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Determinants of value creation from organizational performance-based view: Implications for IT industry in the Post-Covid-19 World

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Abstract

Purpose – The purpose of this study is to identify the variables that drive value creation in the Information Technology (IT) industry specifically, in the post-Covid-19 world.

Design/methodology/approach - This study has synthesized existing literature through which it identifies the variables driving value creation in the IT industry.

Findings - The results of the study show that competitive advantage, cross-disciplinary communication, and diversity drive value creation in the IT industry. Furthermore, the discussion extends organizations' absorptive capacity through the means of integration, learning, and reconfiguring knowledge by assimilating the knowledge process to sense and seize vital opportunities in the market, enablingservice innovation practices outcome, driving enterprise agility by leading digital adoptions in the Post-Covid-19 times,yielding the higher organization value by the extent of social-network heterogeneity (SNH) and focussing on the principle of "the strength of weak ties"are the abilities of an organization to react to a crisis.

Research limitations/implications – This study proposes that this article should help the IT industry and the organizations underneath to achieve greater agility, stability through the extent of IT infrastructure, IT human resource, and IT knowledge management, focusing on cross-disciplinary as a collection of practices over a) intentional learning, b) strategic leadership, and c) transforming practices into integrating systems and embracing design thinking (DT) by encompassing emotional intelligence, integral intelligence, and experiential intelligence approaches, in these post-Covid-19 times more effectively and confidently. Additionally, leveraging absorptive capacity is a key resource in developing and increasing organizations' knowledge pools.

Originality/value – This study offers a theoretical platform for the study ofvalue creation in the IT industry. The present study is the first step towards integrating the elements of value

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creation with dynamic capabilities to enhance the absorptive capacity of an organization, promoting entrepreneurial behavior and diversity management capabilities. Furthermore, this study ascertains the role of market dynamism, Schumpeter's innovation dimensions, Maslow's hierarchy of needs, constructivism, organizational learning,resilience-enhancing diversity management (REDM), strategic human resource management (HRM),and resource-based view as implementation models for the variables identified.

Keywords –Value Creation, Information Technology (IT), Design thinking (DT), Competitive advantage, Cross-disciplinary communication, Diversity

1. Introduction

Value creation, broadly branded as "the fusion of potential co-creation experiences and market-level opportunities, a central concept for both microlevel (individual, group) and macrolevel (organization theory, strategic management), a co-creative mindset for fostering collaboration inside the organization and supported by interaction-centric capabilities, an exciting paradigm from the view point of analytical thinking which sees creativity and innovation as primary and collectively balance out analytical mastery and intuitive originality to form 'design thinking', a significant driver on the innovation front leading through Hamel's innovation stack, a key enabler for better executive decision making and innovations through the facets of customer capitalism and integrative thinking, it relates to organizational value creation by the means of intellectual capital assets and knowledge management practices, a paradoxical problem solving process through the approach of Value Creation Wheel (VCW), a mechanism to lead innovative solutions by fostering collaborative work, an interacting platform for heterogeneous relations of artifacts, processes, interfaces further aided by digitalized technologies, a pivotal driver of value creation through the importance of integrated multi-disciplinary business (through form of entrepreneurship, innovation, and new agile business models), a tool to start with the customer experience journey first and work backward towards the technology" has progressively been in talks in Information Technology (IT) organizations which has become more pertinent, as an empowering agent of product and services. (Prahalad & Ramaswamy, 2004), (Lepak, Smith, & Taylor, 2007), (Ramaswamy, 2009), (Martin, 2009), (Leavy, 2010), (Leavy, 2011), (Kianto, Ritala, Spender, & Vanhala, 2014), (Lages, 2016), (Grácio & Rijo, 2017), (Ramaswamy & Ozcan, 2018), (Maritz, 2020), (Campos, 2021).This gives us a picture of how value creation has been practiced over the years, and the roles it has incorporated. The purpose of this literature review study is multifaceted, firstly, it highlights the gaps in the broader area around the variables impacting the value creation in the IT industry, specifically touches upon business and client value it drives in the post-covid-19 world. Our goal is to fill this gap by identifying the variables that drive value creation and business outcomes. This study has synthesized existing literature collected from wide-ranging international journals, online databases i.e., Google Scholar, ProQuest ((Ewin, Luck, Chugh, & Jarvis, 2017), (Palacin-Silva, Khakurel, Happonen, Hynninen, & Porras, 2017)). Further, this article has been structured as shown in [Table 1] (Ewin et al., 2017).

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Table 1 – Article structure

#	Section	Content
1	Introduction	Touches background of the research and introducing the high-level gaps to the readers.
2	Research Questions	Highlighting the research gaps found through the extensive literature review.
3	Research Objectives	The study aims to answer the gaps through the research objectives.
4	Scope of the study	This section outlines the boundaries of the study in terms of the objectives its covers.
5	Literature review	This section focuses on a literature review which is subdivided into sub-sections that flows together to take the reader through the literature analyzing the concepts of Competitive advantage, Cross-disciplinary communication, and Diversity.
6	Research methodology	It outlines the procedures of conducting research and in this study, it states how data has been collected for this study.
7	Research Framework	It illustrates the plan for conducting the research.
	Discussion, Analysis, and Outcome	This section discusses the implementation process and further reviews the purpose to further arrive at an informed conclusion.
8	Research Implications	This section signifies the impact of the research and recommendations to offer.
9	Limitations and Scope for Future Research	This section discusses the shortcomings of the study conducted and further, helps asserts what will the prospects around this research.
10	Conclusion	Summarizing the study and finally, connects back to the introduction.

Table 2 – Keyword Search

#	Keyword Search
1	"Competitive advantage and information technology "
2	"Competitive advantage and information technology and the post-covid-19 times"
3	"Competitive advantage and design thinking"
4	"Competitive advantage and the post-covid-19 times"
5	"Competitive advantage information technology capabilities"
6	"Competitive advantage information technology industry"
7	"Cross-disciplinary communication and design thinking"
8	"Cross-disciplinary communication and the post-covid-19 times"

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9	"Design thinking and Client Value"
10	"Diversity and design thinking"
11	"Diversity and the post-covid-19 times"
12	"Managing Design Thinking effectively"
13	"Value Creation and design thinking"

2. Research Questions

The aim of this study is three-fold:

a) How do organizational effects of structure, people, and culture impact the degree of competitive advantage?
b) How does cross-disciplinary communication fields are expanded to gain business-related considerations and attract talents from different fields?
c) How diversity plays a crucial role in the organization's value creation process given the changing face of the workforce and increasing global competition?

3. Research Objectives

The objectives of this study have three-fold;

a) To formulate competitive advantage strategies for the IT industry to increase its effectiveness.
b) To study the cross-disciplinary communications requirements in the purview of IT organizations.
c) To understand the role of diversity as an enabler in the value creation journey.

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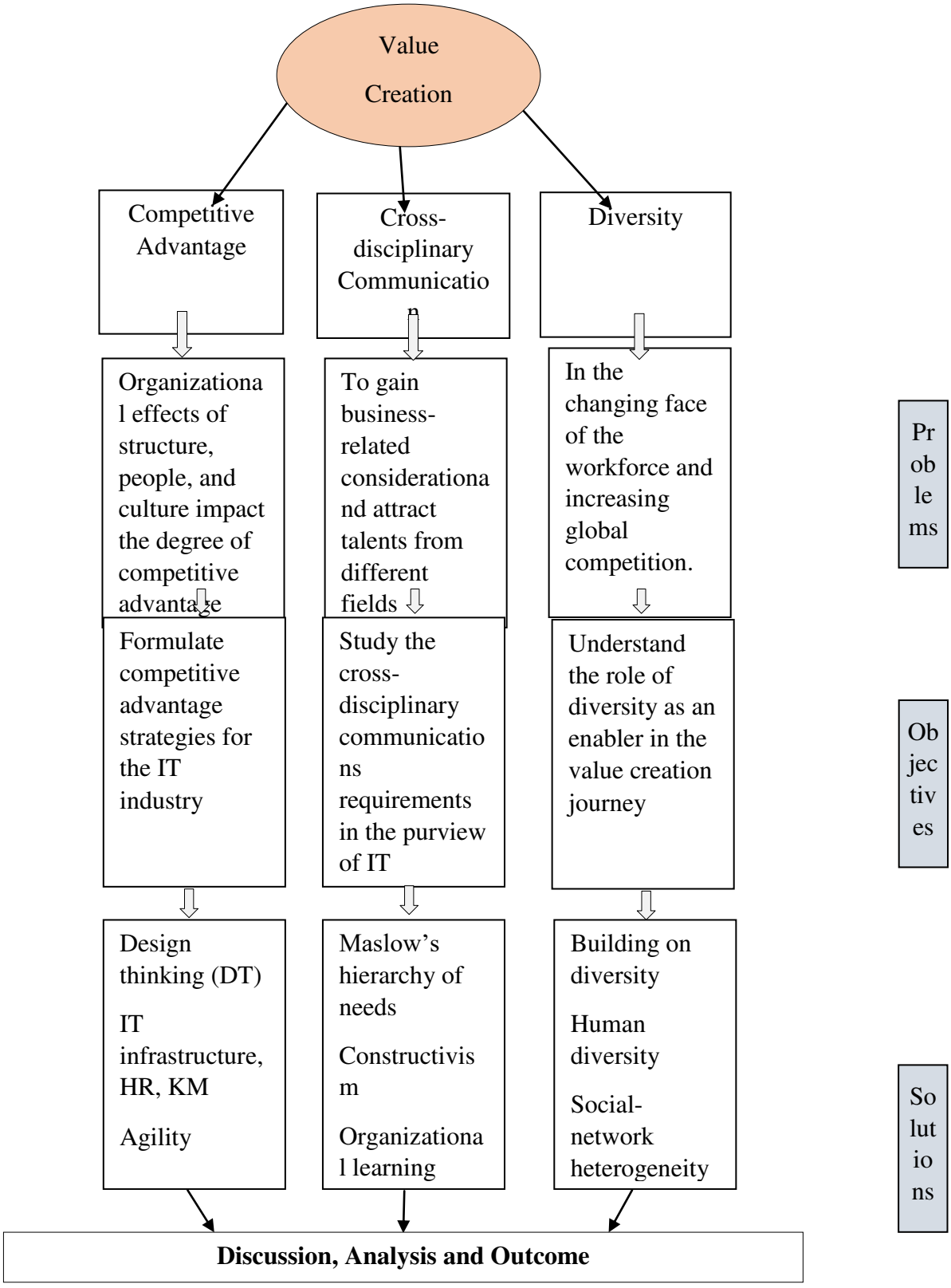
Figure 1 – Research Framework



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4. Scope of the study

This paper explores the notion of value creation from organizational performance perspectives and further, through the lens of competitive advantage, cross-disciplinary communication, and diversity, and discusses the links between leveraging potential opportunities of both in business and internal organizations in this post-Covid-19 times. There exists a body of research literature suggesting that innovation is a pivotal factor for competitive advantage, the need for an open and collaborative form of innovation in producing visible results for an economy, the advent of digital transformation journey (through the fusion of advanced technologies and integration of physical and digital systems), in the context of leadership competencies (the role of 'crisis leadership' demands integration of skills, abilities, positive reinforcement, strong communication, and appreciation for work) especially in response of Covid-19 are essential, the role of entrepreneurial skill in the face of challenges fostering resilience, being adaptable and innovative, the importance of team diversity (degree of individual differences among members of a team) in creating organization value conducive to team innovation through the facets of bio-demographic diversity and task-related diversity ((Almeida, Duarte Santos, & Augusto Monteiro, 2020), (Dirani et al., 2020), (Portuguez Castro & Gómez Zermeño, 2020, p. 19), (Usher & Barak, 2020)). This study scope has been drawn towards value creation context on IT industry around the learnings from the opportunities provided to us in post-Covid-19 times.

5. Review of Literature

5.1 Competitive Advantage

The essence of competitive advantage inspires efficiency and transforms IT organizations is shown in the study established by (Bhatt & Grover, 2005) which discusses three types of information technology capabilities – a) IT Infrastructure, b) IT Business experience, and c) relationship infrastructure which is highly related to organizations sustainable competitive advantage. Additionally, this study also suggests IT organization's dynamic capabilities as the intensity of organizational learning closely concerning with the absorptive capacity of the organizations which increases the knowledge exploration and exploitation. IT plays a pivotal role in organizations' ability to deliver high business performance through the facets of innovations in their products, channels, and customer segments also, it enables a competitive edge over competitors by leveraging IT applications as a form of important strategy. There is also some variation regarding business decision-making, contributing to business strategy driving competitive advantage by embracing design thinking which encompasses three types of approaches – a) emotional intelligence - this ability fosters a culture of attachment, commitment, and conviction., b) integral intelligence – this ability sums up varied customer needs into the singular capability to deliver value., and c) experiential intelligence – this form enables human senses to make innovation effort visible, known and distinguish (Clark & Smith, n.d.).

As an important aspect of the literature on competitive advantage, the use of IT for adaptation, alignment, and agility transforms the organizations to achieve competitive

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advantage. Leading through these observations, the study of (Gunasekaran, Subramanian, & Papadopoulos, 2017) is one of the influential studies in the synergistic use of IT on business performance establishing through alignment between virtual enterprise and IT. Furthermore, the potential of enterprise agility also has a profound impact on digital adoptions. Prior research has shown that the notion of competitive advantage from the lens of design thinking the value it brings for industry practitioners while referring to a) a bigger picture, b) selecting appropriate prototyping techniques, and c) the role of communication and seeking feedback from customers (Rau, Zbiek, & Jonas, 2017). The importance of competitive advantage not only lies in the design thinking discipline, but it can also be inferred as the dynamic capability to enhance the absorptive capacity of an organization by the means of integration, learning, and reconfiguring knowledge by assimilating the knowledge process to sense and seize vital opportunities in the market. Additionally, absorptive capacity can be termed as a key resource in developing and increasing organizations' knowledge pools. According to the literature review, there is a research gap to analyze how to do organizational effects of structure, people, and culture impact the degree of competitive advantage (Cousins, 2018).

(Kwok & Koh, 2020) defines that there is the movement under-way for long-term sustainable competitive advantage through the technological advancements as it highlights Schumpeter's innovation dimensions for competitive advantage, and further, recent studies outlined by (Muazu & Abdulmalik, 2021) suggest competitive advantage as a benefit arising from products and service for consumers by offering greater value at a higher justifiable price highlighting IT infrastructure, IT human resource, and IT knowledge management as its key drivers.

5.2 Cross-disciplinary communication

The importance of cross-disciplinary communications lies in defining collective thinking as an ability to collaborate and learn from each other perspectives. Additionally, it touches upon three perspectives of learning to enable cross-disciplinary - Maslow's hierarchy of needs, constructivism, and organizational learning. This notion implies to diverse people must interact, make decisions, and take collective actions (Pennington, 2008). Prior research has shown that cross-disciplinary as a collection of practices including – a) working together to generate a better outcome, b) intentional learning, c) strategic leadership to enable synergy and innovation outcome, and d) transforming practices into integrating systems (Adams, Daly, Mann, & Dall'Alba, 2011). According to (O'Rourke & Crowley, 2013), philosophy can play a vital role in enhancing the effectiveness and efficiency around a mutual understanding of assumptions triggering greater and effective cross-disciplinary communication.

From a value creation perspective, cross-disciplinary communication has been considered as an innovative model to achieve the synergetic effect based on the system of norms, values, and invariants of these disciplines; self-organizing and self-transforming to qualitatively new cross-disciplinary units of knowledge through communication (Olkhovaya, Shukhman, Amirova, & Zaitseva, n.d.). Cross-disciplinary can also be termed in the context of project work for developing, sharing skillsets, solving real-world problems, and addressing business,

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engineering, and information technology (Wrigley & Straker, 2017). Since cross-disciplinary communication is vital to organizational culture, and further the lack of understanding of how cross-disciplinary communication fields are expanded to gain business-related considerations and attract talents from different fields is the research gap that needs to be analyzed from the IT industry point of view (Tu et al., 2018). The Covid-19 pandemic stresses the significance of understanding the role of cross-disciplinary communications in building innovation strength and equitable cooperation by examining the complex problems (Wen, Wang, Kozak, Liu, & Hou, 2020).

5.3 Diversity

(Lindberg, Meinel, & Wagner, 2011) asserts the use of design thinking in the context of IT development and share elementary differences – a) building on diversity – facilitate team-based collaboration by implementing differing thinking styles in development teams, b) exploring the problem space – a team-based collaborative effort, emphasizing over understanding user needs and to come up with new ideas, c) exploring the solution space – approach lean towards agile process and limit divergent thinking, d) iterative alignment of both spaces – it gives the flavors around design thinking and agile process, whereas design thinking supports both the spaces much more extensively. An investigation of various perspectives on the impact on diversity can be discovered in the study of (Kimbell, 2012) which talks about a deeper understanding of design activity and designers as it helps researchers involving diverse and multiple actors and constitute towards developing practice-based approach re-conceives of design activity involving designers, end-users and stakeholders.

Understanding the impact of diversity through the lens of design thinking revolves around the incorporation of different perspectives, values, and ways of thinking and additionally, in some of the contexts it can be coined as “numbers problems”. The importance of diversity not only lies in the discipline it accounted for, however, but it also lies in integrating the notions of social and technical shifts as well as the professional formation processes of the different disciplines (Zoltowski, Buzzanell, Brightman, Torres, & Eddington, 2017). This is supported by (Panke & Harth, 2018) who suggest design thinking in the context of inclusive community design which talks about an array of social and cultural backgrounds, economic and philosophical perspectives, and life experiences leading to greater diversity in the organization workforce and resulting in achieving design solutions.

Among the factors influencing value creation, the study of (Fang et al., 2018) is one of the influential studies in understanding human diversity, enhances social learning, and greater growth opportunities. This literature further suggests some of the focus points – a) human diversity through the extent of social-network heterogeneity (SNH) by analyzing the higher firm value in the virtue of a heterogeneous group of people who themselves have diverse attributes and backgrounds, b) diversity helps elucidate access to different types of knowledge and opportunities, c) it touches upon the principle of “the strength of weak ties” which implies the formation of persons from different cultural backgrounds and further,

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promoting information flow leading to external opportunities, d) creation of new knowledge more efficiently if the emphasis is drawn towards a high degree of diversity of culture thereby weakening social barriers, e) changing attitudes towards human diversity both socially and in the workplace and further, being knowledgeable across different cultural backgrounds seems to be seen as a critical success factor in the modern global business environment. Additionally, this study also talks about some of the challenges posed by the inclusion of diversity in the business context i.e. a) diversity might ruin cooperation and trust among a group of people, b) conflicts in diversity leads to negative organizational performance. A topic that has grown in relevance our goal is to fill this gap between how diversity plays a crucial role in the organization's value creation process given the changing face of the workforce and increasing global competition (Fang et al., 2018).

From an integrative thinking perspective, diversity plays a vital role in establishing the organization's hierarchy developed by (Joachim, Schulenkorf, Schlenker, & Frawley, 2020) and contributing to the democratic spirit. The notion of diversity of perspectives manifested as the use of multiple and different stakeholders and broadly, relates to the design thinking theme of diversity (Joachim et al., 2020).

6. Research Methodology

The research philosophy for this study will be that of the pragmatism view which arises out of concern with the real-world practice-oriented investigation. Pragmatism philosophy builds its foundation over research questions that have been identified during the study (Saunders, Lewis, & Thornhill, 2019).

This study has synthesized existing literature that has been collected from different sources i.e., international journals, online databases i.e., Google Scholar, ProQuest, and the following keywords have been searched through shown in [Table 2].

7. Research Framework

The proposed research framework foundation is developed through a literature review exercise (Imenda, 2014). The impact of value creation is the dependent variable. The research framework is shown in [Figure 1]

7.1 Discussion, Analysis, and Outcome

7.1.1 Competitive advantage - Analysis of solutions and implementations

In this research paper, we aim to contribute to the debate on the formulation of competitive advantage within IT. The study laid by (Porter, 1990) suggests for achieving competitive advantage organizations need to overcome complacency and inertia to seize new opportunities in the new market and put itself into technological advancements and need to frame an effective plan which should be the focus on national circumstances and organization strategy. Further, (Porter, 1990) offers some of the key rules for innovation – a) sell to the most sophisticated and demanding buyers, b) look for the buyer with distinguishing needs, c) source from the most advanced and home-based supplier, d) always treat competitors as a benchmark(or motivational factor) study their key traits, e) role of differentiation strategy in

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the facets of human resource development (HRD), diversification - improvement and the innovation should be at the heart, role of alliances and role of leadership as an enabler. Leveraging the strategic targeting of resources through the resource-based view of the firm and developing dynamic capabilities as a foundation for the creation of competitive advantage (Mathews, n.d.).

The researchers in recent times have been immensely attracted by the impact of Covid-19 on the strategies of different organizations, thus the study by (González-Sánchez, Olmo-Sánchez, & Maeso-González, 2021) suggests organizations reviewing their Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to formulate competitive advantage strategies basis the post-Covid-19 times and their prioritization towards market and product level opportunities.

7.1.2 Cross-disciplinary communication - Analysis of solutions and implementations

A review of various perspectives on the impact of cross-disciplinary communication can be found in the works of (Ding, Pulford, & Bates, 2020) which discusses the role of leadership (hosting town halls, webinars, workshops, and coordinating communications), management (being a central administration team), collaboration, and teamwork. Further, it suggests the individual qualities in fostering cross-disciplinary by being receptive to ideas, commitments, confidence, and dealing with the unknown.

Another aspect of this concept is the increased interest in strategic human resource management (HRM) implementation effectiveness (primarily, touching on three fields – strategy, innovation, and change management) and can be understood in terms of a dynamic process with maintaining a certain degree of diversity (Trullen, Bos-Nehles, & Valverde, 2020).

7.1.3 Diversity - Analysis of solutions and implementations

While acknowledging the contributions of earlier research in this stream on the perspectives between diversity and workforce diversity. The study by (Yadav & Lenka, 2020) suggests workforce diversity as the integration and composition of demographic, cultural, informational, organizational, and cognitive diversity further diversify by the relationships among group members. Diversity has been defined as an important aspect to drive creativity, innovation, and value in organizations. Additionally, this literature discusses the measurement and outcomes of diversity by employing Euclidean distance measure at the individual level for measuring diversity and The coefficient of variation, Blau index of heterogeneity, and entropy index as widely used diversity measures.

In essence, the study by (Duchek, Raetze, & Scheuch, 2020) suggests resilience-enhancing diversity management (REDM) as one of the implementation models for a better understanding of diversity in the crisis and discusses the sensemaking capabilities, problem-solving process in complex situations under three stages of resilience process (anticipation, coping and adaptation)

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8. Research Implications

This study proposes that this article should help the IT industry and the organizations underneath to achieve greater agility, stability through the extent of IT infrastructure, IT human resource, and IT knowledge management, and embracing design thinking (DT) by encompassing emotional intelligence, integral intelligence, and experiential intelligence approaches, in these post-Covid-19 times more effectively and confidently. Additionally, it integrates the elements of value creation with dynamic capabilities, promoting entrepreneurial behavior and diversity management capabilities.

9. Limitations and scope for future research

The existing literature reviewed is based on secondary data and it might be irrelevant as the information may have been gathered at a time that could be outdated (Johnston, 2014). Further, there could be the presence of biases to support the vested interest of the source (Zikmund, 2010). Since our study is the initial level probe into the value creation in the post-Covid-19 terrain thus, it proposes some further exploration on the role of enterprise risk management in gaining competitive advantage across developing countries and further, it can evaluate organizational factors and other variables (organizational culture, training, etc.) (Saeidi et al., 2019).

Future research can make use of survey design or interviews form of primary data collection techniques (Kokt & Makumbe, 2020) to examine the relationships.

10. Conclusion

This research study has analyzed the role of competitive advantage, cross-disciplinary communication, and diversity through the value creation lens in the IT context and is validated using secondary data, which previously has scarcely examined given the mode of implementation models this article presents and discussed. For this study, we developed a research framework suggesting the relationship between the impact of value creation and the variables studied. Additionally, this study is the first step towards integrating the elements of IT organizations with the variable as competitive advantage link to dynamic capabilities as a foundation for creating a competitive edge leveraging through strategic targeting of resources through the resource-based view of the firm, the cross-disciplinary communication link to dynamic process with maintaining a certain degree of diversity employing strategic human resource management (HRM) and whereas, the discussion on assessing the understanding of diversity is the subject of resilience-enhancing diversity management (REDM). Therefore, the findings help to elucidate the variables found in the literature review.

Last, we make recommendations on the strategic role design thinking can play to assist and create value during this pandemic by, employing following approaches – a) emotional intelligence - this ability fosters a culture of attachment, commitment, and conviction., b) integral intelligence – this ability sums up varied customer needs into the singular capability to deliver value., and c) experiential intelligence – this form enables human senses to make innovation effort visible, known and distinguish, d) selecting appropriate prototyping techniques, e) the role of communication and seeking feedback from customers, and f)

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dynamic capability to enhance the absorptive capacity of an organization by the means of integration, and further learning use of design thinking in the context of IT development and share elementary differences - a) building on diversity – facilitate team-based collaboration by implementing differing thinking styles in development teams, b) exploring the problem space – a team-based collaborative effort, emphasizing over understanding user needs and to come up with new ideas, c) exploring the solution space – approach lean towards agile process and limit divergent thinking, and d) iterative alignment of both spaces – it gives the flavors around design thinking and agile process.

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