ABSTRACT

INTUITIVE AND RATIONAL DECISION MAKING, INNOVATION CAPABILITIES, TO HUMAN RESOURCES SUSTAINABLE GROWTH OFPRODUCTIVITY

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Abstract. Albert Einstein (1935) stated that "...the intuitive mind is a sacred gift, and the rational mind is a faithful servant. We have created a society that honours the servant and has forgotten the gift." This paper based on the intuitive and rational decision-making approach when making decisions in the business environment. Studiesto the intuitive and rational decisions of the human resources shows that the two of them is needed to create innovation capabilities. As the result, the innovation capabilities create human resources sustainable growth of productivity. This paper is conducted using secondary sources at the libraries in this subject.

Keywords*: Intuitive, Rational, Innovation Capabilities, Sustainable Growth of Productivity.*

INTRODUCTION

Intuition is the act or faculty of knowing or sensing without the use of rational processes; immediate cognition (Webster Dictionary). In the managerial decision-making application, intuition is the ability to draw accurate conclusions and make decisions without relying in anylogical analysis or thorough thought process, or even sometimes having only a small piece of information (Kruglanski and Gigerenzer, 2018).

The small part of the brain leaps to the type of conclusions that is called the adaptive unconscious (Kong et al., 2020). Studies of this kind of decision making are new and important on the fields of managerial science. This new notion of adaptive unconscious can be settled as giant computers that processes tons of data we need rapidly, in order to function as human beings (Harper, 2021: Gladwell, 2006).

Tufekci and Wilson (2012) stated: "The mind operates most efficiently by relegating agood deal of high level, sophisticated thinking to the unconscious, just as a modern jetliner is able to fly on automatic pilot with little or no input from human, "conscious" pilot. The adaptive unconscious mindset does an excellent job of sizing up the world, warning people of danger, setting goals, and initiating action in a sophisticated and efficient manner."

At the other side, Spaccatini (2022) stated that "… a rational mindset is, instead, characterized by a preference for details. Thus, the attention is oriented on the focal object's specific attributes, regardless of its context (Nisbett et al., 2001) …". Rational mindsets can be described as a trait – stable personal-cultural-related characteristics – and state variables – characteristics that are temporarily induced by the specific situation (Förster & Dannenberg, 2010).

Mintzberg and Westley's (2001) decision making typology is adapted to the case of entrepreneurial mindset. Pina E Cunha (2007) complemented the rational, step-by-step mode of decision making, with the intuitive and improvisational modes. Complementing the rational mindset with the intuitive or improvisational decision making a richer and more integrated understanding of innovation capability is obtained. To make the implications of the two mindsets to innovation capability clear, the process under each of the two mindsets, will be considered. Ireland, Hitt and Sirmon's (2003) model of strategic entrepreneurship may be used as a framework. Ireland *et al*,'s model of strategic entrepreneurship suggests that to understand how the innovation capability leads to sustainable growth of productivity, four building blocks of activity should be considered: mindset, culture and leadership, strategic management of resources, and application of creativity and development of innovation.

Both intuition and rationality can play important roles in decision making. However, a framework that specifically accounts for the interplay between intuition and rationality is still missing. Calabretta (2016) recommend using a paradox lens and conceptualizes the intuition– rationality duality as a paradoxical tension. His empirical data suggest that management of the tension starts with preparing the ground for paradoxical thinking by creating managerial acceptance for the contradictory elements of rational and intuitive approaches to decision making. The process then continues by developing decision-making outcomes through the integration of intuitive and rational practices.

Finally, the outcomes of paradoxical thinking are embedded into the organizational context to be a creative mindset. The creative mindset drove human resources sustainable growth of productivity through innovation capability. Human resources possessing a growth mindset reflected and drove success directly or through innovation capability. Although, those with a strong, fixed mindset did not significantly affect sustainable growth of productivity, they could drive success through innovation capability (Yodchai et al., 2021).

LITERATURE REVIEW

In the fast paced and transforming business environment is of extreme importance that organizations count with leaders who can take sound decisions rapidly and leaders responsiveto changes in the business environment (Dess and Picken, 2000). Supporting enhanced and more rapidly decision making is a major goal for any organization in any industry. Executivestend to make and focus to better, faster decision making that implemented as critical differentiator for competitive advantage and bottom-line results (Nemkova *et al*., 2012). Barth(2007) stated that "...decision making today places a premium on speed to a degree unprecedented in world history...". Managerial success depends on the managers' ability to take accurate and quick decisions under unpredictable environment (Intezari and Pauleen, 2013). As the managers only have limited information on the problem or little time to decide;the intuition ability becomes an indispensable tool for managers -- especially at senior level (Hodgkinson and Healey, 2011).

Jack Welch -- former General Electric CEO -- stated: "Much has been written about themystery of gut, but it's just pattern recognition, isn't it? You've seen something so many timesyou just know what's going on this time. The facts may be incomplete, or the data limited, but the situation feels very, very familiar to you..." (Welch, 1984). Citroen (2011) stated that seniormanagement of any company executives should make decisions without always having the full information. For example, in a crisis managers should conjecture which way the crisis will move or trying to anticipate the unexpected, and that is done most of the time with very few information. Another good example is when two companies are competing for market share in the same industry; both management teams rely heavily in intuition to anticipate the opponent'smoves.

There is an area where senior managers are making decision intuitively, when they hireand promote -- let's say, senior managers. In fact, hiring someone from outside you know verylittle about that person. One can put that person under tests, psychological analyses and interviews, but in the end, you put together a judgment, part of that judgment has to do with your gut feeling, because no test can answer questions like: is this person going to fit in the corporate culture? Does he/she understand how we do things around here? Does he/she understand our core values? All those are questions that are not know until you hire that person(O'Reilly et al., 1991).

Intuition is used heavily is in product development (Dayan and Elbana, 2011: Akgun and Keskin, 2021). Unfortunately, there is a harmful tendency to use more intuition than

management should. Managers tend to reflect their personal taste, if the team likes a specific product, they assume that it is going to do well in the market (Lovallo and Kahneman, 2003). In addition, they can use intuitive decision making the wrong way in product development bykeeping dead projects open, managers invest several years and a large sum of capital in a product, even though all the market tests signals that the product won't work, management still want to keep investing on it because they have the "hunch" or the "gut feeling" that it will work(Schreiber, 2016).

The Sony Walkman was considering the Walkman, a tiny tape recorder that would not record, but just play, there was nothing ground-breaking on it, almost everyone thought that this product was going to be a total failure. However, Akio Morita insisted that the Walkman was a fabulous product, and it turned out to be an innovation that revolutionized the way we listen to music (Smith, 2007).

Then let us introduce an integrative framework that assimilates these two perspectives (intuition and innovation capabilities) and sets out an agenda for future research and implications for management. Many studies over the last decade have shown the deep impact of emotional intelligence in the management field, and intuitive decision making is not the exception (Lindner, 2006). "Feelings exist for a reason, and harnessed properly, they can enhance rather than impede your decisions. Emotions have been hard- wired into our psyche because they automatically prompt us to act in ways that help us to survive and thrive in the world" (Plutchik, 1991).

"Emotional intelligence is defined as a person's self-awareness, self-confidence, self- control, commitment and integrity, and a person's ability to communicate, influence, initiate change and accept change. Studies have shown that emotional intelligence impacts a leader's ability to be effective. Three of the most important aspects of emotional intelligence for a leader's ability to make effective decisions are self-awareness, communication and influence, and commitment and integrity. Managers who do not develop their emotional intelligence havedifficulty in building good relationships with peers, subordinates, superiors and clients"(Goleman, 2001).

According to psychologist Daniel Goleman, 90 percent of the differences between top-performing and average-performing senior executives can be explained by emotional intelligence. And this primarily implies being able to recognize and interpret one's emotions. In the book Descartes Err, author Antonio Damasio explains that decision making is far from

a cold, analytic process, instead our emotions and feelings play a vital role by helping us filter various possibilities rapidly, even though our conscious mind might not be aware of the screening. Our intuitive feelings thus guide our decision making to the point at which our conscious mind can make good choices. So just as an abundance of emotion -- anger, for example -- can lead to faulty decisions, so can its paucity (Lerman, 2014).

Another necessary factor for having a razor-sharp intuition is to have a good network. Executives need to interact with equals in order to share experiences and to hear about a widerange of different issues that other executives have deal with in the past. Networking is a channel that allows executives to interchange knowledge through anecdote s, stories orpersonal experiences.

One more factor needed for good intuitive decision making is tolerance. Intuition nurtures greatest in an atmosphere in which both positive and negative experiences can be had. For management, this requires a willingness to tolerate errors and reward successes. Top level managers can create such atmospheres by openly and constantly supporting managers who take risks and make errors. “When promoting senior executives is just as important to investigate their failures or defeats as their successes, in my view, only someone who has some failures toshow in their history can carry out a leadership role in a forward-looking way, because only then is it clear that the person was willing to take risks...” (Matzler, 2007).

To have a better understating of the power of intuition—if used correctly— when making a management decision is imperative to analyse various cases in which intuition haveled to great business ideas. First, we will analyse the case of the Austrian Motorcyclemanufacturer KTM and afterwards the case of the successful sports vehicle Viper. To complement, we will read a case in which an important decision was taken relying solely in information and analytical data; ultimately the decision turned out to be a dreadful business idea. This shows that despite the large quantities of data and analytics executives often need torely on intuition to make complex business decisions.

However, the ability to intuitively take accurate decisions does not come freely or instantaneously; it requires numerous years of practice, emotional intelligence, networking, tolerance, among other necessary factors for good intuitive decision making. That will lead usto the innovation capability (Tamer Cavusgil et al., 2003: Wang et al., 2008).

Only age will not get you there as experience and expertise is not the same thing. Just doing the same task repeatedly is no guarantee you will get better. Instead, the practice needsto be directed towards

improving performance (Ericsson, 2006). When performed correctly, prolonged, deliberate practice produces a large body of specialized knowledge, a “library” in the mind of the person doing the practice. This is very important because having a broad “library” allows an experienced manager to rapidly recognize patterns that novices don’t (Furret al., 2012).

When intuition is based upon extensive effective learning from past experiences it may reflect “innovation capability” -- situations and problems become very familiar that is easier tograsp the key issues instantly without conscious analytical process (Kou et al., 2021). This enables managers to put information together in “chunks” that make it easy to store and recognize when confronting a decision. If these decisions are based on deep background knowledge and expertise, intuition can be just as effective tool as analysis and considerably quicker (Calabretta et al., 2016). Anyway, the innovation capability should be the output of rational side of the decision (Zhao et al, 2015).

Both intuition and rationality can play important roles in strategic decision making. However, a framework that specifically accounts for the interplay between intuition and rationality is still missing. This study addresses this gap by using a paradox lens and conceptualizes the intuition–rationality duality as a paradoxical tension. We draw on seven case studies of innovation projects to empirically derive a three steps process for managing thisintuition–rationality tension through paradoxical thinking (Calabretta et al., 2020).

The empirical data suggest that management of the tension starts with preparing the ground for paradoxical thinking by creating managerial acceptance for the contradictory elements of rational and intuitive approaches to decision making. The process then continues by developing decision-making outcomes through the integration of intuitive and rational practices. Anyway, paradox and dual-process theories are used by management and organization researchers in studying a variety of phenomena across a wide range of management sub-fields. Cognition is a focal point of both theories. However, despite their growing importance and shared areas of inquiry, these two theories have developed largely in isolation from each other (Keller and Sadler-Smith, 2019).

New enabling factors and drivers in Innovation Capability is e-commerce (Terziovsky, 2007). In this field, knowledge about interplay between mindsets become very important. Milojevic et al. (2016) studied the interplay among thinking style (rational/intuitive mindset), personality, and creativity through self-report surveys and task logs. From the analysis of

survey results and performance measures, correlations among thinking style, creative behaviour and performance can be identified. Samples from Shanghai Jiao Tong University were applied in this study. The findings showed relatively strong correlations between rationality/intuitive mindset and creativity across subjects. Creativity is included as the main process component to build innovation capability. Ferreira (2018) stated that the performance,includes the sustainable growth of productivity, is affected by creativity and innovation capability positively dan significantly. Watkins and Ehst (2008) also state that sustainable growth of productivity can be reached by implementing capacity building on science, technology, and innovation.

METHOD, DATA, AND ANALYSIS

From the reference studies, a model of Intuitional and Rational mindsets, Innovation Capabilities, and Sustainable Growth of Productivity may be built. Even there are paradoxical tension between them, both Intuitive and Rational Mindset play important role in building human resources creativity. The Creativity is main part of the process to build Innovation Capability. The Sustainable Growth of Productivity as the result is affected significantly by theInnovation Capability. The model will be presented below.

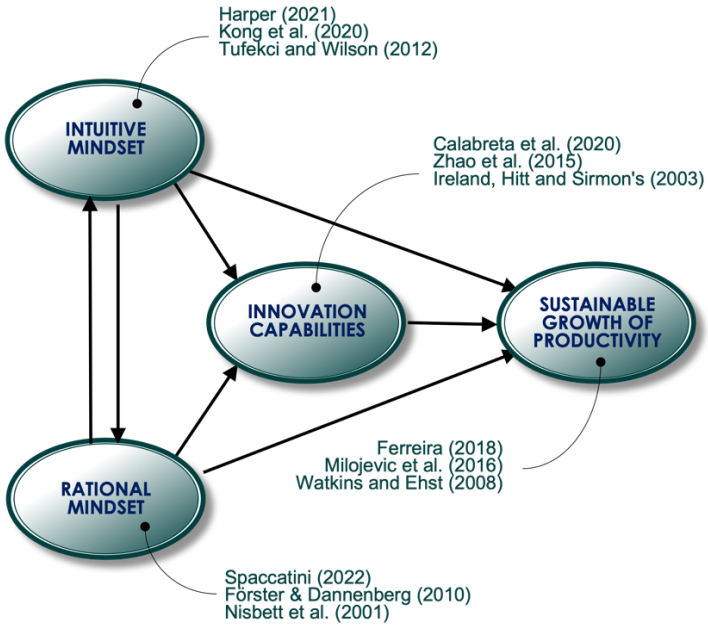

Figure 1.
Model Intuitive and Rational Mindsets, Innovation Capabilities, and Sustainable Growth of Productivity.

Both intuition and rationality mindset have paradoxical relationship, one affects the other, on creating innovation capabilities (Calabretta et al., 2020). Intuitive mindset may createsustainable growth of production on the successful decision process in unpredictable environment (Holm, 2014). Rational mindset may also create sustainable growth of productionon the successful decision process in predictive and definitive situation (Carter, 2016). Innovation capabilities affects significantly and positively the sustainable growth of production(Ferreira, 2018: Khurram et al., 2014).

RESULT AND DISCUSSION

Indeed, there are still many components to be discussed for the above model. Mindset is something that cannot be measured physically, so only perception data can be obtained. Likewise with innovation capabilities, measurements can only be obtained from perceptual data. Sustainable growth of production may be obtained with more accurate data, however, infuture research there will be a lot of debate on the matter of measurement.

The model formed from the reference study is a structural model. The constructs of Intuition Mindset, Rational Mindset, Innovation Capability, and Sustainable Growth of Production are latent variables that must be measured through various indicators.

CONCLUSION

Sustainable Growth of Production is important for a business and should be supported by adequate human resources capabilities. One of the requirements for adequate human resources is the capability to innovate. This capability to innovate is motivated by creativity that formed from intuition and rational mindsets, which, although paradoxical, should be implemented to create innovation capability.

IMPLICATION/LIMITATION AND SUGGESTIONS

Intuition is often ignored, precisely because it is irrational. However, creativity is also formed from processing that uses intuition. It is creativity that supports the process of forminginnovation capabilities, which in turn forms a sustainable growth of production. Many studies are still needed regarding the intuitive and rational mindset, to be able to build towards creativity from human resources. Theories about the innovation capability should also be developed. The innovation capability is very important to improve the human resources sustainable growth of production.

In various other reference studies, the establishment of innovation capability and sustainable growth of production needs support from capacity building process. This capacity building material should also involve intuition, rational mindset, and innovation capability. This is the practical implication of this study.

On the policy-making side, it is necessary to pay attention to the education and training of human resources from their early age. It is necessary to train a balanced mindset between the use of intuition and ratio since the beginning of education. The government needs to provide adequate facilities for training in the use of intuition and reason in daily life.

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