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RESEARCH ARTICLE

ORGANIZATIONAL RESILIENT BEHAVIOR OF SELECTED MANUFACTURING COMPANIES IN QUEZON PROVINCE DURING ADVERSITIES

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ABSTRACT

Organizational resilience plays a significant role in ensuring that the business survives and recovers its expected losses. The study aimed to develop a resiliency management plan for manufacturing companies in Quezon Province. The study utilized the descriptive-correlational design method. A survey questionnaire was used to gather data. The respondents were 165 selected manufacturing managers from first-class municipalities in Quezon province. Weighted mean was utilized as a statistical mean to determine the level of organizational resilience of the small manufacturing companies in Quezon province. Additionally, the Spearman Rho Rank Correlation coefficient was employed to ascertain if there are significant relationships between and amongst the major variables. The study's findings showed a significant relationship between organizational resilience and organizational resilience behavior.

KEYWORDS

Business risks, manufacturing companies, organizational resilience, resiliency management plan

1. INTRODUCTION

In today's globalized economy, manufacturers rely on suppliers worldwide. Manufacturing companies are not only involved in production, but also have a significant impact on employment, innovation, and economic growth. These companies create job opportunities across different sectors and skill levels, crucial for sustaining livelihoods and promoting community economic stability (Kumar et al., 2023). Some manufacturing companies are vulnerable to business risks, which can impact operations. Various uncertainties are bound to cause disruptions in business transactions, resulting in increased costs and reduced revenue (Kumar et al., 2009). Organizational resilience significantly strengthens manufacturing companies' ability to anticipate, respond to, recover from, and learn from adversity as these events are unavoidable.

Manufacturers in the province and CALABARZON are not exempt from the threats of these uncertainties. They have adapted by putting in place proactive systems to navigate risks and challenges, given their high sensitivity to competition in local businesses. This research delves into the status of manufacturing companies in the first-class municipalities in Quezon province and their relationship with local business performance. The objectives include assessing the level of organizational resilience and describing the organizational resilience behaviors among the manufacturing companies in Quezon province. Additionally, it aims to comprehend the impact of organizational resilience on business performance and provide actionable recommendations to strengthen the resilience and recovery of these local enterprises through a proposed resiliency management plan. Organizational resilience is essential for these companies to anticipate, respond to, and recover from business risks.

2. LITERATURE REVIEW

Organizations that have built up resilience are better equipped to handle unexpected crises, maintain their competitive edge, reduce the impact of disruptions, enhance employee motivation, and cultivate a positive public image through effective leadership, culture, and behavior and strategically managing risks. Interestingly expressed, organizational leadership is a vital aspect of business management that involves coordinating people and resources toward achieving the organizational goals of the manufacturing companies. According to Harvard Business Review, organizational leadership entails setting a vision, inspiring and motivating employees, and establishing a positive culture that encourages teamwork, innovation, and performance (Harvard Business Review, 2020). Effective organizational leadership is crucial in today's complex business environment, where companies face dynamic challenges such as global competition, technological disruption, and changing customer needs.

Vitasek, explains that organizational leadership involves creating a shared vision, developing strategies, establishing policies, and implementing plans that align with the organization's mission and values (Vitasek, 2023). Effective organizational leaders are those who possess key leadership traits such as integrity, empathy, communication, and problem-solving skills. It also emphasizes the importance of effective communication, collaboration, and teamwork in achieving the organizational objectives of manufacturing companies. Overall, effective organizational leadership is critical for achieving business success and profitability, particularly in manufacturing companies. Transformational leadership practices that inspire and motivate employees, promote teamwork, and align with the organization's mission and values are essential for achieving optimal performance outcomes. Manufacturing Managers can benefit from developing their leadership skills through training, mentorship, and continuous learning to improve employee job satisfaction, motivation, and organizational performance.

An organization's culture and behavior have been acknowledged as significant in improving employee commitment for manufacturing companies. Time commitment predicts loyalty and retention during difficult times. Employers should ensure staff are equipped to handle challenges and uncertainty. Dunger found that organizational commitment is influenced by transformational leadership, team cohesiveness, compensation, justice, and caring attitudes (Dunger, 2023).

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Thus, team cohesiveness, transformational leadership style, remuneration, a caring attitude, and justice have the most significant impact on commitment. These elements of company culture are crucial for raising employee engagement, especially in manufacturing companies. Organizational resilience can be enhanced by actively promoting a healthy culture. A healthy culture is characterized by shared beliefs and values, positive attitudes, and behaviors that support organizational resilience (Jamaludin et al., 2023; Ng et al., 2024). Demonstrating a strong commitment to fostering such a culture is essential to ensure the organization's long-term success. (Continuity Central com, 2022). Essential in building a resilient organization by highlights the culture of trust and transparency, strong leadership, and employee involvement (Morais-Storz et al., 2018).

Colwill proposes a behavioral theory for culture development in sustainable SMEs, culture should be viewed as a dynamic process influenced by individual and collective behavior (Colwill, 2018; Kumar et al., 2023). It emphasizes the role of leadership, employee engagement, and learning in shaping sustainable cultural practices of manufacturing companies. According to Kaul in a VUCA environment, the strategy should precede organizational culture (Kaul, 2019). It highlights the significance of cultural challenges and emphasizes the need for an inclusive and adaptable culture. It underscores cultural alignment, leadership, and effective communication as essential factors in overcoming these challenges. Thus, it emphasizes that manufacturing companies must internalize the importance of teamwork as part of their resilience culture. Cited by Access organizational culture plays a crucial role in enhancing employee engagement, innovation, and overall organizational performance (Access, 2019).

It stresses the importance of leadership in shaping and nurturing a positive organizational resilience culture. Strawser defines resilience culture as a strategic mindset, approach, and methodology that organizations adopt to enhance their adaptability to change, disruptions, and crises (Strawser, 2022). Organizationally resilient cultures recognize the advantages of shared accountability and empowered teams. Creating a strong feeling of accountability and a clear understanding can help the organization and management become more prepared for crisis circumstances. Although developing a resilient culture takes time, the benefits for any business are significant. Herman highlights the importance of organizational culture and behavior in achieving resilience maturity, and a culture of trust and transparency, with strong leadership and employee involvement (Herman, 2023).

Managing risk is a crucial aspect of any organization, particularly a manufacturing company, and it involves identifying, assessing, and mitigating risks that may hinder an organization's ability to achieve its goals. Quezon Province is often faced with natural calamities that, in turn, prevent manufacturing companies from maintaining their profits, According to TechTarget, risk management is essential as it enables organizations to minimize the negative impacts of risks while maximizing opportunities that arise (TechTarget, 2022). Additionally, risk management ensures that an organization remains compliant with regulatory requirements and enhances stakeholder confidence in the organization's operations. Hence, risk management is a critical process that manufacturing companies undertake to identify, assess, and mitigate potential risks that could affect their objectives.

TechTarget highlights its role in identifying and mitigating potential risks that could lead to financial losses, accidents, errors, or natural disasters. The resource emphasizes the need for organizations to have a systematic approach to managing risks. IBM offers insight into risk management, emphasizing the significance of understanding and managing risks in achieving organizational goals. The resource provides information on the key components of risk management and highlights the importance of integrating risk management into business processes (IBM, 2020). Similarly, manufacturing companies must optimize the use of available resources to achieve their goals effectively. Corporate Finance Institute provides resources on risk management, covering various aspects such as risk identification, assessment, mitigation, and monitoring. The resource emphasizes the role of risk management in preserving and enhancing shareholder value (Corporate Finance Institute, 2020).

Info Entrepreneurs provides a guide to managing risks in business, emphasizing the importance of risk assessment, risk reduction, and contingency planning. The resource offers practical advice and tools for effective risk management (Info Entrepreneurs, 2021). Reciprocity's resource on risk management explains the concept of a risk management plan and its components. The resource highlights the need for organizations to develop a structured approach to identifying and addressing risks (Reciprocity, 2019). On the other hand, for Bucovetchi and Vevera disturbances are inevitable for organizations due to internal factors like technologies and human resources, as well as external factors like political, legislative, and economic influences (Bucovetchi and Vevera, 2024).

It highlighted that resilience is mainly about understanding an organization's vulnerability and its dimensions. The resource developed an argument that an organizational resilience perspective on digital marketing extends beyond operational security and encompasses technology, ethics, incentive structures, regulatory issues, and their intersection with a new business model. Hence, risk management assessments are essential for every business in particular manufacturing companies that wish to enhance its risk management efficiency and resiliency. A business will always have an edge if it can foresee danger. A business that can foresee a risk to its finances would keep its investments to a minimum and concentrate on bolstering its financial position.

Investopedia posits that risk management involves identifying and analyzing potential risks, developing, and implementing risk mitigation strategies, and regularly reviewing and evaluating the effectiveness of the risk management process (Investopedia, 2022). The goal is to develop a risk management plan that can minimize the impact of risks and protect the organization's assets, reputation, and stakeholders. The effectiveness of risk management also depends on the strategies employed. Bayraktar examined the effectiveness of risk management strategies in the construction industry and found that a proactive risk management approach that involves identifying and managing risks early in the project lifecycle can significantly reduce the negative impacts of risks on project performance (Bayraktar, 2020). Implementing strong risk management strategies allows the business to maximize opportunities while avoiding potential risks (Australian Government, 2024).

Additionally, the Federal Emergency Management Agency (FEMA) provides resources on risk management in the context of emergency management. The FEMA emphasizes the importance of risk assessment, planning, and mitigation strategies in reducing the impact of emergencies (FEMA, 2022). The effectiveness of risk management depends on various factors such as the strategies employed and the context in which it is applied. Studies have shown that effective risk management practices can enhance project success and improve organizational performance.

Manufacturing managers who exhibit resilience are better equipped to overcome obstacles and achieve their goals. Similarly, as cited by (Fatoki, 2018). Entrepreneurs possess remarkable behavioral characteristics that enable them to overcome challenging conditions and adapt to their culture. Resilient entrepreneurs are adept at managing the challenges they face and strive towards achieving their goals, instead of giving up or resisting. They confront difficult situations with a positive attitude, rather than one of fear, inattention, or despair. Therefore, resilient behavior serves as an advantage to manufacturing companies when dealing with business risks or uncertainties.

Manufacturing companies face numerous challenges in their operations, such as technological advancements, economic uncertainties, changing customer demands, and intense competition. The ability of manufacturing companies to adapt to these challenges is crucial for their survival, growth, and success. Innovation involves developing new products, services, and processes that meet customer needs, enhance operational efficiency, and create competitive advantages. According to the study an innovation is a critical success factor especially those that operate in dynamic and fast-paced industries (Dodourova et al., 2020). This strategy involves conducting research and development, fostering a culture of creativity and experimentation, and collaborating with partners and customers to identify new opportunities. Another strategy that can be adopted is agility. Agility involves the ability to respond quickly and effectively to changing market conditions, customer needs, and technological advancements. According to the study by Ilmudeen agility is essential, especially for those who operate in uncertain and volatile environments (Ilmudeen, 2021). This strategy involves developing flexible organizational structures, empowering employees to make decisions, and leveraging technology to improve responsiveness and efficiency.

According to the study customer-centricity is essential for manufacturing companies, especially those that operate in highly competitive markets (Liu et al., 2021). This strategy involves conducting customer research, developing personalized marketing strategies, and providing excellent customer service. A manufacturing company can use customer feedback to improve product quality, reduce lead times, and enhance customer satisfaction. The fourth strategy that can be adopted is diversification. Diversification involves expanding manufacturing companies' product lines, customer base, and geographic reach to reduce dependence on a single product or market. For a group researchers' diversification is essential for manufacturing companies, especially those that operate in highly concentrated markets or face intense competition (Anggraeni et al., 2021). This strategy involves conducting market research, identifying new opportunities, and developing a clear diversification strategy. Thus, manufacturing companies can leverage their core competencies to enter new markets or develop new products and services.

Manufacturing companies can also adopt a lean strategy. Lean involves eliminating waste, improving efficiency, and increasing value for customers. As elucidated in the study lean is essential, especially for those who face resource constraints or operate in highly competitive markets (Lu et al., 2020). This strategy involves implementing continuous improvement processes, optimizing workflow, and reducing non-value-added activities. The sixth strategy that can be adopted is social responsibility. Social responsibility involves the adoption of ethical and sustainable practices that benefit society and the environment. For social responsibility is essential, especially for those who operate in environmentally sensitive industries or face consumer pressure to act responsibly (Ho et al., 2019).

This strategy involves adopting eco-friendly practices, promoting social causes, and engaging in community development. The strategy may be utilized by manufacturing companies, they can use sustainable materials, reduce their carbon footprint, and donate a portion of their profits to charity. Likewise, in adopting a learning strategy. A learning strategy involves the continuous acquisition and application of new knowledge and skills to improve manufacturing companies' operations and competitiveness. Cited in the study of learning is essential, especially those that operate in rapidly changing industries or face technological advancements (Wang et al., 2020). This strategy involves investing in employee training and development, networking with industry experts and peers, and participating in industry events and conferences. Hence, manufacturing companies can leverage online courses, workshops, and mentorship programs to enhance their skills and knowledge and gain a competitive advantage.

The eighth strategy that can be adopted is digitalization. Digitalization involves the integration of digital technologies into manufacturing operations to enhance efficiency, effectiveness, and competitiveness. According to the study digitalization is essential, for businesses who operate in the digital economy or face disruptive technologies (Mohamad et al., 2020). This strategy involves developing a digitalization strategy, investing in digital technologies, and integrating them into operations. The strategy aids manufacturing companies utilize cloud computing, social media, and e-commerce platforms to streamline their operations and reach new customers. Finally, there is a collaborative strategy. Collaboration involves partnering with other manufacturing companies' suppliers, customers, or stakeholders to achieve common goals, such as innovation, cost reduction, and market expansion. According to the study collaboration is essential for manufacturing companies, as they face resource constraints or operate in highly competitive markets (Li et al., 2020). This strategy involves identifying potential partners, building trust and rapport, and sharing resources and knowledge. Manufacturing companies can collaborate with suppliers to reduce costs, with customers to develop new products, or with industry peers to achieve common goals.

Being resourceful during the event of a crisis is significant to any business. A study by Del Giudice and colleagues examined the impact of the COVID-19 pandemic on SME resilience (Del Giudice et al., 2021). The research used a qualitative approach to investigate the experiences of 63 Italian SMEs. The study found that SMEs that had a strong online presence were proactive in adopting new technologies, and diversified their products and services were more resilient during the pandemic. Manufacturing companies need to be adaptable, innovative, and proactive to enhance their resilience and overcome unexpected challenges in their operations, including financial constraints, limited resources, and lack of access to information. In the face of these challenges, Manufacturing companies need to adopt preparedness strategies to mitigate risks, ensure continuity of operations, and remain competitive. Manufacturing companies can adopt various risk management approaches, such as insurance, contingency planning, and diversification. In essence, manufacturing companies can take out insurance policies to protect against financial losses due to unforeseen events such as natural disasters or cyber-attacks. Similarly, develop a contingency plan to ensure business continuity in the event of disruptions.

As elucidated in the study of digital transformation is critical, especially in the wake of the COVID-19 pandemic, which has accelerated the adoption of digital technologies (Wang et al., 2020). The study involves adopting digital tools such as cloud computing, artificial intelligence, and social media to streamline business operations and reach customers more effectively. Manufacturing companies can use social media platforms to increase their online presence and engage with customers. Emphasized in the study of networking is essential, for those that operate in local or regional markets (Watanabe et al., 2019). This strategy involves attending industry conferences, joining industry associations, and participating in business networks. Similarly, manufacturing companies can partner with other businesses to expand their market reach and gain access to new customers and opportunities. However, the choice of preparedness strategy will depend on numerous factors, such as the market dynamics, and long-term goals. By adopting the right preparedness strategy, manufacturing companies can overcome challenges, seize opportunities, and achieve business success.

Collaborative decision-making is one of the fundamental elements of promoting cooperation and inclusion in the workplace; thus, in the case of business risks, employee engagement in decision-making processes is crucial. Overall, fostering a collaborative and inclusive work environment is a continual effort that necessitates dedication, continuous learning, and active engagement from all workers. As a result of taking this step, a healthy and inclusive work atmosphere will be established in which everyone will feel appreciated, respected, and empowered to make their best efforts. For manufacturing companies, teams that work for a common purpose become more engaged, which has significant implications for any firm. Performance improves when employee objectives and team or organizational goals complement one another.

Highly functioning teams develop an agreement on a shared goal and form a group commitment to work together to achieve that goal. As noticed by Rallybright at work, inclusive cooperation is the cornerstone of organizational success (Rallybright, 2023). It gives everyone a sense of belonging, both in terms of the job they accomplish and the connections they build inside the group. It is an environment in which people feel comfortable presenting themselves as their actual selves, without hiding elements of their identity. Increased employee engagement, improved work satisfaction, innovative ideas that generate success, and lower attrition rates are all benefits of inclusive cooperation. In the same way, Waleed says that creating a collaborative and inclusive work atmosphere is critical for encouraging productivity, creativity, and employee happiness (Waleed, 2023).

Manufacturing companies must be mindful of industry trends in the emergence of technologies. Mindful of, self-aware people are aware of their own emotions, encourage others to provide constructive criticism and act on it constructively, understand how their behavior and actions affect others, and are aware of their own strengths and development needs (Murdoch, 2021). A person with poor self-awareness, on the other hand, is likely to disregard their emotions and sentiments and is unlikely to spend time pondering how they react. Because they cannot filter their communication, they tend to express what they believe and may appear to be unconscious of the impact of their words or actions on others. Similarly, if manufacturing companies are not mindful enough of the trends in the internal and external environment of the firm, they are bound to lag.

At a glance, we are increasingly living in what has been dubbed a 'VUCA' environment. In other words, a volatile, unpredictable, complex, and ambiguous world. In these VUCA times, having resilient individuals who are comfortable with change and uncertainty is more crucial than ever. Being resilient lowers our chances of burnout and increases our chances of being engaged and productive at work. As a result, nowadays it is essential that businesses increasingly search for "resilient" personnel who can adapt to a continuously changing workplace. In addition, it is the responsibility of the owner of the business to actively monitor industry trends and be aware of potential risks and vulnerabilities encountered by the business, thus, communication and coordination must be employed.

The company's diversity and integration efforts should be aligned with the overall strategy of the business. Furthermore, manufacturing companies can enhance their resilience by adopting certain strategies, such as risk management, customer orientation, flexibility, diversification, employee empowerment, and proactive planning. The COVID-19 pandemic has highlighted the importance of resilience and businesses need to be adaptable, innovative, and proactive to overcome unexpected challenges. Diversification involves expanding manufacturing companies' product lines, customer base, and geographic reach to reduce dependence on a single product or market.

3. Methods

The study employed a quantitative descriptive-correlation design. This was used to describe the resilient behaviors of the manufacturing companies in Quezon Province and to ascertain if there are significant relationships between and among the major variables. The participants of the study were the managers of the selected manufacturing companies in Quezon Province. The respondents were identified through the assistance of the Business Process Licensing Officer of the first-class Municipalities. Respondents were chosen through cluster sampling, the Cities and Municipalities Competitive Index cited that there are fifteen first-class municipalities in Quezon Province (Cities and Municipalities Competitive Index, 2022). As divided, into clusters, some of those clusters were randomly selected as samples. A sample size of one hundred ninety-seven (n=197) was determined using RaoSoft software (RaoSoft, Inc. Seattle, WA); in which 5% margin of error, 95% confidence interval, 401 as population size, and a response distribution of 50% were used. Only 165 were retrieved from the questionnaires distributed, resulting in an 84% response rate. The study used a researcher-made questionnaire that aimed to describe the organizational resilient behavior of the respondents. The instrument has undergone a series of validations to ensure its reliability and validity.

4. Data Analysis

The descriptive results of the mean scores on the level of organizational resilience of manufacturing companies in Quezon Province are shown in Table 1.

Table 1: Level of Organizational Resilience of Manufacturing Companies

Indicators	WM	AR
Leadership	4.25	Very Highly Resilient
Culture and Behavior	4.25	Very Highly Resilient
Preparedness and Managing Risk	4.21	Very Highly Resilient
General Weighted Mean	4.24	Very Highly Resilient

At a glance, the indicators such as leadership, culture, and behavior obtain the highest weighted mean (M=4.25) and are interpreted as “very highly resilient”. This suggests a very high level of resilience among the manufacturing companies in these areas. While preparedness and managing risk (M=4.21), on the other hand, is a critical aspect of organizational resilience, manufacturing companies must anticipate, prepare, and withstand disruptive events while continuing normal operations. Moreover, it is the initiative of the managers to provide employees with a policy on how to safeguard the organization itself through information dissemination among the members of the organization. Likewise, it depicts that organizational leadership is a vital aspect of business management that involves coordinating people and resources toward achieving organizational goals. Therefore, the culture is an integral part of the organization, and the members are responsible for ensuring the confidentiality, integrity, and availability of corporate information as needed and in the case of a crisis. Further, as to managing risks, communications and collaboration are essential components of a company's preparation program.

Table 2: Effectiveness of Organizational Resilient Behaviors of Manufacturing Companies

Indicators	WM	AR
Adaptive and Flexible	4.26	Highly Effective
Resourceful, Creative, and Innovative	4.21	Highly Effective
Prepared, Robust, and Redundant	4.21	Highly Effective
Inclusive and Collaborative	4.20	Effective
Aware and Reflective	4.23	Highly Effective
Diverse and Integrated	4.24	Highly Effective
General Weighted Mean	4.94	Highly Effective

Table 2 shows the perceived descriptions of organizational resilient behavior. There a highly effective descriptions of organizational resilient behavior as being adaptive and flexible (M=4.26); diverse and integrated (M=4.24); aware and reflective (M=4.23); resourceful, creative, and innovative (M=4.21); and prepared, robust, and redundant (M=4.21). Thus, it implies that consistency in manufacturing companies is maintained despite a diverse workforce. It also shows that they collaborate well in facing and solving the challenges they encounter. Similarly, Manufacturing companies face numerous challenges in their operations, such as technological advancements, economic uncertainties, changing customer demands, and intense competition. The ability of Manufacturing companies to adapt to these challenges is crucial for their survival, growth, and success.

Additionally, Manufacturing companies’ diversity and integration efforts should be aligned with the overall strategy of the business since it can enhance their resilience by adopting certain strategies, such as risk management, customer orientation, flexibility, diversification, employee empowerment, and proactive planning. Furthermore, it is the responsibility of the owner of the business to actively monitor industry trends and be aware of potential risks and vulnerabilities encountered by the business, thus, communication and coordination must be employed. Moreover, being resourceful during the event of a crisis is significant to any business. Therefore, resilient behavior serves as an advantage to entrepreneurs when dealing with business risks or uncertainties.

The relationship between resilience and behavior is ascertained with the use of the Spearman Rho Rank Correlation technique interpreted as a moderate to strong positive correlation implicating that indeed there is a significant relationship between organizational resilience and organizational behavior. Likewise, the moderate to strong positive correlation between resilience and behavior implies that better organizational resilient behavior may result in better organizational resilience or vice versa. These findings underscore the constructive collaboration between behavior and resilience as a key driver of success in turbulent environments.

5. Conclusion

The findings highlight that Manufacturing companies in Quezon Province foster organizational resilience in terms of leadership, culture and behavior, preparedness, and risk management. These elements of organizational resilience shape the organization’s collective identity and provide a framework for decision-making and character which influence its shared values, beliefs, assumptions, and norms. Based on the findings, it is evident that manufacturing companies in Quezon province promote a culture of adaptability and flexibility, diversity and integration, awareness and reflectiveness, resourcefulness, creativeness, innovation and preparedness, robustness, and redundancy. These organizational resilience behaviors play a crucial role in the company’s policy implementation and employees’ performance.

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