another important variable to investigate. Eisenhardt (1989) found that fast decision makers utilize more information and develop a greater amount of options than slower decision makers. Future studies could investigate whether maximizers are willing to satisfice when needed, or if they are more likely to become overwhelmed by information overload. Another interesting question is whether maximizers process information faster than satisficers? Alternatively, they may simply be willing to spend more time gathering information during the search process.

This research stream may also open new outlets to advance the literature on top management teams. What is the right combination of maximizers and satisficers among top management teams? One could guess that too many maximizers in a room may produce information overload, leading to analysis paralysis. Perhaps having a balance of maximizers and satisficers on the team offers complementary skillsets that enhance group decision making. For practitioners, understanding differences in decision making styles may provide another tool to help identify employees who are ready to take on leadership roles within the company. A maximization questionnaire could be administered to help find employees who have the

decision-making skills necessary to be effective leaders. Although this study has taken some important first steps toward understanding how managers utilize decision-making styles to be more effective, there are likely many new and interesting opportunities for researchers to explore. Hopefully this study will open many new areas of inquiry, enhancing our understanding of what makes managers successful.

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