

**ORGANISATIONAL GREEN CULTURE AND COMPETITIVE  
ADVANTAGE IN MANUFACTURING INDUSTRY: CORPORATE  
SOCIAL RESPONSIBILITY AS A MEDIATOR**

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**FACULTY OF BUSINESS AND ECONOMICS  
UNIVERSITI MALAYA  
KUALA LUMPUR**

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AS A MEDIATOR**

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**ORGANISATIONAL GREEN CULTURE AND COMPETITIVE ADVANTAGE  
IN MANUFACTURING INDUSTRY: CORPORATE SOCIAL  
RESPONSIBILITY AS A MEDIATOR**

**ABSTRACT**

Green practises are changing the economic landscape and encouraging organisations to embrace a green culture. However, there is a lack of study on the factors necessary to drive and shape this formula successfully. Corporate social responsibility (CSR) could be a driving force for gaining environmental education and economic information, as it can mobilise employee knowledge and cultivate a learning environment that can accommodate business sustainability. The research aims to examine the relationship between organisational green culture and competitive advantage of manufacturing industries in Selangor, using CSR activities as a mediator. Organisational green management and CSR activities are seen as a way to gain competitive advantage, so CSR activities are offered to sustain the relationship between an organisational green culture and its competitive advantage. Insights gained from empirical analysis could be beneficial for future researchers. This study used ZoomInfo Technologies Inc. software to collect samples from 2,400 Selangor manufacturing companies, drawn randomly from 25% of the population and distributed to 600 managers. A structured survey was conducted using Google Forms to obtain data from 196 respondents, which was analysed using SPSS version 29. This research study found that organisational green culture and CSR activities have a positive effect on competitive advantage in manufacturing firms in Selangor. It provides an empirical explanation of the relationships between variables that influence competitive advantage.

**Keywords:** Organisational green culture, CSR activities, Competitive advantage, Resources-based view.

**BUDAYA HIJAU ORGANISASI DAN KELEBIHAN KOMPETITIF DALAM  
INDUSTRI PEMBUATAN: TANGGUNGJAWAB SOSIAL KORPORAT  
SEBAGAI PENGANTARA**

**ABSTRAK**

Amalan hijau mengubah landskap ekonomi dan menggalakkan organisasi untuk menerima budaya hijau. Walau bagaimanapun, terdapat kekurangan kajian tentang faktor-faktor yang diperlukan untuk memacu dan membentuk formula ini dengan jayanya. Tanggungjawab sosial korporat (CSR) boleh menjadi penggerak untuk mendapatkan pendidikan alam sekitar dan maklumat ekonomi, kerana ia dapat menggerakkan pengetahuan pekerja dan memupuk persekitaran pembelajaran yang dapat menampung kemampanan perniagaan. Penyelidikan ini bertujuan untuk mengkaji hubungan antara budaya hijau organisasi dan kelebihan daya saing industri pembuatan di Selangor, menggunakan aktiviti CSR sebagai pengantara. Pengurusan hijau organisasi dan aktiviti CSR dilihat sebagai satu cara untuk mendapatkan kelebihan daya saing, jadi aktiviti CSR ditawarkan untuk mengekalkan hubungan antara budaya hijau organisasi dan kelebihan daya saingnya. Cerapan yang diperoleh daripada analisis empirikal boleh memberi manfaat kepada penyelidik masa depan. Kajian ini menggunakan perisian ZoomInfo Technologies Inc. untuk mengumpul sampel daripada 2,400 syarikat pembuatan Selangor, diambil secara rawak daripada 25% populasi dan diedarkan kepada 600 pengurus. Tinjauan berstruktur telah dijalankan menggunakan Borang Google untuk mendapatkan data daripada 196 responden, yang dianalisis menggunakan SPSS versi 29. Kajian penyelidikan ini mendapati budaya hijau organisasi dan aktiviti CSR mempunyai kesan positif terhadap kelebihan daya saing dalam firma pembuatan di Selangor. Ia memberikan penjelasan empirikal tentang hubungan antara pembolehubah yang mempengaruhi kelebihan daya saing.

Kata kunci: Budaya hijau organisasi, aktiviti CSR, Kelebihan daya saing, Pandangan berasaskan sumber.

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## **LIST OF SYMBOLS AND ABBREVIATIONS**

R&D: Research and Development

CSR: Corporate Social Responsibility

RBV: Resource-based view

SECI: Socialization, Externalization, Combination, Internalization

UN: United Nation

SCP: Sustainable Consumption and Production

GPP: Green Public Procurement

GGP: Government Green Procurement

GHG: Green House Gas

USEPA: United States Environmental Protection Agency

IGPN: International Green Purchasing Network

SPP: Sustainable Public Procurement

PSR: Purchasing Social Responsibility

VRIN: Valuable, Rare, Inimitable, Non-Substitutable

NRBV: Natural Resource-Based View

SPSS: Statistical Package for Social Science

KMO: Kaiser-Meyer-Olkin

SKM: Strategic Knowledge Management

CFA: Confirmatory Factor Analysis

EPP: Environmental Preferred Purchasing

OGC: Organisational Green Culture

CA: Competitive Advantage

## **CHAPTER 1: INTRODUCTION**

### **1.1 Introduction**

This chapter serves as an overview of the current research study. The correlation between an organisational green culture and its competitive advantage is being examined in this thesis. Also, the thesis aims to investigate whether corporate social responsibility activities can mediate the relationship between the organisational green culture and the competitive advantage of manufacturing industries in Selangor. The background of the thesis is presented in Section 1.2, and Section 1.3 explains the problem statement. In Sections 1.4 and 1.5, the research questions and objectives are covered. The study's scope is also covered in Section 1.6, and its importance is covered in Section 1.7 on the implication of the study. Lastly, the research structure is explained in Section 1.8.

### **1.2 Background of study**

Every year, new environmental issues emerge, and the government continues to advise, promote, and enact legislation to encourage industries and the general public to make eco-friendly decisions. To limit environmental damage, the government is monitoring and controlling the ecological effects of production activity. Businesses, especially those in the manufacturing sector, are under growing pressure from a range of shareholders to evaluate the environmental effect of their activities (Abbas and Sagsan, 2019). Therefore, manufacturing industries are always at the forefront of government environmental regulations aimed at preserving the environment. Environmental-based management was seen as a waste of time, and it was assumed that it would mislead the organisation's business operations. But, on the other hand, that thought has been proven to be an indicator of inefficient resource usage, which leads to environmental pollution.

According to Gurca, Bagherzadeh, et al. (2021), the development of the knowledge-based economy has presented new challenges to many Malaysian organisations that



compete in the global business environment. In these circumstances, intangible assets such as organisational green culture and corporate social responsibility activities, as well as knowledge of how to obtain and transform raw materials into finished goods, have a large impact on an organisational ability to obtain and transform raw materials into finished goods, as well as its ability to survive and compete in the market (Cheung et al. 2018). Furthermore, an organisation's ability to focus on the development and use of intellectual assets influences its ability to function in a fast-changing and uncertain global economic environment, according to Fayyaz, Ebrahimian, et al. (2020).

Carbon restrictions, electricity shortages, global warming warnings, and soil erosion are all issues that businesses are currently facing from their suppliers. Similarly, customers are demanding more environmentally friendly services and products, which may cause less damage to the natural environment and thus benefit customers in the long run (Hoffmann, 2007). As a result, according to Brenkert (2019), firms must establish effective means to assess the environment and make strategic choices in order to take advantage of present possibilities while also addressing dangers that may arise. The significance of organisational green culture is critical to ensuring that green initiatives are implemented effectively. In other words, organisational green culture management is made up of three components: green buildings, green energy, and green trash (Ong and Riyanto, 2020). Attempts to promote green growth are ineffective without common organisational objectives among internal and external stakeholders. Therefore, organisational green culture motivates employees to contribute to environmental performance, making it important to increase firm competitiveness and green innovation while improving performance (Chang, 2015).

Altwaijri (2020) says that organisational green culture helps in cost savings and gives a competitive advantage over competitors to act proactively when the government implements new environmental laws in the future. For example, Toyota uses a single

production line to make vehicles of various types that have helped reduce energy consumption, using 30% more energy in manufacturing since 2000 (Sharma, Prakash, et al., 2021). On the one hand, incentivizing manufacturing firms to embrace green innovation methods by increasing their costs of spending can lead to their adoption, even if such tactics do not enhance profits (Rao and Holt, 2005). Organisational green culture can also increase profits with the use of recycled goods, reuse, and reduced components. For example, Levis launched new jeans with less waste made from recycled plastic (Qu, Khan, et al., 2021). In addition, it helps to enhance the image of the business by adopting an environmentally friendly product and service environment. Recognition and certification from the government will enhance the company's image and thus get the public's attention if the company implements an organisational green culture (Chiarini, Baccarani, et al. 2018).

"Culture" is a collective idea of shared ideals, principles, attitudes, and behaviours that influence organisational behaviour. By distributing a set of morals that will support the company in achieving its goals, the management team may help shape the culture of the organisation (Gao, 2017). Every business that wishes to compete effectively in the market is required to develop a strategy based on achieving a competitive advantage, whether consciously or unconsciously. The rise of consumer environmentalism and rigorous international environmental laws and practises have transformed competitive patterns all throughout the world. According to Sanil, Singh, et al. (2021), today's corporate competitiveness has turned towards an organisational green culture, which has had an influence on the global economy's development. Countries that produce and maintain their green assets effectively will have a competitive advantage over those that do not. Individuals with more expertise are more likely to get hired for positions that pay higher and offer more prospects (Roscoe, Subramanian, et al. 2019).

There are two main factors that prevent them from engaging in organisational green culture, one of which is a lack of exposure to the trust itself. Therefore, disclosure needs to be given more widely, as well as holding on-going promotions to cultivate and increase interest in the organisational green culture. Additionally, research by May, Hao, et al. (2021) found that in recent years, manufacturing businesses, government organisations, managers, stakeholder community groups, and other organisations have become increasingly interested in corporate social responsibility operations. These interest groups argue that consumers who lack information on corporate social responsibility concepts will have an impact on their day-to-day financial management as well as in the future. Knowledge or corporate social responsibility literature will guide a person in making decisions about organisational green culture. Through the knowledge possessed by Norbit, Nawawi, et al. (2017), organisational green culture is expected to improve their activities; they are not only responsible for activities such as recruitment, selection, compensation, and others but also need to carry out new activities such as developing leadership skills, developing creativity and innovation, managing change and transformation, making learning organisations, and others. In the age of knowledge, corporate social responsibility activities receive special attention. This concept has become widely known in the business world since the 2000s.

The growth of corporate social responsibility initiatives shows that the economy is growing more and more reliant on high levels of skills, knowledge, and information, as well as ensuring their availability (Roscoe, Subramanian, et al. 2019). Organisational leaders begin to understand the corporate social responsibility activity creation process as a corporate competitive advantage by mobilising employee knowledge and cultivating a learning environment that can accommodate the economics of information that are beginning to spread corporate social responsibility activities (Mohd Hasan, 2017). The purpose of applying this organisational green culture management concept is to develop

and enhance the business operations and achieve a competitive advantage. In addition, organisational green culture management is also applied to increase communication between senior management and staff in order to sustain work procedures, instil a knowledge culture, and create a performance-based compensation system (Ghaffarkadhim, Harun, et al. 2019). Seeing the significance of knowledge in achieving the competitive advantage of an organisation, the organisation must be able to manage the CSR activities inherent in human resources. The approach in the progression of knowledge management is better known as organisational green culture management, with the present CSR initiatives achieving the competitive advantage of the firm successfully. One of the most crucial aspects to examine is competitive advantage.

According to Frizzo-Barker and Chow-White (2020), knowledge has a significant impact on the economy. As a result, it must be produced and handled properly so that corporations may enhance their corporate social responsibility efforts. To achieve this goal, Mousa and Othman (2020) argue that companies should invest more in R&D, education and training, and other corporate social responsibility initiatives, all of which should be prioritised and developed over physical assets. In contrast, Gürlek and Tuna (2018) highlighted the significance of knowledge as a component of production, the concept of cooperative and strategic partnerships, and the swift adjustment of strategy in a network of labour, particularly CSR activities. It is discussed how the economy transitioned from an industrial to a green and cultural economy.

When CSR initiatives are linked with organisational management, the firm benefits strategically. CSR is greatly influenced by a variety of elements, one of which is the economic and environmental aspects of the organisation. The objective of corporate social responsibility is to protect the social, cultural, economic, and ecological features of the communities in which they manage (Raimi, 2017). A company's pioneering efforts will benefit from the "first mover advantage," which allows for demand and ranking of

goods and services, which is beneficial for improving a company's reputation, expanding new markets, and gaining competitive advantages. Furthermore, according to Nevskaya, Seleznev, et al. (2019), effective procedures must be developed.

Information technology, internal green culture, corporate social responsibility initiatives, and all forms of knowledge management may be used to gain an advantage in market place. In other words, Lusarczyk (2019) highlighted that every organisation must learn the weaknesses and strengths of competitors, study the wants and needs of consumers by increasing the ability to innovate or exploit technology, and invest in organisational green culture, particularly corporate social responsibility activities and knowledge-based human resources.

Therefore, this thesis aim investigates how corporate social responsibility initiatives and organisational green culture contributes more benefit and competitive advantage towards manufacturing industries. The discussion begins with a change in the paradigm of competition towards organisational green culture and corporate social responsibility activities as a foundation for improving corporate competitiveness. The study offers a theoretical justification of the relationships between the variables that accounts for the mediating role played by CSR activities.

### **1.3 Problem Statement**

The organisational green culture is basically a concept to preserve the environment and educate people on the significance of ecosystems. The culture of a company is crucial, distinctive, imperfectly imitable, and irreplaceable (Barney, 1986). Malaysia has taken appropriate action by implementing programmes and policies to preserve the environment. Malaysian businesses have begun to recognise the value of organisational green culture in preserving the environment. However, Kardos and Gabor et al. (2019) found that organisational green culture management is not just capable of protecting the environment, but it has also become an advantage to the organisation. This is because

society has started questioning green performance (Asadi and Pourhashemi, 2020). When it comes to managing organisational green cultures, there is a gap in the scholarly literature, according to Hamzah and Ja'afar et al. (2018).

The concern is that they lack an understanding of organisational green culture management and aim to get it from a business management perspective (Kamis et al., 2017). The adoption of organisational behaviour with green management in organisations is the practise of promoting environmental awareness (Zahidy, Sorooshian, et al. 2019). By continuously learning and developing organisational green culture management concepts that are guided by environmental objectives and policies that are completely integrated with the aims and approaches of the firm. Green technology is a very broad category that is also a part of organisational green culture management. However, green technology solely considers materials or equipment.

The change from the industrial era to the green culture economy era requires existing organisations to change the organisation of internal activities, such as by delegating managerial responsibilities, recruiting a more flexible and skilled workforce, outsourcing, and improving cooperation systems both within and outer of the organisation to transform knowledge into profitable business values (Pan, Gao, et al. 2018). Therefore, Yadav, Luthra, et al. (2020) believe that organisations need to change how they oversee their green cultures in light of the era of corporate social responsibility. This is because the significant influence that an organisational green culture has on its ability to be more successful while corporate social responsibility operates together to attain a competitive advantage. Competitive advantage is becoming increasingly crucial in the global economic process as global rivalry becomes more intense (Haseeb, Hussain, et al. 2019).

In the current competitive and dynamic business climate, corporate social responsibility programmes have been recognised as a useful resource for generating organisational competitive advantage, according to Yong, Yusliza, et al. (2020). This is

because Ahmad and Rashid et al. (2017) believe that corporate social responsibility activities provide environmental benefits, have a positive economic impact, and ensure public health. Accounting for corporate social responsibility activities tries to explain how an organisation's operations have an influence on the social and environment while also examining the means and economic performance in order to show progress or conduct a more thorough investigation (Ahmad et al., 2018).

Given the significance of green culture in this business, several studies have looked at how organisational green culture affects competitive advantage in the manufacturing segment (Gürlek and Tuna, 2017). There are not many studies in Malaysia that look at the green culture concerns that organisations face in the assessment of corporate social responsibility. Nevertheless, research by Yusliza, Norazmi, et al. (2019) has looked at the state of organisational green culture and corporate social responsibility activities in Malaysia. Furthermore, earlier studies that made an attempt to show the significance of organisational green cultures and competitive advantages focused more on the financial performance and innovation perspective (Wang, 2019; Gürlek and Tuna, 2018; Roespinoedji et al., 2019) than they did on organisational green cultures. Findings from the few studies on green innovation that have been conducted in the past have been contradictory. Considering the growing importance of organisational green culture and competitive advantage as vital tools for inspiring environmental performance, corporate social responsibility may be a viable option.

The connection between corporate social responsibility and competitiveness is one that has to be taken into account more and more. However, the research does not go into great depth on why this impact happens or what the main factors are that drive increased competitiveness (Marin et al., 2017). The organisational green culture and competitive advantage of a corporation with corporate social responsibility features have received surprisingly little research. Therefore, the current research targets to look into the

relationship between organisational green culture and its effect on competitive advantage among manufacturing industries in Selangor. To examine the relationship further, corporate social responsibility activities act as mediators in the progress of an organisational green culture and the competitive advantage of a firm. This study was necessary as a result.

#### **1.4 Research Question**

This study suggests the following research questions based on the previously mentioned issues: -

1. What is the relationship between an organisational green culture and its competitive advantage in the manufacturing industry?
2. What is the relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry?
3. What is the relationship between corporate social responsibilities and competitive advantage in the manufacturing industry?
4. Do corporate social responsibility activities play a role in mediating the relationship between organisational green culture and competitive advantage in the manufacturing industry?

#### **1.5 Research Objective**

The research objectives for this study are as follows in light of the aforementioned issues: -

1. To investigate the relationship between an organisational green culture and its competitive advantage in the manufacturing industry.
2. To investigate the relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry.



3. To investigate the relationship between corporate social responsibility activities and competitive advantage in the manufacturing industry.
4. To investigate the mediating role of corporate social responsibility activities in the relationship between organisational green culture and competitive advantage in the manufacturing industry.

### **1.6 Scope of Study**

Growing green practises are changing the economic landscape and encouraging organisations to embrace green culture. The benefits of embracing and participating in organisational green culture and gaining competitive advantage have been widely acknowledged by many manufacturing industries, but there is a lack of study on the factors necessary to drive and shape this formula successfully. The process of developing a business's competitive advantage by mobilising employee knowledge and cultivating a learning environment that can accommodate the business's sustainability. Corporate social responsibility (CSR) could be a driving force for environmental education and economic information.

Therefore, current research observes the effects of organisational green culture and CSR initiatives on competitive advantage. The study is being conducted among managers from manufacturing industries based in Selangor. The samples were selected randomly from ZoomInfo Technology software. This study's findings will identify the relationship between organisational green cultures and corporate social responsibility activities and the competitive advantage of manufacturing industries located in Selangor. When organisational green management and CSR activities work together, the chances of gaining a competitive advantage are higher. As a result, CSR activities were offered as a way to attain the sustainable relationship between an organisational green culture and its competitive advantage.

### **1.7 Significance of Study**

The management of the manufacturing industry will advantage from the knowledge gained as a result of this research and would use the additional information to further their analyses on environmental and economic aspects. They may use the study's findings to guide them in reshaping their organisation's future plans, strengthening their competitiveness, and enhancing their management skills and productivity. This study would function as a guideline for any researchers interested in pursuing research on green management.

This study enhances our understanding of corporate social responsibility activities and their importance in manufacturing industries to boost competitive advantage. This study's findings can be used by future researchers to learn further about the role that corporate social responsibility initiatives and organisational green cultures show in Malaysia's competitive advantage.

### **1.8 Research Structure**

The background information, the description of the problem, the research questions, the objectives of the study, its significance, and an outline of the study are all included in the first chapter of the thesis. The following chapter, Chapter 2, examines the literature on organisational green culture, the company's competitive advantages, and corporate social responsibility activities, as well as past research on these issues.

The theoretical analysis of this study is presented in Chapter 3, along with the supporting hypotheses. The variables are defined in this chapter. There is also an examination of the connection between the research hypotheses and the research questions. The research framework, methodology, and study design are then introduced in Chapter 4, as are some details regarding how the research is conducted. This Chapter 4 more focuses on data analysis, which incorporates explanations by referring to the design and hypothesis of variables, the data collection method, and collecting inputs from

existing literature. Relevant variables and reasonable assumptions are set up for this thesis, and then the research model is designed. In Chapter 5, on the other hand, the empirical findings and data analytic methodologies used in this thesis are presented. The data are presented together with a preliminary analysis, descriptive statistics, correlational analysis, regression analysis, and robust tests. It also briefly discusses the findings of the hypothesis testing as well as the analyses mentioned above. This section also includes a synopsis of the findings.

Finally, a thorough analysis of the conclusions and findings of this thesis is presented in the final chapter 6. Insights into the results of earlier investigations are provided in greater detail. In particular, the findings offer empirical support for the relationship between organisational green culture and a firm's competitive advantages. In order to understand how CSR initiatives affect organisational green culture and a firm's competitive advantages, this study looks at how CSR activities operate as a mediating variable. The chapter explains the theoretical and practical aspects. The current study's findings disclosed a substantial relationship between an organisational green culture and its competitive advantage, with CSR activities serving as a mediating element. Finally, the chapter talks about the study's limits, contributions, and upcoming research guidelines.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

The highlights of the research study results gathered from past studies will be described in this chapter. This research will also highlight several concerns that are linked between an organisational green culture and its competitive advantage accompanied by CSR activities. The study's external pressure factors, as well as the relevant constructs that were utilised in this investigation, were reviewed next. A synthesis of data from previous investigations as well as a limitation of the analysis were also discussed further.

### **2.2 Competitive Advantage**

Recently, debates on company policy have provided a lot of thought to the awareness of competitive advantage. There are several claims are made about competitive advantage, yet it is challenging to find an accurate explanation. When considering the way the term "competitive advantage" is working in the strategy literature, value creation appears as a recurrent component. Concerning who should receive value when, there is, however, little agreement. One school of thought contends that unfavourable conditions of trade in product markets are what create value. Sales that break even after costs are paid A deeper look at the term "cost," however, exposes the problems immediately. What is included in the "cost" of a resource? Therefore, Porter (1985) claims that "competitive advantage is at the core of a firm's performance in competitive markets," and he continues by stating that the aim of his book on the theme is to demonstrate "how a firm can actually create and sustain a competitive advantage in an industry—how it can implement the broad generic strategies." The characteristics of competitive advantage therefore include low costs, a clear edge in differentiation, or a fruitful focus strategy. According to Porter (1985), "competitive advantage basically results from the value a business is able to deliver for its customers that exceeds the firm's cost of giving it."

### 2.2.1 Understanding Competitive Advantage

Cost, uniqueness, and focus are Porter's (1985) three criteria for determining a competitive advantage (refer to figure 2.1). Being able to offer a plan at a lower cost than the competition, as per Porter's study, is one way to gain a competitive advantage. Large-scale businesses typically gain efficiency as a result of their recurring familiarity with the activities involved or as a result of their authority to negotiate reduced rates from suppliers. The other two strategies for gaining a competitive advantage involve enticing features that customers recognise in the offering (differentiation) or customers who believe the rival's product best satisfies all of their needs and desires (focus) (Henderson, 2011). The majority of organisations aim to attain a competitive advantage in at least one of the three dimensions, even if it is uncommon to find a business that competes in all three. Or, to put it another way, a firm wins a competitive advantage if it can do it at the lowest cost while divulging the most company data. Additionally, if a business can distinguish itself from its rivals by disclosing more corporate data or data that the rivals do not, this is a source of competitive advantage. In general, it is believed that a business has a "competitive advantage" if its profit level exceeds that of the trade, and a "sustained competitive advantage" if that profit rate can be maintained over time. For a business to have a competitive advantage, customers must place a higher value on its products and services than its cost of production. Or, to put it another way, the foundation of competitive advantage is the production of value (Porter, 1985).



**Figure 2.1: Porter's Generic Competitive Strategies**

### **2.2.2 Competitive Advantage Strategies**

The resource-based view (RBV), which emphasises the significance of environmental factors in the external environment to explain corporate success, differs from the firm. The RBV, on the other hand, argues that the very important indicators financial health of a business are its internal resources (Wernerfelt, 1984). Each company has the ability to own a wide variety of resources that are not totally movable, are difficult to reproduce, and may be used in many ways. These resources may be able to produce a long-term competitive advantage if they have a difficult-to-copy edge in the market.

The RBV's contribution is the notion that businesses should concentrate their efforts on improving internal assets and procedures (Grant, 1991). In light of this, companies need to support unique procedures and utilise their fundamental resources. For businesses that rely on information, processes that effectively consume and use it might give them a sustained competitive advantage. Such a procedure is referred to as "organisational green culture." It's unique to the company and blends business and environmental expertise to help the company meet its goals (Reich and Benbasat, 1996).

Strategic organisational green culture, seen through the lens of RBV, can result in a competitive advantage when it reflects a complex organisational process that is both varied and stationary (Wernerfelt, 1984; Peteraf, 1993; Barney, 1991). The alignment process should be compared to the underlying technology since it is a skill in and of itself, which can seldom create a lasting competitive advantage because it is equally accessible to all organisations (Clemons and Row, 1991). When technology is utilised to harness a company's resources in a new way, it gives it a competitive advantage (Vitale, Ives, and Beath, 1986). Every management process is different, according to the RBV.

### **2.2.3 Competitive Priorities**

The competitive priorities that serve as strategic competencies that may help organisations in originating, developing, and sustaining their competitive advantage have

received many interest in the literature on operations strategy and manufacturing strategy. According to the stated definition, competitive priorities are the elements of a company's production system that it must have to satisfy the demands of the markets it desires to compete in (Krajewski and Ritzman, 1993). The six characteristics Phusavat and Kanchana (2007) describe as competitive considerations in their work are cost, quality, flexibility, delivery, know-how, and customer focus. These principles were specified as follows:

1. Cost: The major emphasis of the term cost is on the capability to efficiently control production costs, together with their ancillary elements like overhead and inventory, as well as value-added.
2. Quality: The characteristics that characterise "quality" include a low failure rate, effective product performance, dependability, certification, and environmental consideration, to name just a few.
3. Flexibility: When it comes to contract conditions, which are frequently changed by customers, flexibility is the capacity to deploy and/or re-deploy resources in response. This phrase covers a broad range of characteristics, such as modifications to planning or design, adjustments to volume, and variations in product.
4. Delivery: Timing is thought to be an issue with delivery. When a customer receives a good or service, it is referred to as being delivered. Time-to-market for a new product is another factor that is taken into account.
5. Know-how: The word "know-how" refers to the tendency for product life cycles to shorten. The problems with knowledge management, creativity, and skill development are therefore covered.
6. Customer-focus: Focusing on the demands of the client is what customer-focus is all about. Included are customer information, product assistance, product customization, after-sale services, and a trustworthy guarantee.

#### **2.2.4 Knowledge Management**

In the current information economy, businesses must maintain their competitiveness and create new organisational structures and resource management theories. The key concepts of a long-lasting competitive advantage, corresponding to the best modern theories of strategic management, are intellectual capital (relational, human, and structural) and strategic partnerships as sources of knowledge (Ferreira et al., 2018). Knowledge management is defined as "an exchange of experiences, facts, knowledge, and skills all through the organisation" (Malik et al., 2018). Since it encourages creativity and expedites innovation for organisations, knowledge management is crucial in today's economy for boosting firm capabilities (Lin, 2006).

Corporate management's capacity to thrive in an environment that is more globally interconnected depends on their organisational intelligence, which is generated through their knowledge and information systems, as well as on the skills of their staff and their interactions with stakeholders (Edvardsson and Durst, 2012). Knowledge resources significantly opened up new company opportunities and made it easier for workers to share information and find solutions to pressing issues by coming up with innovative methods to enhance corporate operations (Lashari et al., 2020). Strategic knowledge management (SKM) refers to the procedures and organisational frameworks that organisations employ to gather, produce, and share information needed to develop strategies and make tactical decisions (Zack, 2002). Knowledge management is an important component because it increases an organisation's capacity for managing knowledge resources and aids people in more effectively achieving their business objectives (Yang et al., 2018).

The knowledge strategy of an organisation establishes the general course of action it intends to match its knowledge resources and capabilities with the intellectual requirements of its strategy. A strategic mindset must be adopted if one hopes to create a



sustainable competitive advantage. Businesses are becoming more and more aware of the practical value of knowledge management if they are to develop and remain competitive. A rising number of businesses globally are beginning to manage their knowledge and innovation in a more dynamic way as a result (Cruz et al., 2015). Campbell and Carayannis (2009) Knowledge is useful as a source of information, but when, how, and why are the key considerations. Knowledge is more valuable now than it has ever been, and it arrives in a number of forms that aren't necessarily predictable or even controllable. Thus, knowledge management activities are necessary to support business revolutions and workplace diversity by fostering chances to raise staff self-efficacy levels, enhance learning, and disseminate information to various individuals who may be affected.

Knowledge systems are awe-inspiring in their complexity, dynamic nature, and adaptability (Carayannis and Campbell, 2009). There are several diverse viewpoints on knowledge that are explored in a range of scientific domains, including philosophy, management, organisational theory literature, and strategy. As a result of various viewpoints on knowledge, several interpretations of strategic knowledge management exist. As a tactical resource, knowledge serves as our starting point. This aligns with the firm's resource-based view as well as conventional business strategy theory. The core assumption of the RBV is that competitive advantage is founded on significant, unique, and unrivalled internal resources and competencies that are hard for competitors to copy (Barney, 1991; Wernerfelt, 1984).

According to Finerty (1997), knowledge management has a two-tiered scope. Utilisation, storage, acquisition, distribution/sharing, and production are all part of the process, which is the first layer. Leadership, culture, measurement, and technology form the second layer of the organisational structure. These layers are integrated to form the scope of knowledge management. Two categories distinguish between explicit and tacit information, which is the motive of knowledge management. Tacit knowledge is

knowledge that exists only in the mind of a person. Personal, procedural, soft, stored in the brain, informal, and usually about proficiency or skill, tacit knowledge is personal, procedural, soft, and stored in the brain. Human knowledge that exists outside the head is referred to as explicit knowledge. Forms of explicit knowledge include, among others, documents, books, journals, and others.

Explicit knowledge is expressed using code, declarative writing, formal writing, and hard forms. Knowledge transfer, according to Nonaka and Takeuchi (1995), is a procedure that takes place when knowledge is being developed. This process is encapsulated in a model called the SECI model (Socialisation, Externalisation, Combination, and Internalisation). The process of transferring information between individuals in an organisation via a conversational process is known as socialisation. This process entails passing down tacit knowledge from one individual to another. The following stage is externalisation, or the transformation of implicit information into explicit knowledge. For instance, writing for books, journals, magazines, and other publications. Combination is the process of moving explicit information from one form of knowledge to another. Consider summarising a book. Internalisation is the process of moving from explicit to tacit knowledge. Teachers, for example, instruct students in the classroom.

### **2.3 Organisational Green Culture**

Organisational green culture refers to how to build a business by implementing green concepts. The green concept will be applied to every business conducted. Organisational green culture describes the proper Malaysian manufacturing organisation's processes in a business by implementing the concept of green. It is a process in management that ensures that an action does not adversely affect the environment. The environmental environment that will increase the quality of the environment is connected to green management. Adopting an organisational green culture policy through organisational green culture

activities on an ongoing basis can benefit all. Organisational green culture is also closely related to the concept of being environmentally friendly to reduce environmental pollution. The management implemented must not disturb the environment in a way that can cause pollution.

The concept of organisational green culture involves three components: green buildings, green energy, and green waste (Tran, 2009). The use of resources to increase environmental efficiency while lowering a building's impacts over time on the environment and human health is known as "green building." Wind, Solar, hydroelectricity, and other renewable energy sources are examples of green energy. It is described from an organisational perspective as an organisational green culture that is closely related to the development of environmental policies that will progress the environmental quality of the organisation by consistently engaging in green technology activities for the use of external and internal stakeholders (Wang et al., 2019).

The government has created many programmes and projects to make us aware of the significance of organisational green culture. Green technology policies have been created, with examples being the national green technology policy and others. For example, the Universiti Tenaga Nasional (Uniten) Sultan Ahmad Shah Campus in Muadzam Shah plans to introduce organisational green culture elective subjects to raise environmental awareness among its students. Also, the government has created many programmes and projects to make us aware of the significance of organisational green culture.

Several green technology policies developed by the government include the national green technology policy and others. Funds have been allocated for green technology by the Ministry of Green Technology, Energy, and Water in order to encourage the expansion of green technology initiatives. Advertisements on television and radio have been widely aired to raise awareness in all communities. The government's efforts have attracted the attention of many parties. Nevertheless, there are various perspectives and

views on organisational green culture. The implementation of organisational green culture depends in large part on this viewpoint and perspective on organisational green culture. Public and private organisations have begun to implement the concept of organisational green culture in organisational management. Unclear perspectives and views make it difficult for an organisation to implement an organisational green culture.

### **2.3.1 Green Procurement**

Environmental sustainability has suffered in recent decades as a result of unsustainable patterns of consumption and production to suit human needs. Unfortunately, such factors have been identified as a significant contributor to environmental degradation (United Nations, 1992). Recognising this, sustainable consumption and production (SCP) has become an important agenda item on the international stage, and one of the initiatives given emphasis is green procurement. In 1992, the term "green procurement" or "sustainable procurement" was coined (Grandia and Voncken, 2019). Businesses are increasingly focused on green procurement, which is rapidly growing, as part of their corporate social responsibility and environmental strategy (Bag, 2017).

For social, economic, and environmental advantages to continue, green procurement rules and strategies are essential for both public and private businesses. Green development may be promoted more widely in the future as a result of such policies and strategies (Telles, 2017). When deciding on green procurement, both the financial costs and the environmental and social implications of goods and services are taken into account. Examples of green procurement include the purchase of waste, office supplies, building maintenance, IT equipment, food, and many forms of transportation, including bicycles and aeroplanes (Bag, 2017). Green procurement also enables businesses to exert control over the supply chain by requiring suppliers to follow certain environmental standards before making a purchase or signing an agreement (Braulio-Gonzalo and Bovea, 2020). It prioritises sourcing raw materials, components, and products from

suppliers that are ecologically friendly while also taking care of concerns like business transportation, utilities, and equipment (Braulio-Gonzalo and Bovea, 2020).

Green procurement is rapidly expanding in government agencies and industries all over the world. Malaysia has taken initiatives to increase sustainability through green procurement, which is a new concept (Miyashita and Sato, 2001). When it comes to reducing environmental impact, green procurement is a good option. According to the Green Purchasing Network Malaysia, some fundamental principles of green procurement include taking necessity into account before making a purchase, being concerned about environmental effect throughout the product's life cycle, and accounting for the manufacturer's and distributors environmental performance. Green procurement also helps local businesses grow by maximising utilising locally produced goods and resources (Buniamin et al., 2016). As a result, companies will benefit from technology and expertise transfer, and Local companies will be urged to speed up Malaysia's economic expansion (Imran, 2020). As a result, green procurement will undoubtedly aid the growth of a green economy (Buniamin et al., 2016).

All governments should establish procurement laws for the public sector that would inspire the distribution and production of environmentally friendly services and goods, as suggested at the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa (UNSD, 2002). Environmental public procurement (also known as environmentally responsible public purchasing), environmental responsibility procurement (also known as environmentally preferred purchasing or EPP), green public procurement (GPP) (Bouwer et al., 2006; Parikka, 2008; Marron, 2004; Qiao and Wang, 2010; UNEP, 2011), environmental public procurement (also known as environmentally responsible public purchasing), and environmental preferred purchasing (EPP) (Rahm and Cogburn, 2005; USEPA, 2009) are all (Li and Geiser, 2005).

In Malaysia, the word "GGP" refers to government green procurement that takes environmental considerations into account in order to safeguard and minimise environmental harm while still boosting the country's economic development (Adham and Siwar, 2012). One of the intended environmental requirements is to minimise environmental impact, have low to no greenhouse gas (GHG) emissions, be safe to use, create a better and healthier environment for all living things, save energy and natural resources, and encourage sustainable resources. Energy derived from natural resources is one of the desired environmental criteria (KeTTHA, 2009). Simply put, GGP entails the purchase of environmentally friendly supplies, services, and works such as energy-efficient electrical appliances, recycled paper, office furniture made from sustainably produced materials, environmentally friendly maintenance services, building design, and Malaysian manufacturing organisation services.

The potential implementation of GGP, which addresses economic, environmental, and social issues, entails a number of simultaneous goals, including minimising adverse environmental effects, lowering carbon dioxide (CO<sub>2</sub>) emissions, cutting costs significantly, reducing material and energy consumption, minimising waste and pollution, avoiding waste, and enhancing economic competitiveness and quality of life (Mielisch and Erdmenger, 2001; McCrudden, 2004; Barr et al., 2005). The implementation of GGP has the potential to address complex environmental challenges, particularly in developing countries (Geng and Doberstein, 2008). An organisation's act in terms of net revenue and cost of products sold benefits from green procurement from a business perspective (Carter et al., 2000).

Many countries, particularly the developed ones, have implemented GGP policies at the national level (Geng and Doberstein, 2008; Li and Geiser, 2005). However, the implementation of GGP in developing countries has not shown much improvement (Adham and Siwar, 2012). Many studies on issues and challenges in implementing GGP

have been conducted in foreign countries, but research on it in Malaysia is still limited. It's possible that this is due to the fact that GGP is still a newly developed idea in Malaysia (Goh and Suhaiza, 2010), where the majority of green procurement practises are only used by foreign companies (Eltayeb and Zailani, 2010). As part of their present green procurement practises, respondents place a strong importance on the safe inbound transportation of product to facilities. Green procurement strategies are relatively new, yet they have proven to be beneficial in reducing environmental impacts. Furthermore, green procurement strategies have some economic, environmental, and social consequences. Green procurement aids in the reduction of poisonous and hazardous substances or waste while also taking into account the effects on human health.

### **2.3.2 Green Production**

The production, use, and disposal of a product or service that does not consider environmental factors will almost certainly have a negative influence on human life quality. To achieve green procurement, the USEPA (1999) established five (5) principles:

- 
- 1. Considering environmental factors as one of the elements (in addition to the more traditional ones such as performance, safety, availability, and pricing);
- 2. Attract attention to pollution prevention at the outset of the purchasing process;
- 3. Examine various environmental attributes over the course of a service's or product's life cycle;
- 4. When choosing products and services, make comparisons on the relevant environmental impacts; and
- 5. Collect accurate and useful environmental data and use it to make purchasing decisions.

IGPN (2010) outlines four (4) green production principles, namely: -

- 1. Take into account about what products and services are needed;

2. Take into account the product and service life cycle (reduction of hazardous materials, efficient and energy-saving resource use, and sustainable, durable, reusable, recyclable, and disposable natural resource use);
3. Consider business ventures (environmental management introduction, environmental information disclosure); and
4. Availability/use of environmental information.

Walker and Brammer (2009) determine what the primary obstacle to implementation is sustainable public procurement (SPP) practises in the United Kingdom was financial. The study was carried out through a questionnaire utilising a scale modified from Carter and Jennings' (2004) Purchasing Social Responsibility (PSR) scale. The scale used by Walker and Brammer (2009) contains seven (7) dimensions namely: -

1. Human rights;
2. Environment;
3. Philanthropy;
4. Diversity;
5. Security;
6. Buying from small vendors; and
7. Buying from local vendors.

### **2.3.3 Environmental Management and Protection**

"Green workplace culture" is a term used to describe a symbolic setting for environmental protection and management where members' sense-making actions and processes are regulated by interpretations as well as a set of values and norms that define how the organisation understands environmental factors (Azzone et al., 1997). Organisational green culture is the integration of widely held core beliefs, such as the need for the organisation to go beyond profit concerns and take a wider view of its own in terms of sustainability of its social and natural environments (Shuo et al., 2009). Green



culture in the workplace is how strongly fundamental principles are adhered to by an organisation, beliefs, symbols, and artefacts reflect a need or desire to conduct business in a way that is ecologically sustainable. There are two aspects to it: the "greenness" of the company's publicly pushed line and the degree to which this exposed perspective is reflected in the company's artefacts and behaviours (Harris and Crane, 2002).

A culture built on ecological principles is necessary for the successful application of a cutting-edge environmental strategy. It demands that the personnel have a high level of attentiveness. A failure to do so might result in some value being lost from management's efforts and investments (Fernandez et al., 2003). Six criteria were used by Mishra and Denison (1995) to assess the organisational green culture: -

1. The firm is concerned with environmental protection and management collaboration;
2. the firm concerns the vision of environmental protection and management;
3. The firm concerns the knowledge of environmental protection and management;
4. The firm concerns the change of environmental protection and management;
5. The firm is concerned about environmental protection and management's responsiveness; and
6. The firm is concerned with environmental agreements.

#### **2.3.4 Green Management Opportunities**

The Possibilities When sustainability is adopted as a business culture, managers have access to new marketing opportunities (Teece and Pisano, 1994). Marketing professionals may explain how their company's values and beliefs are oriented towards meeting not just consumer demands but also enhancing the lives of its stakeholders via the use of sustainable business practises (Menon, 1997). By showing the business's environmentally friendly proposals, such as reducing paper usage or using eco-friendly materials for product packaging, by communicating electronically rather than through hard copy mailings, it helps marketers stand out (Shrivastava, 1995). By creating campaigns that are

based on specific target audiences, waste generated by advertising campaigns is decreased (Frame and Newton, 2007). Initiatives in marketing, like raise awareness of the importance of sustainable goods or services, may put a company ahead of its rivals and help it build a stronger image (Menon, 1997). By assisting companies to capitalise on their green inventions for economic, social, and environmental benefits, such efforts encourage consumers to purchase environmentally friendly goods and enhance the long-term survival of the business (Boulatoff and Boyer, 2009). A company's sustainability-based green activities have a long-term influence on its image and eventually become its identity when they are recognised by organisations which the corporation both uses internally and externally (Rodrigues and Child, 2008).

Managing Possibilities Sustainability promotes resource management that is wise so that chances for effective cost and waste management might arise (Geng and Yi, 2006). By maintaining their financial health while taking into account the health of people and the environment, businesses may successfully manage their future risks. This is the aim of sustainability in the business sector (Osland, 2003). By completing the gaps in the business's green initiatives, the organisation's approach to sustainability creates a range of options that boost performance (Liyanage and Ratnayake, 2009). The management encourages marketing in an effort to persuade customers to exercise caution when consuming the items they are provided with while making an effort to use resources wisely, save money, and minimise waste through green activities (Sheth, 2011). The management of such programmes has as its goal educating everyone about environmental needs and inspiring them to use sustainable goods and services in order to promote sustainability (Sheth, 2011).

As a result of the creation and application of technologies or information systems for sustainable development, management is able to discover gaps or setbacks in the effectiveness of the organisation and prospective areas for improvement (Knirsch and

Szekely, 2005). A sustainability performance reporting system, conversations with different communities to learn about their needs related to sustainability, the development of a programme allowing the exchange of used items to reduce waste, the identification of investments to become a socially responsible organisation, and labelling of products with an eco-friendly mess are just a few ways that the data required to support sustainability-based green initiatives can be gathered. Organisations benefit from green efforts with a performance-oriented road map that lowers risks and costs while creating opportunities for things like a better reputation, more environmentally friendly production, and environmental accounting. Opportunities in Operations Strategic creative procedures that enhance a company's performance in an environmental context and provide the business with enticing financial returns are required in order to care for profit, people, and the environment (Kantabutra and Avery, 2011).

In the area of operations, strong governance, capacity building, knowledge-based solutions, and collaborations are a few examples of change drivers. Utilising natural resources, building the best possible inventory, and producing the least amount of trash possible are all components of good governance that is based on sustainability. With such governance, there is a chance that the standards established by the appropriate authorities will be efficiently followed and that the requirements of both people and the planet will be successfully met over the long term (Szekely and Knirsch, 2005). By encouraging staff to actively regulate overall quality, produce new work, and exercise effective leadership, engaging staff in establishing a culture of sustainability inside the company may present chances for capacity development (Lee et al., 2001). Companies that focus their operational operations on straightforward fixes that lessen functional complexity and increase profitability are examples of those taking such initiatives. Along with the company's own environmental standards, these activities have to be in line with those of the target audience. This complementary alignment makes it possible for businesses to

build partnerships with their customers and satisfies the necessary conditions for them to grow and get a better reputation (Tian and Fuller, 2006). When operational demands are met with a chances of employing specialised knowledge-based expertise that improves the performance of the organisation occur when sustainability-driven green initiatives, such as effective infrastructure or financial support for successful operations, are the emphasis. (Szekely and Knirsch, 2005).

Green initiatives provide chances for enhanced performance in many organisational functions when they become part of the business culture. The management team may benefit from the benefits of the adoption of green initiatives in the form of improved profits through lower costs by incorporating all stakeholders engaged in the adoption of sustainability-driven green initiatives (Roth and Bansal, 2000). Such adoption forces operations to reduce waste created as an outcome of the business's activities and use resources as efficiently as feasible. By improving the consumer image of their brand, it also helps marketers differentiate their items (Knirsch and Szekely, 2005; Roth and Bansal, 2000; Shrivastava, 1995).

### **2.3.5 Environmental Performance and Green Management**

As a cornerstone of corporate strategy, the idea of "green management" was first put forth in the 1990s (Mandip et al., 2012), but it wasn't until the 2000s that it really took off. The definition of "green management" as used by Wehrmeyer and Parker (1996) is basically the planned and structured fusion of conventional organisational management tasks with the organisation's green concerns (Jose Chiappetta, 2011). The urgent necessity to establish links between sustainable development and organisational green practises was also emphasised by Ahmad al. et al. in 2020. This discussion focuses on a contemporary philosophy of economic growth that uses foreign and trade policy, industrial and agricultural policy, fiscal and financial policy, and other realms of influence to advance

socially, environmentally, and politically sustainable development (Shaikh and Rabaiotti, 2010).

A number of common management practises, including induction, hiring and placement, employment research, performance evaluation, awards, and preparation, are widely used to interpret the literature on how green an organisation's management is (Shaikh and Rabaiotti, 2010). When new roles and positions are created and implemented, they are only concerned with the organisational environment, a process known as "work design" (Opatha and Arulrajah, 2014). It involves integrating a variety of tasks that are related to environmental preservation into each function, responsibility, and duty. To put it another way, a fascinating aspect of green job research is the incorporation of environmental considerations into the description of the task while, concurrently, integrating green competence into job specifications (Opatha and Arulrajah, 2014).

Many organisations have already begun putting sustainable business practises into place in order to protect the environment. Furthermore, every job description now explicitly lists at least one ecological upkeep requirement or perhaps an ecological concern (Shaikh, 2010). The adoption of environmentally friendly hiring practises during selection forms the source of the green hiring and selection process, such as the use of green hiring attitudes and resources on the internet and reduced paper usage throughout the recruitment phase (Sinha et al., 2021). Success in protecting the environment depends on people's green abilities (Subramanian et al., 2015). Therefore, it is important to recognise those who appreciate sustainability measures and engage in basic ecological habits like recycling, carpooling, and energy conservation. On the other hand, organisations that value the environment and are "green employers" will attract candidates who adhere to ethical standards (Jose Chiappetta Jabbour, 2011).

Furthermore, according to Shaikh and Rabaiotti (2010), green induction involves educating new recruits about the organisation's environmental initiatives and equipping

them with the skills necessary to practise environmentally responsible interpersonal behaviour. The organisational environmental culture must be truly understood by new employees, along with a plan of action (Wagner, 2002). General green induction and green work induction are two different techniques that organisations might use to address this (Khan, 2020). Companies that practise broad green leadership educate potential members on the fundamental tactics and practises of environmental sustainability. During a specialised eco-induction, new employees are focused on sustainability projects related to their jobs. All of these strategies are now being used in businesses to show their effectiveness. Corporate employees at all levels should be viewed as needing to be environmentally conscientious in order to achieve environmental success. Environmental education is therefore crucial to changing the participants' attitudes and behaviours inside the organisation (Khan, 2020). The emphasis was on giving this sort of training to staff members who would advocate for conservation and waste management practises.

The implementation of rotational programmes to train future green managers and the development of green personal skills should all be seen as successful green training and growth initiatives. Training staff members to conduct energy-saving and environmentally friendly workplace research is another example. The green performance evaluation is a crucial element in the success of the performance feedback interview, which is an appraisal of performance based on green criteria (Opatha and Arulrajah, 2014). Such a green activity will show its value because when a person's worth is considered while evaluating a course of action, it is thought to have greater value, and efforts are made to carry it out. Green practises will thus be encouraged to be adopted by employees if they are incorporated into the performance evaluation system (Samina et al., 2019). Renwick (2012) has praised the addition of environmental sustainability goals to the performance evaluation method since it ensures that workers' advancement is regularly tracked. Modifying programmes to support the development of renewable talents, using financial

and nonfinancial environmental incentives (like cash premiums, benefits, sabbaticals, and gifts), and tying green pay and reward systems to the actions of the green system are all necessary steps to take in order to accomplish this (Dumont et al., 2016). It is important to underline that using environmentally friendly practises at work results in smaller carbon footprints. This might be used as a tool to encourage organisational environmental behaviour.

Green empowerment motivates employees in corporations to take responsibility for their activities, encourages people to make environmentally friendly decisions, and fosters a feeling of self-worth and identity. These factors increase ecological efficiency and cost appreciation. When employees act sustainably, it increases their commitment to sustainability initiatives and their enjoyment when they meet their environmental goals. People and their destructive behaviour have had an effect on the globe and business (Machado et al., 2013). Employing green management practises may help businesses create an ecosystem that is ecologically sustainable. Environment protection is the responsibilities of the manager with the collaboration of the employees (Arulrajah et al., 2016). It may be made ecologically friendly through the use of several operational actions. Therefore, if an organisation integrates green management practises with environmental legislation, it will have positive benefits, according to Jacob and Cherian (2012).

Renwick et al. (2012) also pointed out that firms' success in terms of the environment will suffer if their staff are not active in environmental activities. Hadjri et al. (2020) pointed out afterwards, nevertheless, that a lot of businesses now actively rely on their employees to safeguard the community. In order to offer candidates a green management strategy, green recruiting and selection are thought to be the most effective management techniques. Attracting and hiring qualified candidates is one of the issues managers face today. Still, maintaining culture is a challenge for many organisations. With its assistance, able to find applicants with a real commitment to culture and sustainability. This would

aid businesses in achieving their objective of environmental sustainability. Additionally, according to Hadjri et al. (2020), green training and career promotion are frequently seen as crucial management approaches for an organisation's success in environmental performance. Environmental education is seen as a crucial strategy for improving operational management (Kihombo et al., 2021). This sort of instruction might promote a company culture that encourages the creation of sustainable, green practises like waste reduction and environmental stewardship. The Renwick (2012) training manual lists a few possible tasks, such as recycling for safety and waste management, as well as approaches for environmental preservation and energy conservation.

People may be inspired to adopt ecologically beneficial habits by using green management techniques (Cherian and Jacob, 2012). Green practises can help organisations gain long-term competitive benefits. Several experts have lately updated their knowledge of how the development of green management techniques, such as green employment, green education, green recruiting, green choice, and green incentives, correlates with business success (Rawashdeh et al., 2012). Business organisations present themselves as staunch traditionalists in an effort to attract highly intelligent individuals with superior green knowledge, implement green practises, and solve sustainability difficulties (Karim Al-Adwan and Rawashdeh, 2012). Jacob and Cherian (2012) brought attention to the idea that companies with green management goals may function more successfully and provide favourable results. On the other hand, businesses that do not have staff members that participate in green activities may perform less effectively in terms of the environment.

Renwick (2012) further opined that ecological firms had to concentrate on enticing and choosing candidates with environmental understanding. The effect of management methods on the operation of a corporation may be seen in two different ways, according to Bowen and Ostroff (2004). The methodological framework of the approach, which



takes into account how several common management practises affect an organisation's performance, is its fundamental component. The second approach offers unique information by focusing on how such management practises impact the company's execution. Businesses across a range of sectors utilise strategic ecological improvement methods to get a competitive advantage since environmental efficiency is what drives corporate success (Rodríguez-Antón, 2012). The management strategy has a significant impact on economic and ecological performance (Al-Tuwaijri et al., 2004). Changes to the organisation's physical spaces, its environmental performance standards, and the reactions of its employees are usually included in the process.

Improvements in employee behaviour, the reduction of greenhouse gas emissions, expanded recycling initiatives, and initiated usage of public transportation are all ways that organisations handle environmental challenges, including energy and water conservation. A transition state that addresses these difficulties is an important border state. It is crucial for employees to get involved in environmental management activities, and they get the most interested when they work with other organisations that share their worries about the environment (Harvey et al., 2010). According to a survey of businesses with ISO 14001 certification, organisations with high levels of employee motivation have increased environmental efficiency by putting effective management practises into place at all levels of the organisational structure. When implementing green management practises, several factors are essential to keep in mind, such as choosing candidates with a strong background in the environment and regularly training staff members on environmental issues (Opatha and Arulrajah, 2014). Activities that have a beneficial environmental impact can be used to illustrate how effectively the workplace climate functions. To do this, organisations must carry out effective ecological projects (Jackson and Seo, 2010). The several organisational green cultures that have a positive and

significant impact on the environmental practises of the organisations were described in both studies.

## **2.4 Corporate Social Responsibility (CSR)**

The concept of corporate social responsibility was initially introduced by author Howard Bowen in his 1953 book, *Social Responsibilities of the Businessman*. In 1953, Bowen, a writer well-known for his work on the subject, described corporate social responsibility as "businessmen's obligations to pursue those policies, to make those decisions, or to follow those lines of action that are desirable in terms of our society's objectives and values." His example of CSR is regarded as one of the first examples of the concept. Since then, the subject has gone by a variety of titles, such as corporate social performance in the 2000s and corporate social responsiveness in the 1970s (in the 1980s). This development also demonstrates a better grasp of critical areas of action and performance that prior definitions neglected to take into consideration (Carroll, 1999).

If corporate social responsibility practises are strategic, they may be evaluated using the resource-based view of the corporation. RBV substantially draws from earlier Penrose (1959) research, as pioneered by Wernerfelt (1984) and improved by Barney (1991). This point of view holds that businesses are assemblages of various resources and competencies that are only partially transferable between enterprises. According to Barney (1991), if these resources and competencies are valued, uncommon, one-of-a-kind, and non-substitutable, they can be a good source of long-term competitive advantage. Hart (1995), who conducted the first theoretical study extending the RBV paradigm to corporate social responsibility with a sole focus on environmental social responsibility. According to Hart (1995), this is true for some types of organisations. He said that environmental social responsibility may be a resource or a competence that results in a long-term competitive advantage. According to Russo and Fouts (1997) research, Businesses that performed better in terms of the environment also had better

financial outcomes, which led them to draw the conclusion that this was in line with the RBV hypothesis. By using firm-level data on environmental and accounting profitability, they were able to accomplish this by experimentally testing this theory.

The RBV framework was used to create a more formal theory-of-the-firm model of "profit maximising" corporate social responsibility in McWilliams and Siegel (2001). These authors offered a clear model in which two firms provide the same items, with the difference that one organisation adds a further "social" quality or feature that may be valued by some clients or, possibly, by other stakeholders. To decide how much money to spend on CSR activities and traits, managers in this model perform a cost-benefit analysis. In other words, they examine both the cost of meeting the demand for CSR and the demand itself. There are various strategic ramifications of the company perspective theory on CSR. The first is that a corporation may integrate CSR as a key component of both its business strategies and corporate level differentiating initiatives. Consequently, it should be regarded as a type of strategic investment. Corporate social responsibility may be seen as a way of establishing or keeping a reputation, even when it has nothing to do with a particular product feature or production procedure.

The RBV logic may be employed to predict trends in corporate social responsibility spending across enterprises and industries. The second strategic implication of a solid perspective theory is this: For instance, those anticipate discovering a significant relationship between corporate social responsibility and both marketing and R&D. (McWilliams and Siegel, 2001). Through the development of the corporate viewpoint idea, it may be possible to more clearly appreciate the strategic implications of corporate social responsibility. In particular, this paper seeks to focus on issues like market structure, business dynamics, industry growth, and the use of asymmetric knowledge in the context of corporate social responsibility. It's critical to understand the differences between the two forms of product differentiation when discussing the purpose of

corporate social responsibility in defining products. Vertical differentiation is the first type, and it happens when most customers favour one product over another. The majority of buyers favour a fuel-efficient car, other things being equal. When clients are confident that a product has a corporate social responsibility feature that makes it better than a product without such a feature, a scenario like this can occur in the domain of corporate social responsibility. In addition to assisting the company in satisfying a specific market demand, this kind of distinction might help it retain or improve its reputation, which adds value (Fombrun and Shanley, 1990).

Vertical differentiation happens when a small percentage of consumers like a certain good, yet the decision is made based more on taste than on quality. Contrary to how easily CSR elements may be recognised, customers often find it challenging to assess if a company's internal operations adhere to their moral and political criteria for social responsibility. Activists or the company itself may function as a mediating factor in the degree of asymmetric knowledge regarding internal operations. Particularly for more all-encompassing forms of CSR, this activity might be seen as a sort of advertisement. Although such reports may be helpful, some customers believe the information is biased since it has been filtered by high management.

According to Fombrun and Gilligan (2001), by providing consumers with trustworthy information they can rely on to choose corporate socially responsible, activists may play a big part in resolving this issue. It's worth thinking more deeply about the connection between CSR and advertising. It's helpful to think about a few stylized facts about the development of industries and the nature of advertising. First, since there will be a greater manufacturing difference in those industries and because customers in those industries will typically have more wealthy preferences and knowledge about products and businesses, the established enterprises believe that more established industries would engage more in CSR. It goes without saying that adopting CSR to enhance or preserve

their reputation will certainly increase profits for such companies. Another argument is that it's critical to distinguish between persuasive and informative CSR advertising if some types of CSR do in fact qualify as advertising. Advertising that aims to persuade consumers to buy items with CSR features is known as persuasive CSR advertising. So, this kind of advertising does not always have to be company-specific. Advertising that promotes CSR in an educational manner only informs consumers of the company's CSR management procedures or other relevant CSR features. According to Milgrom and Roberts (1986), a high volume of CSR advertising (whether it be persuasive or informational CSR advertising) may be considered a mark of a company's or product's superiority.

Several decades have passed since the study of corporate social responsibility in for-profit companies began (Maignan, 2001; Lee and Shin, 2010; Shah and Chen, 2010). Corporate social responsibility has for a long time been a major subject of research in both business and science (Turker, 2009; Dincer and Dincer, 2013). Turker (2009) approaches CSR from the perspectives of social, environmental, and economic behaviour. This is due to the wide range of methodologies used in corporate social responsibility research.

#### **2.4.1 Social Aspect of CSR**

Growing interest in implementing the concept of corporate social responsibility in businesses is a result of the benefits of enhancing the social component (Delautre and Abriata, 2018). On the basis of theoretical considerations and real-world experience, internal stakeholders have been persuaded to work more voluntarily and with more participation in organisations that place a priority on motivating employees, developing their skills, and ensuring their safety at work and at home (Papazolomou, 2017). Additionally, external stakeholders are more eager to collaborate with companies that benefit the neighbourhood and are concerned with its welfare (Odongo, 2019). Husted

and Salazar (2006) claim that these deeds shouldn't be done because of altruism. Management people must use a strategic approach in order to bring about real benefits for the business. Through their efforts, strategic social investors build a good name for themselves and hire more skilled workers. The firm becomes more profitable as a result, adding to its worth. By putting money into social practises and creating social strategies, organisations may boost their value and competitive advantage, according to earlier research by Husted et al. (2005). According to Bacinello et al. (2021), all steps taken to enhance employee motivation and well-being result in better business outcomes. Social CSR practises are defined as a company's efforts to improve the social well-being of all stakeholders, including individual stakeholders and the nation as a whole. In addition to the requirement to uphold the law, there are actions that are beneficial to society (McWilliams et al., 2006). Accepting responsibility for the indirect and direct social effects that businesses have on people is a requirement for being socially responsible (Siksnylyte and Stjepcevic, 2017). Activities that businesses engage in as part of their social practises can eventually assist them in achieving their long-term development objectives (Moyeen, 2014).

Globally, social concerns are a big cause of worry for poor nations, but high-income nations must also deal with them. Businesses rely heavily on the wealth and well-being of the communities in which they operate in order to survive. Consequently, an increasing number of organisations are actively involved in addressing social concerns and bringing forward ideas to enhance social welfare (Stjepcevic and Siksnylyte, 2017). The variety of social practises that are mentioned in the research is demonstrated by the literature studies that were done for this study. The most common social behaviours are as follows: -

1. assessment of the impact of the enterprise's activities on the local community,
2. promotion of local community development and heritage preservation
3. collaboration on social and charitable initiatives,

4. maintaining a high level of workplace safety,
5. ensuring that employees' work-life balance is maintained,
6. working with stakeholders in an open and transparent manner,
7. Providing for the development of high-level competencies in employees as well as proper employee motivation.

#### **2.4.2 Economic Aspect of CSR**

Despite the fact that Garay and Font (2012) discovered that the primary motives for implementing corporate social responsibility in most firms are altruistic, the literature frequently discusses gaining an advantage connected to acquiring a competitive advantage and improving financial outcomes. Furthermore, the initial corporate social responsibility assumptions allow us to prioritise the economic dimension because it would be hard to establish policies in the other dimensions without achieving financial outcomes (Carroll, 1999). According to McCain et al. (2019), CSR activities aims to enhance a company's environmental performance, strengthen the honesty of business practises and fairness, promote product safety, protect employee welfare, and strengthen the justice and honesty of business practises.

According to Zhao et al. (2019), the capacity of a company to successfully carry out its commitments related to economic operations in order to preserve economic growth is referred to as the economic dimension of corporate social responsibility. Any business has a basic obligation to promote economic growth for the benefit of all of its staff as well as its shareholders. Economic CSR practises thereby benefit both the firm and society. Economic practises refer to the public's expectation that a company will be financially successful over the long run, provide a stable stream of employment, and be capable of generating high-quality services and goods as a result of efficient and effective operational activity (Carroll, 1999). Economic practises, according to Mahmood and Bashir (2020), refer to the equitable distribution of limited resources in the production of

goods and services. According to Zhao et al. (2019), economic CSR initiatives support businesses but do not immediately benefit society. According to Costa and Menichini (2013), the economic component evaluates the organisation's indirect economic repercussions, emphasising that it is concerned with the influence on stakeholders.

Singh and Mittal (2019) says when it comes to corporate social responsibility, economic practises are organisational procedures designed to ensure legal compliance and avoid legal abuse. Torugsa et al. (2012), explain the economic aspect of proactive CSR emphasises the significance of a long-term management perspective on the need to maintain appropriate cash flow to maintain liquidity and to deliver continuous above-average returns for shareholders; it focuses on the methods employed by businesses to try to avoid issues that could arise in their communications with clients, suppliers, and other market stakeholders. Based on our understanding of CSR economic practises, it is recommended the following set of factors be researched further in the future: -

1. offering a remuneration package that is competitive,
2. maintaining positive relationships with trustworthy suppliers,
3. conducting operations at a low cost,
4. Investing in cutting-edge technology,
5. providing high-quality goods and services,
6. financial risk management,
7. providing a high level of energy supply reliability,
8. Behaving in a fair and consistent manner with customers and suppliers.

### **2.4.3 Environmental Aspect of CSR**

Businesses employ CSR tactics to mitigate the negative consequences of their own activities on the environment and society, according to Gadenne et al. (2009), who also mention a reassessment of the approach to environmental issues, stricter environmental protection regulations, and changing stakeholder expectations regarding environmental



responsibility. Mijatovic et al. (2019) assert that environmental practises both seek to prevent environmental harm and encourage measures for environmental sustainability outside of a company's boundaries.

Environmental practises, per Gadenne et al. (2009), are actions taken by companies to lessen the environmental effects of their behaviour. According to Uhlaner et al. (2012), environmental practises include acts that maintain and safeguard natural resources. Hoogendoorn et al. (2015) define environmental practises as "any purposeful, environmentally friendly activity carried out by a company that is not classified as entrepreneurial in the sense of seizing and exploiting market opportunities," enabling consumers to believe that every intentional, environmentally favourable activity carried out by a corporation is subject to environmental practises.

Businesses participate in voluntary environmental practises for two reasons, according to Tate et al. (2011): first, to improve management and access to natural resources to achieve a competitive edge; and second, to maintain a favourable reputation among stakeholders. Both external and internal stakeholders have an impact on how environmental management practises are implemented, according to Gadenne et al. (2009). On the other side, Babiak and Trendafilova (2011) emphasise the strategic justifications for an environmental corporate social responsibility focus. According to Morales-Raya et al. (2019), businesses utilise environmental practises to meet consumers' environmental expectations, attain legality, and build and maintain environmentally favourable public perceptions. Strict environmental restrictions, according to Hoogendoorn et al. (2015), motivate companies to take action to safeguard the environment, but only if they provide ecologically beneficial products and services.

The finding of Ahmed et al. (2019) that businesses with complex levels of corporate social and environmental practises had reduced equity capital costs is a case in point for the advantages of social practises. According to Yusliza et al.'s (2019) research findings,

environmental practises that are connected to company strategy and are characterised by dynamic capacities might enhance business performance even during economic downturns. Although Chen and Ho (2019) find that adopting eco-friendly practises does not necessarily result in higher sales because it relies on client attitude, Graham and Potter (2015) also show the influence of environmental practises on enhancing company performance. Environmental practises, according to Mijatovic et al. (2019), are linked to competitive advantage and reputational benefits. Environmental CSR practises, according to the literature, include the following:

1. teaching techniques for conserving energy and water,
2. Making an effort to decrease the damaging consequences of energy generation and transmission on the environment,
3. choosing environmentally friendly suppliers,
4. putting in place strategies for reducing waste and pollution,
5. developing renewable energy sources,
6. urging customers to preserve the environment,
7. assessing the environmental impact of activities,
8. Establishing initiatives to protect the environment.

## **2.5 Research/ Past Studies on Organisational Green Culture, CSR, and Competitive Advantage**

To begin, Wang (2019) claims that empirical tests based on resources have been conducted in a variety of literatures ranging from organisational green culture to green performance to competitive advantage. Despite its broad literature base, the author acknowledged that competitive advantage studies have been conducted using RBV theory. The main claims are that the performance of a company is more significantly impacted by the state of green culture in the workplace today. Resources that are precious, scarce, and hard to copy should have a greater positive influence on a corporation's

performance than other types of resources. Corporate strategies that take advantage of valuable, scarce, and difficult-to-copy resources should yield larger returns than those that take advantage of other types of resources (including diversification, mergers, and acquisitions). Strategic alliances that take advantage of valuable, rare, and difficult-to-duplicate resources will outperform others. Adoption of competitive advantage based on RBV theory to expand the firm's market opportunities. Second, according to Gürlek and Tuna (2018), structural equation modelling has been employed in studies on green organisational culture and competitive advantage. The evidence suggests that having a green organisational culture is beneficial for having a competitive advantage. Therefore, green innovation and competitive advantage are greatly influenced by green organisational culture. In particular, an environmentally friendly organisational culture was thought to provide a competitive advantage.

In addition, Roespinoedji et al. (2019), in order to assess a company's performance and competitiveness in the Malaysian manufacturing sector, looked at the role that organisational green culture plays. The empirical findings also show that the development of environmentally friendly products and procedures has a positive causal outcome on organisational green culture and competitive advantage. The results also demonstrate that environmental performance in Malaysian manufacturing businesses is significantly and favourably impacted by competitive advantage.

Martin et al. (2017) respond by carrying out empirical research on the expansion of CSR practises, which motivate businesses to strengthen their relationships with their stakeholders. CSR and competitiveness are theoretically linked via a cycle of learning in which company principles, policies, and practises are constantly updated. However, because there is no scientific evidence to back up this claim, do not investigate the factors that influence this link. According to Marin et al. (2017), corporate social responsibility has a beneficial influence on competitiveness, which is stronger for large organisations

and companies that take proactive measures. Furthermore, empirical results support the idea that CSR enhances a company's market value and suggest that taking part in CSR may boost businesses' ability to compete.

## **2.6 Chapter Summary**

The variables of this study are examined in this chapter in light of pertinent literature and earlier research. This research is supported by each variable in a unique way. The next chapter will deal with the literature review and theoretical analysis.

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## **CHAPTER 3: THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS**

### **3.1 Introduction**

This chapter's objective is to define the study's theoretical framework as well as the research hypotheses, which are based on the issues discussed in the previous chapters. The hypothesis is presented in this chapter based on the literature study that was covered in the preceding chapter. The variables of this study are defined in Section 3.2, and the research framework and research design are offered in Sections 3.3 and 3.4, respectively. The theoretical framework (resource-based view theory) is described in Chapter 3.5. The hypothesis is put forward in Section 3.6 based on the literature study covered in the previous chapter. The chapter is then concluded with a summary in Section 3.7 and the creation of the assumptions that form the basis of this chapter.

### **3.2 Definition of Variables**

#### **3.2.1 Competitive advantage (Dependent variable)**

A competitive advantage is a feature that allows a business to outperform its rivals (Fahey and Christensen, 1986; Porter, 1980).

#### **3.2.2 Organisational green culture (Independent variable)**

Organisational green culture includes shared perceptions, beliefs, customs, symbols, and social stereotypes related to workplace environmental management. It also impacts the expected normative behaviours from employees (Chang, 2015).

#### **3.2.3 Corporate social responsibility (Mediating variable)**

As corporate social responsibility initiatives serve as a representation of the duties that society expects corporations to fulfil, businesses should be concerned with preserving ethical standards and following the law in addition to their own commercial or economic

goals (Carroll, 1999). Focuses on corporate policies and procedures that are designed to benefit employees.

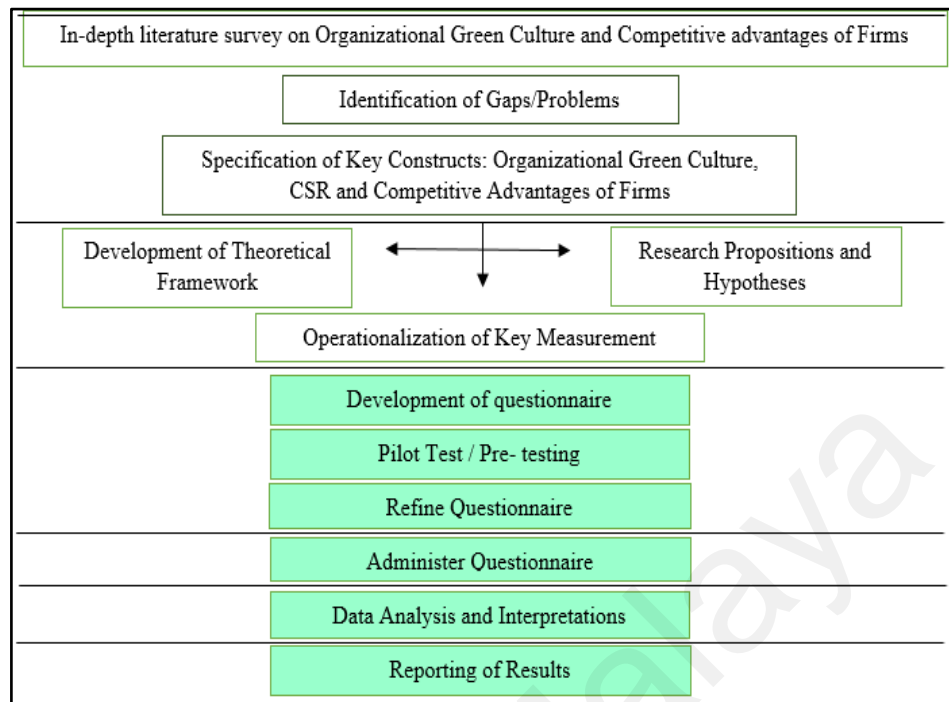
### 3.3 Research Framework



**Figure 3.1: Research Framework**

According to figure 3.1, the independent variable is organisational green culture. The dependent variable is competitive advantage, and the mediator is corporate social responsibility activities. The development of green culture ideals in an organisation is greatly aided by corporate social responsibility (Raimi, 2017). In addition, when CSR activities are integrated with organisational management, the company gains a strategic advantage. Therefore, the connection is proposed to be mediated through CSR actions between an organisational green culture and its competitive advantage. The purpose of this study is to investigate whether the organisational green culture factor has a significant effect on the competitive advantage of the dependent variables in both the past and the present of corporate social responsibility activities.

### 3.4 Research Design



**Figure 3.2: Research design**

### 3.5 Resource-Based View theory

The rare, valuable, non-substitutable, and inimitable (VRIN) resources that a firm uses to its advantage are based on the resource-based view's (RBV) theory of comparative advantage (Barney, 1991). Assets, employees, organisational procedures, and expertise are all examples of a company's resources. Environmental management should be viewed as a separate skill set since it is a strategy that is becoming more and more vital for businesses (Chen, 2007; Hart, 1995). The capacity for green social responsibility to become a critical ability for green manufacturing environmentally competitive standards may be shaped by companies through corporate environmental management. The organisational green culture, according to RBV, is the company's intangible asset (Barney, 1991). Despite the fact that the majority of studies claim that organisational culture is based on RBV reasoning (Kleinschmidt et al., 2007), new research suggests that organisational green culture should be centred on environmental issues. By establishing behavioural standards within the company, organisational culture aids individuals in

grasping operations (Schein, 1992). The capacity of corporate culture to affect organisational flexibility and forecast future performance is a powerful tool (Denison and Mishra, 1995). Organisational culture, for example, is one of the major elements that gives companies a competitive advantage. Due to this, when a firm has VRIN resources, it is more likely to act responsibly if the company's culture encourages it (Campbell, 2007). This finding backs up earlier study conclusions (Russo and Fouts, 1997). The NRBV supports this contribution since it indicates that businesses must be able to create new resources to accommodate shifting environmental constraints.

The RBV evolves into an environmental-based strategy called the Natural Resource-Based View (NRBV), which comes with three capability strategy arguments: product stewardship, sustainable development, and pollution prevention (Hart and Dowell, 2010). Each strategy has multiple sources of competitive advantage, key elements, and different environmental driving forces. The first key strategy, product stewardship, is the entire value of the organisation's environmental-based production process. This would integrate the production design and development process effectively through stakeholder engagement. Therefore, through establishing standards for product stewardship strategies, organisations can effectively gain competitive advantages (Hart and Dowell, 2010). The second key strategy is sustainable development. This strategy merely does not focus on preventing environmental pollution or environmental damage, but rather encourages developing organisations to attain competitive advantages by recognising the need to reduce environmental burden and increasing economic benefits to sustain competition (Hart and Dowell, 2010). The third key strategy is pollution prevention, which would initiate the process to prevent pollution through emissions and waste from production and maximise the proficiency of production by limiting required inputs, reducing the liability of costs, and simplifying the procedure rather than taking action cleaning after the process, which is time-consuming (Hart and Dowell, 2010).



According to the NRBV, without good green strategy management, organisations may not be able to fully understand their benefits (Widener, 2006). From the theoretical standpoint of the firm's NRBV, an examination is undertaken into the result of organisational green culture on the realisation of a business's competitive advantage. A competitive advantage is a difference in implementation between companies on a similar metric that permits one company to outperform its competitors (Connor, 2002). To adapt to evolving environmental challenges, businesses must be able to generate new resources (Menguc and Ozanne, 2005). As an unseen asset, organisational green culture might provide a competitive advantage since it should be distinct from rivals' cultures and difficult to duplicate. One of the tools used to facilitate organisational green culture and the competitive advantage of a firm is the corporate social responsibility strategy. To prove these, managers are selected from the industries to measure and offer underlying information about the firm's competitive advantages and their critical elements, respectively (Kaplan and Norton, 1996). The success element of effective green management and measuring procedures has a beneficial impact on the firm's competitive advantages (Kaplan and Norton, 1996). The corporate social responsibility strategy provides strong support for the green management outcome and process (Armstrong and Shimizu, 2007).

### **3.6 Hypotheses Development**

#### **3.6.1 Organisational green culture and competitive advantage of firm**

The organisational green culture was derived through the adaptation of the external and internal environment, learning, behavioural acceptance, and guidance in order to positively impact the firm's workers, control systems, and structure (Chang, 2015). Environmental concern is growing in popularity worldwide. The organisation's conventions, attitudes, and standards for embedding environmental principles in all

employees are referred to as "organisational green culture. In today's economy, organisational green culture and competitive advantages are at the top of the priority list for a company to outperform its competitors (Porter, 1985). To retain their present market position and gain a competitive advantage, businesses must outperform their competitors.

The theoretical foundation for comprehending the suggested theory of the resource-based view of the firm is the impact of organisational green culture on creating competitive advantage for businesses (Hart, 1995). According to this notion, resources should be uncommon, precious, unique, and restricted. Every business has a different competitive advantage that helps it outperform its competitors. Every company should be able to identify new resources, adapt to them, and respond to any environmental concern (Menguc and Ozanne, 2005). Therefore, because organisational green culture differs from that of its competitors, green culture initiatives are considered one method of gaining a competitive advantage.

A corporate green culture may also produce a competitive advantage among the organisation's members by adopting environmental issues as a fundamental priority (Bansal, 2003). A strong organisational green culture encourages its people to automatically understand the firm's environmental approach. The organisation may establish environmental-based common values while also gaining a competitive advantage through green policies and initiatives (Qi et al., 2012). A business's green culture may also help it distinguish between its competitive advantage and that of its consumers' ideas of green principles, claim Sharma and Aragón-Correa (2003). Furthermore, expanding the adoption of green culture in the workplace aids the company in developing a clear understanding of the customer's viewpoint (Leonidou et al., 2015). The results of the study demonstrated that ethical environmental concern among an organisation's members has a beneficial influence on the firm's competitiveness. Therefore, it is hypothesised that:

**H1. There is significant relationship between an organisational green culture and competitive advantage in the manufacturing industry.**

### **3.6.2 Organisational green culture and CSR**

In the business world, the idea that a company should have social obligations to the community in addition to making a profit is known as a CSR strategy (Shabana and Carroll, 2010). The aspects of corporate social responsibility related to environmental and social issues in business are related to advanced business performance or consistency in acting on legal demands regardless of contributing to social activities even before the legal requirements are met by promoting corporate citizenship, stakeholder management, and ethics in business (Ivanova and Bikeeva, 2016). It's even linked to measures to mitigate environmental harm (Su and Swanson, 2019). Similarly, organisational green culture encouraged firms to embrace the green movement to achieve sustainable goals through corporate social responsibility initiatives (Tang et al., 2016). The organisation's commitment to environmental sustainability acts as the main motivator for its CSR strategy during the decision-making process. When workers implement a green culture at work and are interested in learning about how the company's environmental management system is progressing, it is effective. Consequently, the amount of support a firm receives for CSR activities is proportional to the quality of its green culture within the corporation.

An organisational green culture thrives with the help of CSR initiatives, protecting the environment and enhancing the firm's competitive advantages. CSR initiatives are largely inspired by corporate green culture behaviour (Campbell, 2007). As a result of this behaviour, the company is more likely to engage in philanthropic activities. When an organisation's green culture encourages employees to participate in more socially responsible conduct, it becomes more likely to achieve long-term success (Campbell, 2007).

A managerial framework known as the RBV serves to identify the strategic resources that a company utilise to accomplish a stable economic level. The term "sustainable business" refers to a company that is socially responsible, such as supplying solar panels for homes, removing plastic items from waterways that rely on fossil fuels for illumination, or recycling plastic trash. Green culture is a set of guidelines for people's daily lives that aim to bring them closer to nature. A green corporate culture ensures that all company practises, including managerial decision-making, are in accordance with environmental management and environmental consciousness (Cordeiro and Tewari, 2014). Managers in companies that practise environmental stewardship adopt environmental policies in order to strengthen their performance and incorporate corporate social responsibility components. Hence, the application of CSR aspects in a firm varies, but all firms align with organisational green culture and the quality of environmental standards. Therefore, it is hypothesised that:

**H2: There is significant relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry.**

### **3.6.3 The effect of CSR on competitive advantage of firm**

Corporate social responsibility and business advantage are tightly connected ideas. According to a preliminary study, corporate social responsibility spending will raise operating costs and eventually disadvantage firms compared to those that do not occupy in corporate social responsibility (Frooman, 1997). The corporate social responsibility of the corporation is seen as a significant intangible, dynamic resource in its resource-based strategy. Because they think it will enable them with a competitive advantage, businesses participate in corporate social responsibility. Making judgements on the creation and use of additional organisational resources, which together determine their marketing strategy and direction, may be done using this information as a starting point. Businesses and the

societies in which they function and live are inextricably linked. Business is a necessary component of modern civilization (Branco and Rodrigues, 2006). Because companies are increasingly willingly incorporating corporate social responsibility into their operations, it's important to understand why companies choose to participate in CSR activities, also known as social responsibility activities. Of course, there are certain driving forces for the incorporation of corporate social responsibility into business operations, such as stakeholder expectations, but corporate social responsibility must also result in some financial success for businesses (Porter and Kramer, 2006).

Gaining a competitive advantage via infrastructure development, personal development, the quality of the governmental framework and governance, supplier and consumer needs, and civil society contributions to establish favourable corporate social responsibility circumstances to meet all stakeholders' wants Responsible competitiveness is translated into environmental and social values through CSR initiatives (Zadek, 2006). The impact of corporate social responsibility in today's competitive economy is quite significant. Businesses may increase their financial success by participating in CSR (Porter and Kramer, 2006). As a result, executives must treat corporate social responsibility as they would any other financial choice (McWilliams and Siegel, 2001). A study by the Dow Jones Development Index observe that companies that practised corporate social responsibility had better market competitive advantages than those that did not, and that it also improved a company's social image and reputation, affected stakeholder loyalty, and increased stakeholder satisfaction (Perrini, 2006). Corporate social responsibility behaviours were also shown to minimise transaction frictions and costs, therefore improving competitive advantages, by boosting the confidence of consumers and sellers (Nan and Heo, 2007).

A persuasive representation of a company's competitive advantages has evolved as the resource-based view (RBV) of business (Barney, 2001). Organisational resources and

capacity, according to the RBV, are the two most significant advantages in the marketplace. The resources of a firm might be both material and intangible. As a fundamental strategy, CSR may be defined as a valuable intangible asset. This perspective on business also implies that a company may attain and maintain a competitive advantage by creating valued resources and competencies that are generally inelastic in supply (Ray et al., 2003). Internal intangible resources and external market conditions can be utilised as a foundation for innovating and developing this unique strategic component. The unique blend of resources can aid in recognising the company's ability to focus on and attain its objectives (Barney, 2001). According to the idea, the appropriate resource mix must be established, evaluated, and managed throughout time for the specific category of company performance desired.

Company social responsibility is now widely seen as an important tool that offers non-financial benefits to businesses, such as improved customer satisfaction and corporate reputation. This gives companies a distinct competitive advantage. Corporate social responsibility often entails some short-term expenditures, but the rewards of these efforts are usually long-term (Branco and Rodrigues, 2006). Companies aren't always sure if corporate social responsibility contributes to a competitive advantage because it doesn't always result in financial benefits. The proclamation of a "win-win" scenario is intended to counteract unfavourable perceptions, restore and enhance external competitiveness, and implement corporate social responsibility measures. This study backs up the notion that CSR activities help a company gain a competitive advantage. Hence, it is hypothesised that:

**H3: There is significant relationship between corporate social responsibilities activities and competitive advantage in the manufacturing industry.**

### **3.6.4 Corporate Social Responsibility as a Mediator**

Numerous studies have demonstrated that a corporate green culture improves a company's success (Eiadat et al., 2008). The company believes that investing in green management will give it a competitive advantage. The relationship between organisational green culture and a company's competitive advantage elicits these diametrically opposed perspectives. According to Zhu et al. (2007), organisational green culture can help businesses gain a competitive advantage. However, there is little evidence that environmental culture can boost a company's competitive advantage (Triebswetter and Hitchens, 2005). Corporate social responsibility may operate as a mediator in the interplay between organisational green culture and competitive advantage since there are opportunities to combine green culture with competitive advantage. In terms of organisational culture, economics, and social aspects, CSR activities constitute an organisational green culture aimed at preserving the firm's green value (Raimi, 2017). Even though it has had a lot of theoretical support over the past 10 years, corporate social responsibility is still being adopted by business sectors at a rapid rate (Hou, 2018). Laws and regulations, the economy, organisational culture, natural disasters, and competitive advantage are few of the elements that affect corporate social responsibility performance (Caampbell, 2018). CSR activities improve the firm's competitive advantage and the organisation's long-term growth (Gorski, 2017).

Every CSR activity improves the reputation of the company, employee satisfaction, and customer acceptance and loyalty (Asrarul, 2017). Businesses that participate in social development initiatives, especially those in the manufacturing sector, enhance the environment, cut down on waste, pollution, and emissions, and boost market share values (Awan, 2017). Ecologists and stakeholders have been in touch with manufacturing enterprises to urge them to include organisational green culture and CSR activities in order to satisfy stakeholders, into their operations and consumers (Yu and Huo, 2019).

Numerous studies have shown that it can already achieve sustainable growth while also protecting the environment (Shahzad et al., 2019); therefore, it is hypothesised that:

**H4: Corporate social responsibility plays a significant role in mediating the relationship between organisational green culture and competitive advantage in the manufacturing industry.**

### **3.7 Chapter summary**

In this chapter, the research's theoretical framework is discussed to understand how CSR activities have been used to mediate the organisational green culture on an organisation's competitive advantage. In particular, theoretical foundations (such as the resource-based view theory) and the formulation of hypotheses were also examined with the help of relevant prior studies.



## **CHAPTER 4: METHODOLOGY AND RESEARCH DESIGN**

### **4.1 Introduction**

In the preceding chapter, the study's antecedents were covered. The research methodology used in this research is defined in Section 4.2 of this chapter. The study design and development, variable measurement, sample and data collection, and techniques of data analysis are covered in Sections 4.3, 4.4, 4.5, and 4.6, respectively. The objectives of the study and the research techniques used are explained in this chapter. This study's primary objective is to verify if CSR initiatives may assist in mediating the relationship between organisational green culture and competitive advantage in Selangor-based manufacturing industries.

### **4.2 Research Methodology**

#### **4.2.1: Research methodology overview**

The research methodology, which is divided into five sections, Figure 4.1 below briefly summarises and provides an overview.

1. The first section specifies the philosophical assumptions of the research, which are positivist rather than interpretivist or critical. In the positivist paradigm, a quantitative approach is common. The aim of hypothesis-testing research is to attempt to test a variety of hypotheses and look into possible links between organisational green culture, CSR, and competitive advantage. Moreover, like other studies in business-related fields, the current study is carried out at manufacturing companies within the region of Selangor in their natural or "non-contrived" contexts. Finally, this study is a cross-sectional or one-shot study because data was collected only once over a six-month period (as opposed to longitudinal).
2. Each variable's measurement was designated and developed in the second section of the research method.

3. The pre-testing procedure was divided into three stages (Cavana et al., 2001). To begin, the questionnaire's face validity was assessed by having master's students participate in a pre-test questionnaire survey to gauge their response to each item and obtain feedback and general information. Second, the study's content validity was assessed by the research supervisor and a panel of students. Finally, a sample of 29 managers from manufacturing industries based in Selangor were given the final draught of the questionnaire survey to pre-test.
4. To fulfil the aforementioned goals and strategy for the investigation, the current study used a questionnaire survey. Among the 2400 manufacturing industries in Selangor that use ZoomInfo software, 600 were randomly chosen as targeted responders. The data were collected from the 196 respondents who completed the questionnaire. All 196 managers from manufacturing industries in Selangor are included in this study's demographics and sample. The analytical unit is organisational. The managers were given the questionnaires. These specific informants were chosen for their topical competence and practical experience. Questionnaires were distributed through email and WhatsApp to the respective respondents.
5. To assess the data collection for this study, the Statistical Package for Social Science (SPSS) version 29 was chosen. For confirmatory factor analysis and hypothesis testing, SPSS was used to identify the measurement model and structural model. The Sobel test and macroprocess were used to identify the mediation.



first section of the questionnaire, which comprised gender, age range, marital status, level of education achievement, years of working experience in the firm, and the number of employees in the company was gathered in the first section of the questionnaire, which comprised gender, age range, marital status, level of education achievement, years of working experience in the firm, and the number of employees in the company. The evaluation of organisational green culture makes up the second section. Corporate social responsibility is examined in the third section, which includes social, economic, and environmental aspects, and the fourth section looks at a company's competitive advantage. The measurements and definitions for the variables are as follows:

#### **4.4.1 Independent Variable (Organisational Green Culture)**

Social patterns, rituals, cultural values, and shared values that perform in the firm's green management are defined as organisational green culture. Green value management norms and beliefs determine how each individual achieves expected behaviour and standards over time. A corporation is considered to have a "green" culture when its employees think and act beyond financial goals to maximise the positive impact of organisational operations while reducing the negative effects of operating activities on the environment (Roscoe et al., 2019). The measurement of organisational green culture includes 15 items:

1. Our company makes a determined effort to educate every employee on the value of environmental protection.
2. Our company uses less or non-polluting/toxic materials.
3. Our company integrates environmental aims into all of our other corporate objectives.
4. Our company places a great premium on environmental protection.
5. Our company recycles its end-of-life items and recovers them.
6. When producing, using, or disposing of products, our company employs low-energy resources including water, electricity, gas, and gasoline.

7. Our company creates goods and procedures with minimal negative effects on the environment.
8. At our company, protecting the environment is a core corporate priority.
9. Our company uses eco-labelling.
10. Our company redefines operational and manufacturing procedures to enhance internal effectiveness that can support implementation.
11. Our company enhances ecologically friendly packaging for both new and existing items.
12. Our company redesigns a product or service to comply with new environmental requirements or guidelines.
13. Our company has a clear policy statement that encourages environmental awareness in all areas.
14. Recycled, repurposed, or newly made materials are employed by our company.
15. Our company employs more eco-friendly technologies to save money and reduce pollution (such as energy, water, and waste).

#### **4.4.2 Dependent Variable (Competitive Advantage)**

The organisation has an advantage over competitors if they can't to copy its competitive strategies or if they are able to reap the same benefits that the company does as a result of its aggressive methods. In this research, competitive advantages are defined as a situation in which a company's competitors are unable to replicate its successful methods, allowing them to reap the long-term benefits of these tactics (Barney, 1991).

There were 8 items in the measurement of a company's competitive advantages:

1. Our company is constantly investing in new capabilities that will give it a competitive advantage over our competitors.
2. When compared to our main rivals, our company has stronger managerial skills.
3. Our company's top rivals will find it difficult to replicate our unique position.

4. Our company's main rivals find it difficult to copy our goods or services.
5. The quality of the goods or services provided by our company is higher than that of the goods or services provided by our main rival.
6. Our company's profitability is higher.
7. Our company's growth is outpacing that of our main rivals.
8. Our company has very unique product and services.

#### **4.4.3 Mediating Variable (Corporate Social Responsibility)**

The term "corporate social responsibility" describes an organisation's efforts to meet stakeholder expectations for outcomes in the areas of the environment, the economy, and society (Aguinis and Glavas, 2012). The social aspect of CSR entails taking every action to improve and protect the well-being of an organisation's society, with corporate social responsibility as one of their responsibilities (Davis and Blomstrom, 1975). An organisation that can offer and create employment with fair compensation for workers, encourage technical innovation and produce new goods, and deliver a return on investment to shareholders is considered an economic aspect of corporate social responsibility (Carroll, 1979). CSR's environmental component emphasises eco-efficiency, innovation, and pollution prevention (Torugsa et al., 2012). By participating in environmental activities, businesses may create new goods and services ahead of the competition, save money, grasp opportunities, and achieve market leadership. The measurement of corporate social responsibility includes 61 items:-

1. Our company promotes volunteerism.
2. Our company promotes charity.
3. Our company rewards employees' social activities.
4. Our company is active in the community development activities.
5. Our company donates money to charitable organisations.
6. Our company organises volunteer activities.

7. Our company gives the flexibility to employees organise activities.
8. Our company is aware of employee social activities.
9. Our company arrange social activities every week.
10. Our company ensures employees take breaks.
11. Our company complies with all federal labour laws.
12. Our company ensures employees work reasonable hours.
13. Our company takes measures to protect the environment.
14. Our company participates in a recycling programme.
15. Our company provides a safe workplace.
16. Our company provides a hygienic workplace.
17. Our company is in favour of eco-friendly products.
18. Our company invests in energy conservation program.
19. Our company is in favour of reducing gas emissions and waste production, as well as recycling materials.
20. The containers and packaging that are recyclable are used is valued by our company.
21. Our company rewards employees have a favourable attitude toward the use, purchase, or production of environmentally friendly goods.
22. Our company is particularly concerned with providing customers with high-quality products and/or services.
23. The products and/or services provided by the company meet national and international quality requirements. (i.e., ISO standards).
24. Our company provides customers with accurate and complete product and/or service information.
25. Our company prioritizes work quality.
26. Our company prioritizes the protection of consumer rights.

27. Our company has established effective procedures for dealing with customer complaints.
28. Our company cultivates business relationships with regional suppliers.
29. Our company in the labeling of items, provide clear and exact information about warranty duties.
30. Our company has established a formal procedure for communicating with customers, suppliers, and other stakeholders.
31. Our company encourages People with disabilities and those who are at risk of social exclusion to work.
32. Our company encourages employees to participate in training and professional development.
33. Our company was committed to the creation of new jobs.
34. Our company adheres health programme.
35. Our company takes employee initiatives and proposals into account when making decisions.
36. Our company human resource policies aimed at making it easier for employees to balance their professional and personal lives.
37. Our company is dedicated to improving the employees' quality of life.
38. Our company understands the significance of employee pension plans.
39. Our company ensures that all employees have equal access to opportunities without discrimination.
40. Our company participates in government community social projects
41. Our company conducts its operations in a way that is safe for all of its employees.
42. Our company participates in community service projects.
43. Our company is committed to making a positive difference in the communities in which it operates.



44. Our company wants to make its community a better place to live and work.
45. Our company is committed to improving human rights.
46. Our company is committed to improve and invest environmental quality.
47. Our company is committed to safeguarding employees and their work environment.
48. Our company is committed to minimizing risk, responding to safety concerns, and providing risk management and safety-related information.
49. Our company is committed to preserving natural resources.
50. Our company is committed to minimizing the environment impacts of our business.
51. Our company is committed to conducting business in a sustainable manner.
52. Our company is committed to minimizing its impact on biodiversity and the surrounding habitats.
53. Our company volunteers it's time to local and international organisations and individuals.
54. Our company donates its resources to community and global institutions and individuals.
55. Our company shares its intellectual capital on sustainability openly.
56. Our company works with clients to support their sustainability efforts.
57. Our company takes steps to minimize its impact on the environment.
58. Our company is a major corporate contributor in the community where its located.
59. Our company has a budget for community support.
60. Our company wants to make a difference in every community it serves.
61. Our company makes food donations to local food banks.

#### **4.4.4 Research Instrument**

Conducting surveys is one way to obtain data from respondents in order to accomplish the goal of the study. This is evidenced by, Sekaran (2009) asserted that the survey technique is an appropriate way for doing quantitative research since it saves time, gives

rapid responses, and is a low-cost, dependable method when compared to alternative data collection methods. Table 4.1 summarises the design of the research instrument:

**Table 4.1: Summary of Research Instrument**

| Section | Title/ Variable              | Number of Questions | Source of Questions |
|---------|------------------------------|---------------------|---------------------|
| A       | Demographic details          | 6                   |                     |
| B       | Organisational green culture | 15                  | Wang, (2019)        |
| C       | Competitive advantage        | 8                   | Wang, (2019)        |
| D       | CSR activities               | 61                  | Toliver, (2016)     |

Table 4.1 provided to the researcher a summary of the study tool used to collect data. The questionnaire was created using modified versions of questions from other studies. The questionnaire survey was created using the Google Forms platform, which made it easy to disseminate to our respondents.

The apparent scale is used in Section A to answer gender, age, married status, education, working experience, and number of employees in the company. The respondent's perspective was measured by the researcher using a five-point Likert scale from section 1 to section 5. The researcher utilised five-point, "1"-anchored Likert scales to measure the characteristics stated in sections B through D. The scale from strongly disagree to strongly agree ("5") from Table 4.2 will be used to determine the relationship between an organisational green culture and its competitive advantage as it relates to the current state of corporate social responsibility in the manufacturing industries in Selangor.

The respondents answered the survey based on their age, working experience in the manufacturing industry, and knowledge that they gained from this pandemic in their daily production. Each respondent ticked the appropriate options for the same questionnaire statements in this survey. The options are based on 5-point Likert-scale responses. The data from the 196 respondents was gathered as a result of their responses. Additionally, because to the pandemic, it was not possible to distribute surveys outside to respondents, thus an online survey using Google Survey was conducted instead.

**Table 4.2 Selection of option (Likert Scale)**

| 1                 | 2        | 3       | 4     | 5              |
|-------------------|----------|---------|-------|----------------|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

#### **4.5 Sample and Data Collection**

The managerial level of statistics on particular environmental core values and competitive advantage topics is typically not available in public sources. Therefore, a survey was conducted to obtain the results. The questionnaire was created using the available literature on variables. This study concentrated on Selangor-based manufacturing companies, with the goal of examining the research's objectives and hypotheses. The study population were extracted from ZoomInfo Technologies Inc. software. ZoomInfo is software that gathers and organises the data of registered companies according to sector, location, etc. Every data point that enters their database goes through the FuZion data collection system. This sophisticated data gathering system ensures that the company's data is accurate, actionable, and compatible with data privacy laws. The software allows us to filter and search according to our preferences. As a result, it was discovered that almost 2400 manufacturing industries based in Selangor have been verified and registered on the ZoomInfo website portal.

Selangor is one of Malaysia's largest contributors to the state's gross domestic product (The Edge Malaysia, 2019). Selangor's strategic location, convenient access to ports and highways, and extensive industrial infrastructure have led many businesses to see it as the area's production and distribution centre. As the majority of investors prefer to invest and grow their businesses in Selangor, including manufacturing businesses. Figure 4.2 below, which displays the GDP by state for Malaysia, demonstrates that Selangor has the largest GDP, generating 28.8% of state economies' GDPs. The source is the Times Series (2015), Department of Statistics. The manufacturing market in Selangor has been steadily

expanding over time. Because manufacturing firms have more green experience and information inputs, the assurance of the manufacturing firm sample has taken place (Albort-Morant et al., 2016). Because of their dominant role in Malaysia, Selangor State was chosen for further investigation.

| MANUFACTURING   | 2010           | 2011           | 2012           | 2013e          | 2014p          | %2014p |
|-----------------|----------------|----------------|----------------|----------------|----------------|--------|
| JOHOR           | 25,532         | 24,637         | 26,048         | 27,228         | 28,769         | 12.40% |
| KEDAH           | 7,959          | 8,790          | 9,395          | 9,714          | 10,097         | 4.30%  |
| KELANTAN        | 987            | 1,029          | 1,059          | 1,056          | 1,077          | 0.50%  |
| MELAKA          | 10,213         | 10,540         | 11,146         | 11,067         | 12,160         | 5.20%  |
| NEGERI SEMBILAN | 13,187         | 14,089         | 14,845         | 14,854         | 14,980         | 6.40%  |
| PAHANG          | 8,147          | 8,526          | 9,135          | 9,512          | 9,841          | 4.20%  |
| PULAU PINANG    | 24,299         | 25,221         | 25,617         | 26,617         | 29,183         | 12.50% |
| PERAK           | 7,568          | 8,326          | 8,756          | 9,361          | 10,051         | 4.30%  |
| PERLIS          | 321            | 363            | 381            | 395            | 410            | 0.20%  |
| SELANGOR        | 54,869         | 57,576         | 60,648         | 62,863         | 67,032         | 28.80% |
| TERENGGANU      | 8,256          | 8,230          | 8,585          | 8,828          | 9,552          | 4.10%  |
| SABAH           | 4,823          | 5,147          | 5,091          | 5,328          | 5,721          | 2.50%  |
| SARAWAK         | 24,121         | 25,712         | 26,044         | 26,745         | 27,835         | 12.05% |
| WP KUALA LUMPUR | 3,456          | 3,907          | 4,235          | 4,670          | 5,175          | 2.20%  |
| WP LABUAN       | 756            | 889            | 937            | 979            | 983            | 0.40%  |
| <b>TOTAL</b>    | <b>194,494</b> | <b>202,982</b> | <b>211,922</b> | <b>219,217</b> | <b>232,866</b> |        |

**Figure 4.2: GDP by State and Economic for Year 2010 to 2014**

A population, in the words of Sekaran and Bougie (2013), is a collection of individuals that the researcher has selected. Additionally, a study's population should consist of all the people, occasions, or objects of interest that the researcher may use in the investigation, according to Sekaran and Bougie (2013). The unit of analysis for this study is manufacturing firm and the unit of observation is managers. The population for this research is made up of managers from manufacturing industries in Selangor. Unfortunately, due to the pandemic, a large number of businesses have temporarily closed due to the COVID-19 crisis, forcing all employees to work from home. Therefore, decided to collect data with a small population out of 2400 Selangor-based manufacturing industries, of which only 25% were chosen as a sample and were randomly targeted at 600 respondents. Initially, 600 questionnaires were distributed via official emails and shared via Google Forms to the respective recipients. Google Forms is a helpful tool for distributing surveys, graphing results, and exporting them to a spreadsheet. To guarantee

accurate replies, it offers a number of question styles, personalised logic, and data validation guidelines.

The firms are selected randomly from the population by the software. One month after the initial response, follow-up phone calls and messages with a polite reminder were initiated. The status of the surveys was continuously checked via phone calls to determine progress. The questionnaires were collected over the course of five to six months, and 224 surveys were ultimately obtained from diverse respondents working for manufacturing firms in Selangor. A total of 224 people out of the original 600 responded. There were 224 questionnaires received in total, with a 37.33 percent response rate. As a result, 28 of the 224 recipients were disqualified due to missing information. Only 196 sample questionnaires out of 224 are usable.

**Table 4.3 Summary of Data Collection**

| <b>Descriptions</b>                | <b>Number</b> | <b>Percentage (%)</b> |
|------------------------------------|---------------|-----------------------|
| Targeted sample overall            | 600           | 100                   |
| Questionnaires distributed overall | 600           | 100                   |
| Questionnaires received overall    | 224           | 37.33                 |
| Less: unusable                     | 28            | 4.67                  |
| Total usable responses             | 196           | 32.67                 |

#### **4.6 Techniques of Data Analysis**

Many researchers use a variety of statistical tools to arrive at reliable conclusions regarding their study topics. However, for the sake of this empirical investigation, the data was analysed using SPSS Version 29.

##### **4.6.1 Reliability and Validity**

Validity and reliability are important when it comes to measuring scales. The internal consistency of indicators for a notion is evaluated using reliability analysis (Hair et al., 1998). Reliability analysis seeks to ascertain the degree to which a set of questions effectively exploits a particular set of common causes of variation (Viswanathan et al.,

2015). Alpha from Cronbach's coefficient is frequently used to measure this. Cronbach's coefficient alpha is "the ratio of the sum of the co-variances among the components of the linear combination (items), which estimates true variance, to the sum of all elements in the variance-covariance matrix of measures, which equals the observed variance" (Bernstein and Nunnally, 2014). Cronbach's alpha in this study was calculated on a sample of 196 respondents. In order to verify the trustworthiness of this pilot research, Cronbach's alpha is required. To meet the need for an objective means of evaluating a research instrument's internal consistency and reliability (Cronbach, 1951).

Validity is a measurement of how well an exact scale or set of measurements captures the object of interest. Utilising scales that had previously been validated in the literature and closely studying the items allowed for the establishment of content validity (Sireci, 1998) throughout the questionnaire's development. According to Venkatesh and Morris (2003), all traditional measures are founded on steps that have already been verified, and their reliability has been found to be good. The concept validity test, which evaluates convergent and discriminant validity, was next carried out.

The degree to which two conceptually identical notions are specific is measured by discriminant validity, and the correlation should be minimal in this case. To assess this form of validity, a connection analysis might be employed. If the association result showed a correlation between variables of less than 0.8, it would be believed that the multiple constructs were not measuring the same thing (Bagozzi, 2019). The amount of correlation between the phases of the same construct is referred to as convergent abilities, and the correlation here should be strong. Confirmatory factor analysis (CFA), the most widely used approach for this test, can be used to access it (Netemeyer et al., 2016).

CFA enables a researcher to confirm the factor structure of a group of observed variables using either empirical research, current theory knowledge, or a combination of the two. The scale is considered to have convergent quality if each individual factor

charge for each construct is at least 0.50, all measurement items are significant (level of .01) for Bartlett's test of sphericity, and the Kaiser-Meyer-Olkin (KMO) index is at least 0.06 (Pallant, 2015).

#### **4.6.2 Factor Analysis**

Factor analysis is frequently utilised to establish the reliability of the variables' dimensions or components, with the goal of condensing the enormous number of observable variables to a small group of crucial components. Furthermore, factor analysis, according to Emory and Cooper (1991), is a method for bringing a large number down of variables into a manageable number by figuring out how to link together variables that seem to convey the same idea. As opposed to that, factor analysis can be carried out in a rotating or non-rotating fashion, according to Hair et al. (1998). There are various methods for doing a factor analysis on a rotating basis, but the varimax rotation methodology is one that is frequently used in research since it tends to produce a clear distinction (Hair et al. 2016).

#### **4.6.3 Sampling Adequacy**

To evaluate the effectiveness of sampling among the suggested variables, Kaiser Meyer-Olkin (KMO) will be employed in this study. Viaene and Verbeke (1999) state that the KMO value should be larger than 0.60 and that a value of 0.90 or above is regarded as desirable. In the midst of all of this, Kinnear Grey (1994) classifies the KMO value and its acceptance threshold; if the KMO value is higher than 0.50, it may be a favourable factor.

#### **4.6.4 Measurement of Reliability**

Structural measures are metrics that are objective, constant throughout time, and across various components in the instrument, according to Carmine Zeller's (1979) definition of reliability analysis. In this way, the level of dependability is defined. A measure of

consistency in output while still being error-free is reliability analysis. According to Sekaran (2009), the reliability analysis result for the suggested variable must be greater than 0.50 in order to be considered acceptable; however, if it is between 0.60 and 0.80, it is seen as being at a respectable or good quality.

#### **4.6.5 Regression Analysis**

The partial regression coefficient ( $r$ ) in the coefficient table, which creates the regression equation for the model, stands the partial regression coefficient in the regression process, where  $R$  stands the bivariate correlation between the observed values of the dependent variable and the values that would be predicted based on the regression equation. The coefficient of multiple regression is represented by  $R^2$  in the table of the summary of the regression model ( $R$  squared). The modified  $R^2$  value represents both the number of independent variables and the grade of fit of the research model.

#### **4.7 Pilot study**

A pilot study is a scaled-down version of a larger study or a trial run carried out before the larger investigation. An alternative name for this is a "feasibility" study. It can also be used to describe the preliminary evaluation of specific research tools, like schedules for interviews or questionnaires (Hundley et al., 2002). The researcher conducts a pilot study to provide them a clear image of their research. The pilot study will be carried out once the researcher is well-versed in the research subject and questions, the methodologies and processes to be used, and the research time frame, according to Blaxter et al. (1996), who support this stance. It is "reassessment without tears," in which the researcher tries out all of the research approaches and methodologies that he or she has in mind to evaluate how well they will perform in practise. A pilot study, a small-scale experiment of a larger research design, is widely used by researchers to examine the feasibility, facilities, and processes. (Rowan, et al., 2012). The researchers conducted a pilot study with a sample



size of 29 respondents. According to Baker (1994), a sample size of 10–25% of the sample size for the final research is considered to be an adequate number of participants to be included in a pilot study. In order to avoid errors in the research, the researcher recorded the replies from the respondents in this pilot study.

The feedback from the pilot test was amended accordingly as stated below: -

1. Repetitive questions in forth section
2. Add on option about number of employees in organisation.

#### **4.8 Chapter Summary**

This section covered the fundamentals of research methodology. All aspects of green management have been thought about conceptually and empirically using the approaches discussed above to attain research objectives. The analysis outcomes will be given in the next part to illustrate whether they are consistent.

## **CHAPTER 5: DATA ANALYSIS AND RESULTS**

### **5.1 Introduction**

The findings of this chapter include the SPSS analysis are presented alongside comprehensive details on the data analysis methods applied in this study. As defined by Polit and Hungler (1999), data are the specifics amassed throughout a study. The information for this study's investigation was gathered through a questionnaire survey. To gather information about the objectives of the research and its topics, a set of questionnaires was implemented. This study's aim was to determine and explain how CSR and organisational green culture affect the competitive advantages of manufacturing industries in Selangor. The quantitative data in this study were analysed using the Statistical Package for Social Science (SPSS) version 29, which was conducted through the use of questionnaires.

### **5.2 Descriptive analysis**

The survey was successfully completed by 196 managers of manufacturing industries in Selangor. Google Forms was used to send the questionnaire to the managers of manufacturing industries in Selangor. Through the online survey Google Form, 196 responses were successfully collected. As a result, the replies are used as the number of responses in the following analytic steps.

#### **5.2.1 Analyses of Respondent Demography**

In the data collected from the questionnaires in Section A, the information gathered was on gender, age, marital status, education, work experience, and the total number of employees in the organisation. The demographic table and pie chart are described in accordance with the following, which displays the respondent's demographic profile.

**Table 5.1: Demographic profile**

|                    | <b>Valid</b>   | <b>Frequency</b> | <b>Percentage</b> | <b>Cumulative Percentage</b> |
|--------------------|----------------|------------------|-------------------|------------------------------|
| Gender             | Male           | 123              | 62.8              | 62.8                         |
|                    | Female         | 73               | 37.2              | 100.0                        |
| Age                | 20 - 29        | 40               | 20.4              | 20.4                         |
|                    | 30 - 39        | 68               | 34.7              | 55.1                         |
|                    | 40 – 49        | 51               | 26.0              | 81.1                         |
|                    | 50 above       | 37               | 18.9              | 100.0                        |
| Marital Status     | Single         | 27               | 13.8              | 13.8                         |
|                    | Married        | 138              | 70.4              | 84.2                         |
|                    | Divorce        | 31               | 15.8              | 100.0                        |
| Education          | Diploma        | 42               | 21.4              | 21.4                         |
|                    | Degree         | 78               | 39.8              | 61.2                         |
|                    | Masters        | 65               | 33.2              | 94.4                         |
|                    | PhD            | 11               | 5.6               | 100                          |
| Working Experience | 1 - 3          | 49               | 25.0              | 25.0                         |
|                    | 4 - 6          | 69               | 35.2              | 60.2                         |
|                    | 7 – 9          | 36               | 18.4              | 78.6                         |
|                    | 10 years above | 42               | 21.4              | 100.0                        |
| No of Employees    | ≤ 100          | 12               | 6.1               | 6.1                          |
|                    | 101 – 300      | 51               | 26.0              | 32.1                         |
|                    | 301 – 600      | 52               | 26.5              | 58.6                         |
|                    | 601 - 900      | 54               | 27.6              | 86.2                         |
|                    | 901 above      | 27               | 13.8              | 100.0                        |

According to SPSS Statistics and Google Form, able to observe from the Table 5.1 that male respondents dominated the unit, with 123 respondents accounting for 62.8 percent of the total. A total of 73 female respondents responded to the survey, accounting for 37.2 percent of the total of 196 respondents.

Ages 30 to 39 made up the bulk of the respondents, or 34.7% of the 196 people that took part in the survey. The group of people over 51 years old has the smallest number of respondents, accounting for only 18.9% of the total. With a percentage of 26 percent, those aged 40 to 41 years are the second most likely to respond, followed by those aged 20 to 29 years and above have a percentage of 20.4 percent of the total 196 respondents.

For marital status, the demography data from Table 5.1 above shows that the most of the 196 respondents are married. There were 138 married respondents who responded to this survey, accounting for 70.4 percent of all respondents. The total number of divorce respondents who answered this questionnaire is 31, with a response rate of 15.8 percent. In contrast, approximately 27 respondents (13.8 percent) out of a total of 196 are single.

The respondent's highest academic qualification was a bachelor's degree, which accounted for 39.8 percent of the total number of 78 respondents. With a total of 65 and 33.2 percent of respondents from the demographic study for education, the master's background has the second-highest percentage of participants. From the 196 total respondents for this survey, 42 people with a diploma or less responded, accounting for 21.4 percent. The respondents with the lowest academic qualifications are postgraduates.

The respondents with the least amount of work experience are those with less than 4 to 6 years of experience, with 69 respondents (35.2 percent) out of a total of 196. Then came 1 - 3 years, with 49 of the total respondents (25 percent), and above 10 years, with 42 respondents (21.4 percent). With a percentage of 18.4 percent, 36 respondents had 7 to 9 years of work experience.

The company with the most respondents, 601 to 900 employees, has 54 respondents, or 27.6% of the total 196 respondents. Following that, the majority of respondents' companies have between 100 and 600 employees, with 52 of 26 percent and 51 of 26.5 percent, respectively. The number of respondents whose company has less than 100 employees is 12, with a percentage of 6.1 percent, and the number of respondents whose company has more than 901 employees is 27, with a percentage of 13.8 percent. The results of the pilot study, as well as the number of employees in the company, reflect the advantages of a positive culture and strategies for implementing better culture practises.

### 5.2.2 Descriptive Statistics

**Table 5.2: Descriptive Statistical of Variables**

|                                 | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> | <b>N</b> |
|---------------------------------|----------------|----------------|-------------|-----------------------|----------|
| Organisational Green Culture    | 1              | 5              | 3.9497      | .7761                 | 196      |
| Competitive Advantage           | 1              | 5              | 3.9643      | .7615                 | 196      |
| Corporate Social Responsibility | 1              | 5              | 3.9920      | .7426                 | 196      |

Table 5.2 shows the variables' descriptive statistical data. Organisational green culture is the independent variable in this research. The descriptive analysis shows that there are a total of 15 questions, with a mean average of 3.9497 and a standard deviation of 0.7761. The dependent variable of this study is competitive advantage. The descriptive analysis shows that there are a total of 8 questions, with an average mean of 3.9643 and a standard deviation of 0.7615. Lastly, corporate social responsibility activities are a mediating variable in this study. There are 61 questions altogether, with an average mean of 3.9920 and a standard deviation of 0.7426.

### 5.3 Measurement model

As shown in Table 5.3, the measurement model evaluates the construct's quality in the study, which was carried out with SPSS version 29.

#### 5.3.1 Factor analysis

The Kaiser-Meyer-Olkin measure and the Bartlett's sphericity test were both used in the factor analysis. In contrast, the Kaiser-Meyer-Olkin measure was 0.810, while Bartlett's test of sphericity was significant at 0.000. Scheridan and Lyndall (2001) deem the contents of a tool sufficient if the Kaiser-Meyer-Olkin measure value is greater than 0.6. (Scheridan and Lyndall, 2001). The preliminary tests show that all important variables have strong ( $> 0.6$ ) factor loadings. Factor loadings are a metric for how well a

specific item represents the underlying architecture. When the sample was first evaluated, some of the questions had factor loadings ranging from 0.605 to 0.839. (Hair et al., 2017, 2018, 2019). As a result, no items were ruled out for further investigation. The factor loadings for each factor are shown in tables 5.3 and 5.4.

**Table 5.3: KMO and Bartlett's Test**

| <b>KMO and Bartlett's Test</b>                   |                    |           |      |
|--|--------------------|-----------|------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    |           | .810 |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 11277.086 |      |
|  | df                 | 3486      |      |
|  | Sig.               | <.001     |      |

**Table 5.4: Factor Loadings (Extraction Method: Principal Component Analysis)**

| <b>Component</b> | <b>Initial</b> | <b>Extraction</b> |
|------------------|----------------|-------------------|
| OGC 1            | 1.00           | 0.605             |
| OGC 2            | 1.00           | 0.665             |
| OGC 3            | 1.00           | 0.705             |
| OGC 4            | 1.00           | 0.79              |
| OGC 5            | 1.00           | 0.748             |
| OGC 6            | 1.00           | 0.756             |
| OGC 7            | 1.00           | 0.788             |
| OGC 8            | 1.00           | 0.761             |
| OGC 9            | 1.00           | 0.643             |
| OGC 10           | 1.00           | 0.774             |
| OGC 11           | 1.00           | 0.762             |
| OGC 12           | 1.00           | 0.761             |
| OGC 13           | 1.00           | 0.732             |
| OGC 14           | 1.00           | 0.783             |
| OGC 15           | 1.00           | 0.817             |
| CA 1             | 1.00           | 0.768             |
| CA 2             | 1.00           | 0.647             |
| CA 3             | 1.00           | 0.698             |
| CA 4             | 1.00           | 0.741             |
| CA 5             | 1.00           | 0.787             |
| CA 6             | 1.00           | 0.827             |
| CA 7             | 1.00           | 0.689             |
| CA 8             | 1.00           | 0.732             |
| CSR 1            | 1.00           | 0.812             |
| CSR 2            | 1.00           | 0.594             |
| CSR 3            | 1.00           | 0.741             |
| CSR 4            | 1.00           | 0.775             |
| CSR 5            | 1.00           | 0.748             |
| CSR 6            | 1.00           | 0.778             |
| CSR 7            | 1.00           | 0.688             |
| CSR 8            | 1.00           | 0.839             |
| CSR 9            | 1.00           | 0.811             |
| CSR 10           | 1.00           | 0.711             |
| CSR 11           | 1.00           | 0.771             |

|        |      |       |
|--------|------|-------|
| CSR 12 | 1.00 | 0.705 |
| CSR 13 | 1.00 | 0.788 |
| CSR 14 | 1.00 | 0.656 |
| CSR 15 | 1.00 | 0.712 |
| CSR 16 | 1.00 | 0.75  |
| CSR 17 | 1.00 | 0.759 |
| CSR 18 | 1.00 | 0.732 |
| CSR 19 | 1.00 | 0.738 |
| CSR 20 | 1.00 | 0.781 |
| CSR 21 | 1.00 | 0.763 |
| CSR 22 | 1.00 | 0.645 |
| CSR 23 | 1.00 | 0.726 |
| CSR 24 | 1.00 | 0.716 |
| CSR 25 | 1.00 | 0.747 |
| CSR 26 | 1.00 | 0.697 |
| CSR 27 | 1.00 | 0.687 |
| CSR 28 | 1.00 | 0.604 |
| CSR 29 | 1.00 | 0.785 |
| CSR 30 | 1.00 | 0.740 |
| CSR 31 | 1.00 | 0.658 |
| CSR 32 | 1.00 | 0.728 |
| CSR 33 | 1.00 | 0.731 |
| CSR 34 | 1.00 | 0.703 |
| CSR 35 | 1.00 | 0.814 |
| CSR 36 | 1.00 | 0.751 |
| CSR 37 | 1.00 | 0.676 |
| CSR 38 | 1.00 | 0.749 |
| CSR 39 | 1.00 | 0.719 |
| CSR 40 | 1.00 | 0.753 |
| CSR 41 | 1.00 | 0.768 |
| CSR 42 | 1.00 | 0.719 |
| CSR 43 | 1.00 | 0.816 |
| CSR 44 | 1.00 | 0.744 |
| CSR 45 | 1.00 | 0.728 |
| CSR 46 | 1.00 | 0.709 |
| CSR 47 | 1.00 | 0.773 |
| CSR 48 | 1.00 | 0.803 |
| CSR 49 | 1.00 | 0.693 |
| CSR 50 | 1.00 | 0.803 |
| CSR 51 | 1.00 | 0.822 |
| CSR 52 | 1.00 | 0.767 |
| CSR 53 | 1.00 | 0.605 |
| CSR 54 | 1.00 | 0.704 |
| CSR 55 | 1.00 | 0.742 |
| CSR 56 | 1.00 | 0.687 |
| CSR 57 | 1.00 | 0.739 |
| CSR 58 | 1.00 | 0.808 |
| CSR 59 | 1.00 | 0.693 |
| CSR 60 | 1.00 | 0.738 |
| CSR 61 | 1.00 | 0.696 |

OGC = Organisational green culture,  
CA = Competitive advantage,  
CSR = Corporate social responsibility activities

According to the findings of the factor analysis, the KMO value for this study is 0.810, as shown in Table 5.3. On the other hand, the community value is higher than Hair's (1998) minimum level, which is that all the loading values are greater than 0.6. Therefore, all components are accepted. The range of loadings is 0.605 to 0.839.

### 5.3.2 Reliability Analysis

Zikmund et al. (2019) stated that research that has a reliability test is error-free and produces consistent results. This SPSS software's reliability study is used to assess the analysis for this study, which includes 196 respondents. The reliability analysis, which includes composite reliability, is the first element of the measurement model (CR). Furthermore, the Cronbach alpha (C) values are supported by the strong composite reliability metric for all latent variables, which shows adequate reliability (Nunnally, 1978). However, Cronbach's alpha has lately been challenged as a dependability metric, and it has been emphasised that it may not be enough (Cronbach and Shavelson, 2004). As a result, dependability measures such as Cronbach's alpha are becoming more common in research investigations. The reliability table 5.5 is shown below.

**Table 5.5 Summary of Reliability Analysis**

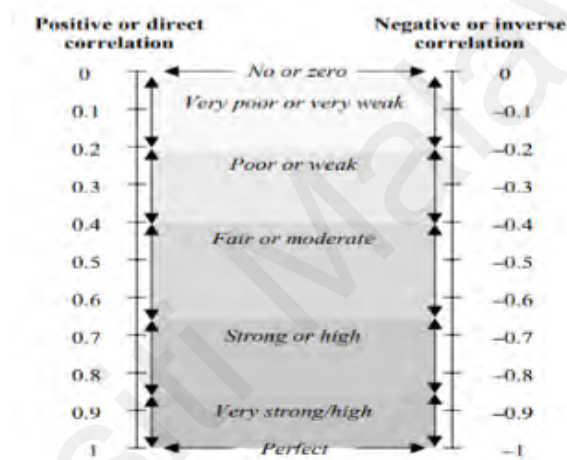
| <b>Code</b> | <b>Description</b>                         | <b><u>Cronbach Alpha</u></b> | <b>N of Items</b> |
|-------------|--|------------------------------|-------------------|
| <b>OGC</b>  | Organisational green culture               | 0.873                        | 15                |
| <b>CA</b>   | Competitive advantage                      | 0.802                        | 8                 |
| <b>CSR</b>  | Corporate social responsibility activities | 0.949                        | 61                |

Table 5.5 shows that the questionnaire contains three items, each of which has a significant Cronbach alpha greater than 0.6. It is safe to presume that all of the objects can be transported to the following level as a consequence.



### 5.3.3 Correlation analysis

To evaluate the relationship between two variables, the correlation analysis can be used. According to Schober et al. (2018), correlation is a metric for the monotonic relationship between two variables. When examining the connection between random variables, correlation is used as a measurement. The Pearson's correlation coefficient is used to reflect both the strength of the association between the two variables as well as how strong the connection is between the two variables. Correlation must be used in quantitative data analysis studies to establish the relationship between variables.



**Figure 5.1: Interpretation of correlation coefficient**

The correlation coefficient was examined using SPSS based on the information gathered during the study. This study has evaluated the correlation between the independent variables and the dependent variable. In this study, the correlation between each independent variable and dependent variable has been evaluated in accordance with the hypothesis.

H1. There is significant relationship between an organisational green culture and competitive advantage of manufacturing industries in Selangor.

H2. There is significant relationship between organisational green culture and corporate social responsibility activities in Selangor manufacturing industries.

H3. There is significant relationship between corporate social responsibilities activities and a company's competitive advantage of manufacturing industries in Selangor.

H4. Corporate social responsibility plays a significant role in mediating the relationship between organisational green culture and competitive advantage of manufacturing industries in Selangor.

Table 5.6 following presents an overview of the correlation coefficients.

**Table 5.6 Summary of Correlation analysis**

| <b>Correlations</b>                 |                     |                                  |                           |                                     |
|-------------------------------------|---------------------|----------------------------------|---------------------------|-------------------------------------|
|                                     |                     | Organisational_<br>Green_Culture | Competitive_<br>Advantage | Corporate_Social<br>_Responsibility |
| Organisational_Green_<br>Culture    | Pearson Correlation | 1                                | .554**                    | .717**                              |
|                                     | Sig. (2-tailed)     |                                  | <.001                     | <.001                               |
|                                     | N                   | 196                              | 196                       | 196                                 |
| Competitive_Advantage               | Pearson Correlation | .554**                           | 1                         | .621**                              |
|                                     | Sig. (2-tailed)     | <.001                            |                           | <.001                               |
|                                     | N                   | 196                              | 196                       | 196                                 |
| Corporate_Social_Res<br>ponsibility | Pearson Correlation | .717**                           | .621**                    | 1                                   |
|                                     | Sig. (2-tailed)     | <.001                            | <.001                     |                                     |
|                                     | N                   | 196                              | 196                       | 196                                 |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Hypothesis 1: There is significant relationship between an organisational green culture and competitive advantage in the manufacturing industry.**

H0: There is no relationship between an organisational green culture and competitive advantage.

H1: There is a relationship between an organisational green culture and competitive advantage.

The p-value is less than 0.01, which is less than the significant level of 0.05 (p 0.05), as shown in. As a result, H0 will be rejected and H1 will be accepted, as there is a link between the independent variable, organisational green culture, and the dependent variable, competitive advantage in the manufacturing industry in Selangor. The Pearson correlation (r-value) is 0.554, indicating that there is a positive association between organisational green culture and competitive advantage in the manufacturing industries

in Selangor. This correlation coefficient value of 0.554 is below the coefficient range of 0.70. As a result, there is a fair correlation between organisational green culture and competitive advantage. Therefore, hypothesis 1, which is that there is a significant relationship between organisational green culture and competitive advantage of manufacturing industries in Selangor, is acceptable, valid, and reliable in this research study.

**Hypothesis 2: There is significant relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry.**

H0: There is no relationship between organisational green culture and corporate social responsibility activities.

H1: There is a relationship between organisational green culture and corporate social responsibility activities.

The p-value is less than 0.01, which is less than the significant level of 0.05 ( $p < 0.05$ ), as shown in. As a result, H0 will be rejected and H1 will be accepted, as there is a link between the organisational green culture and CSR activities. Based on the data collected, the correlation between organisational green culture and corporate social responsibility activities has a relationship with the Selangor manufacturing industry with an r-value of 0.717. This correlation value indicates a positive and very strong relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry in Selangor. Therefore, hypothesis 2 is acceptable, valid, and reliable in this research study.

**Hypothesis 3: There is significant relationship between corporate social responsibility activities and competitive advantage in the manufacturing industry.**

H0: There is no relationship between corporate social responsibilities activities and a company's competitive advantage

H1: There is a relationship between corporate social responsibilities activities and a company's competitive advantage.

The p-value is less than 0.01, which is less than the significant level of 0.05 ( $p < 0.05$ ), as shown in. As a result,  $H_0$  will be rejected and  $H_1$  will be accepted, as there is a link between CSR activities and a company's competitive advantage. Based on the collected data, the correlation between corporate social responsibility activities and a company's competitive advantage in the manufacturing industry is 0.621. This indicates that the correlation value,  $r$ , of 0.621 is a positive value and that there is a fair relationship between corporate social responsibility activities and a company's competitive advantage. Therefore, hypothesis 4 is acceptable, valid, and reliable in this study.

A correlation analysis between all of the variables measured in Table 5.6 above. According to the reliability findings mentioned above, when two or more independent variables have a significant degree of correlation, the condition of multicollinearity exists (Cooper et al., 2003). Due to their interrelationships, multicollinearity problems may reduce the ability to define any variable's effect (Hair et al., 1998; Hair, 2006). There must be no multicollinearity problem when conducting multivariate hypothesis testing, as this will invalidate the results.

#### **5.4 Structural model**

Using a structural model of the SPSS version 29, the hypotheses were evaluated. The structural model was evaluated after the reflecting and formative measurement models were verified to be accurate and valid. The structural model depicts the postulated and theoretically justified connections between constructs or variables in a research model. The magnitude and importance of route coefficients, the coefficients of determination ( $R^2$ ) of endogenous factors, and direct and indirect effects were all evaluated.

### 5.4.1 Regression Analysis

Regression analysis is the name given to a group of statistical techniques for figuring out the connections between a few independent variables and a dependent variable. It is also one of the methods of market research that is most frequently employed. It may be applied to evaluate the strength of a relationship between variables and predict how they will interact in the future. Regression analysis can be used by market researchers to look into the relationships between one dependent variable and one independent variable (Marko and Erik, 2014). It is done to perform the regression analysis. The regression analysis in this study was carried out according to the hypothesis for each dependent variable and independent variable.

#### 5.4.1.1 Direct effects

**Table 5.7: Summary of regression analysis between organisational green culture and Competitive advantage**

| Hypothesis | Regression weights | Beta Coefficient | R2    | F      | p-value | Hypothesis Supported |
|------------|--------------------|------------------|-------|--------|---------|----------------------|
| H1         | OGC > CA           | 0.587            | 0.306 | 85.718 | .000    | Yes                  |

Notes:  $p < 0.05$ , OGC = Organisational green culture, CA = Competitive advantage

The regression analysis between organisational green culture and competitive advantage can be seen in Table 5.7 above. The results of the regression analysis show that the variables have a significant relationship. The dependent variable competitive advantage was regressed on the independent variable organisational green culture to test the hypothesis, H1. Organisational green culture significantly predicted competitive advantage,  $F(1,195) = 85.718$ ,  $p = 0.001$ , which indicates that the organisational green culture can play a significant role in shaping competitive advantage ( $b = 0.587$ ,  $p = 0.001$ ). The higher the degree of green culture within an organisation, the greater the competitive advantage of manufacturing firms in Selangor. These results clearly demonstrate the

positive effects of organisational green culture. Moreover, the  $R^2 = 0.306$  depicts that the model explains 30.6% of the variable as competitive advantage.

*H1. There is significant relationship between an organisational green culture and its competitive advantage in the manufacturing industry*

**Table 5.8: Summary of regression analysis between organisational green culture and CSR activities**

| Hypothesis | Regression weights | Beta Coefficient | R2    | F       | p-value | Hypothesis Supported |
|------------|--------------------|------------------|-------|---------|---------|----------------------|
| H2         | OGC > CSR          | 0.570            | 0.514 | 205.417 | .000    | Yes                  |

Notes:  $p < 0.05$ , OGC = Organisational green culture, CSR = Corporate Social Responsibility

The regression analysis between CSR activities and organisational green culture can be seen in Table 5.8 above. The results of the regression analysis show that the variables have a significant relationship. The dependent variable, corporate social responsibility, was regressed on the predicting variable, organisational green culture, to test the hypothesis H2. Organisational green culture significantly predicted corporate social responsibility activities,  $F(1, 195) = 205.417\%$ ,  $p = 0.001$ , which indicates that the organisational green culture can play a significant role in determining corporate social responsibility ( $b = 0.570$ ,  $p = 0.001$ ). These results clearly demonstrate the positive effects of organisational green culture. Moreover, the  $R^2 = 0.514$  indicates that the model explains 51.4% of the variable as corporate social responsibility activities. According to the study's findings, organisational green culture is a modern environmental ideology that promotes growth that is sustainable for the environment and the economy. It is founded on science, politics, and aesthetics (Martelo-Landroguez et al., 2018).

*H2. There is significant relationship between organisational green culture and corporate social responsibility activities in the Manufacturing industry.*

**Table 5.9: Summary of regression analysis between CSR activities and competitive advantages**

| Hypothesis | Regression weights | Beta Coefficient | R2    | F       | p-value | Hypothesis Supported |
|------------|--------------------|------------------|-------|---------|---------|----------------------|
| H3         | CSR > CA           | 0.829            | 0.385 | 121.613 | .000    | Yes                  |

Notes:  $p < 0.05$ , CA = Competitive advantage, CSR = Corporate Social Responsibility

The regression analysis between corporate social responsibility and competitive advantage can be seen in Table 5.9 above. The results of the regression analysis show that the variables have a significant relationship. The dependent variable competitive advantage was regressed on the expected variable corporate social responsibility to test the hypothesis, H3. Corporate social responsibilities significantly predicted competitive advantage,  $F(1,195) = 121.613$ ,  $p = 0.001$ , which indicates that corporate social responsibility can play a significant role in determining competitive advantage ( $b = 0.829$ ,  $p = 0.001$ ). These results clearly show the positive effects of corporate social responsibility. Additionally, the  $R^2 = 0.385$  indicates that the model explains 38.5% depicts that the model of the variable is competitive advantage. As a result, corporate social responsibility entails improving administrative procedures and practises in order to improve performance and gain a competitive advantage by considering social, economic, and environmental factors.

*H3. There is significant relationship between corporate social responsibility activities and competitive advantage in the manufacturing industry.*

#### **5.4.1.2 Indirect effects**

The indirect effect shows the route taken by the mediator to connect the dependent and independent variables by the path coefficients of the mediation being calculated, as shown in tables 5.10 and 5.11. To determine the relationship between the random variables, regression analysis is performed. Using multiple regression, the regression is measured in addition to revealing the strength of link between the two variables.

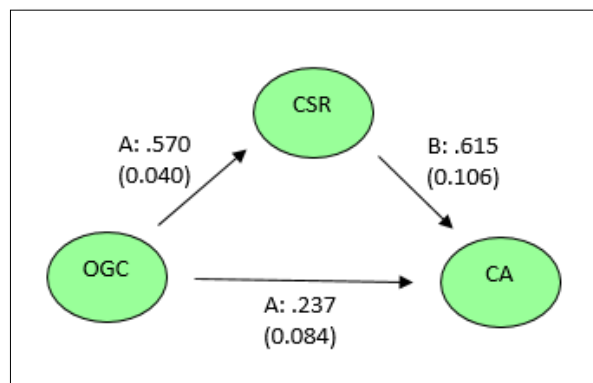
**Table 5.10: Coefficients regression analysis between organisational green culture and competitive advantage through CSR activities**

| Coefficients <sup>a</sup> |                                     |                             |            |                           |       |       |
|---------------------------|-------------------------------------|-----------------------------|------------|---------------------------|-------|-------|
|                           |                                     | Unstandardized Coefficients |            | Standardized Coefficients |       |       |
| Model                     |                                     | B                           | Std. Error | Beta                      | t     | Sig.  |
| 1                         | (Constant)                          | .574                        | .297       |                           | 1.930 | .055  |
|                           | Organisational_Green_Cul<br>ture    | .237                        | .084       | .223                      | 2.812 | .005  |
|                           | Corporate_Social_Respon<br>sibility | .615                        | .106       | .461                      | 5.804 | <.001 |

a. Dependent Variable: Competitive\_Advantage

| Hypothesis | Regression weights | R2    | p-value | Hypothesis Supported |
|------------|--------------------|-------|---------|----------------------|
| H4         | OGC > CSR > CA     | 0.385 | .000    | Yes                  |

The mediation analysis was carried out to evaluate the mediation role of corporate social responsibility in the link between organisational green culture and competitive advantage. The result table 5.10 of the regression coefficient analysis revealed that the total effect of organisational green culture on competitive advantage was significant ( $b = 0.587$ ,  $t = 0.063$ ,  $p 0.001$ ). With the inclusion of the mediating variable corporate social responsibility, the impact of organisational green culture on competitive advantage became significant ( $b = 0.237$ ,  $t = 0.084$ ,  $p 0.005$ ). The indirect effect of organisational green culture on competitive advantage through corporate social responsibility was found to be significant ( $b = 0.615$ ,  $t = 0.106$ ,  $p 0.001$ ). Figure 5.2 shows the regression analysis of path coefficients.



**Figure 5.2: Study model**



For further investigation using the Sobel test (Sobel 1982), it may be determined whether indirect effects have any influence on mediator CSR actions. In order to evaluate the importance of the indirect correlations in the research in a single test, the Sobel test is used (Sobel, 1982). Which approach is equal for multiplying two regression coefficients to determine the indirect effect (Sobel, 1982). In a single test, a Sobel test is used to identify the significance of the study's indirect relationships. Through the use of the interactive calculator, the path in figure 5.2. The two coefficients come from two different regression models. Path and its unstandardized coefficients are entered into the interactive calculator, and their standard errors are determined (Preacher and Leonardelli 2010). A multi-regression analysis is carried out. In order to evaluate each dependent variable and independent variable in accordance with the hypothesis, the multiple regression analysis was performed in this study.

**Table 5.11: The Sobel test of indirect effects significant with CSR activities as the mediator**

| <b>Indirect effects<br/>(OGC → CSR → CA)</b> | <b>Input</b> | <b>Test<br/>statistics</b> | <b>Standard<br/>error</b> | <b>p-value</b> |
|--|--------------|----------------------------|---------------------------|----------------|
| Unstandardized coefficient $\alpha$          | .570         | 6.51218                    | 0.05383                   | 0.0000         |
| Unstandardized coefficient $\beta$           | .615         |                            |                           |                |
| Standard error $\alpha$                      | .040         |                            |                           |                |
| Standard error $\beta$                       | .084         |                            |                           |                |

The indirect effect analysis results for organisational green culture on competitive advantage through corporate social responsibility using Sobel test the results demonstrate that the p-value in this instance is less than 0.05., therefore the indirect effect of organisational green culture on competitive advantage via corporate social responsibility is statistically significant ( $p = 0.000$ ). Calculated as  $(0.570 \times 0.615) = 0.3506$ , the indirect effect point estimate at which the Sobel Test's p-value becomes statistically significant. The estimated indirect effect is the value.

Another technique is utilised in the PROCESS macro extension of SPSS version 29 to verify the indirect effect. The PROCESS macro's use with bootstrapped assurance (Hayes, 2017). The 95% confidence interval and 10,000-bootstrap sample were employed for the mediation analysis. When the lower and upper 95% confidence interval values are either above or below zero, mediation is effective. The study evaluated how corporate social responsibility affected the relationship between competitive advantage and organisational green culture. The finding ( $b = 0.3503$ ;  $t = 3.4683$ ), which supports H4, showed a significant indirect influence of organisational green culture on competitive advantage. Additionally, it was discovered that the direct impact of organisational green culture on competitive advantage was significant ( $b = 0.2367$ ,  $p = 0.005$ ) even when the mediator was present.

As a result, the relationship between organisational green culture and competitive advantage was mediated by corporate social responsibility. Table 5.12 provides a summary of the mediating analysis.

#### 5.4.2 Mediation Analysis

**Table 5.12: The macro process of indirect effects significant with CSR activities as the mediator**

|                | Total effect     | Direct effect    | Indirect effect | Confidence Intervals |             | t-statistics | Conclusion        |
|----------------|------------------|------------------|-----------------|----------------------|-------------|--------------|-------------------|
|                |                  |                  |                 | Lower Bound          | Upper Bound |              |                   |
| OGC > CSR > CA | 0.5869<br>(.000) | 0.2367<br>(.005) | 0.3503          | 0.1499               | 0.5347      | 3.4683       | Partial mediation |

The sole change between the Sobel test and macro process results of the mediation analysis is the rounding up of the point effect for the indirect effect from 0.3506 to 0.3503 in PROCESS macro. The relationship between organisational green culture and competitive advantage is mediated by corporate social responsibility, and H4 is recognised as a result. Additionally, in light of natural RBV theory, this study

demonstrates that corporate social responsibility initiatives have a role in mediating the link between green organisational cultures and competitive advantage. As a result, this creates an active research model by adhering to the natural RBV hypothesis.

*H4. Corporate social responsibility plays a significant role in mediating the relationship between organisational green culture and competitive advantage in the manufacturing industry.*

## **5.5 Chapter Summary**

In summary, this research looks at the mediating effects of CSR activities on the relationships between organisational green culture and competitive advantages of manufacturing industries in Selangor using mediation analysis such the Sobel test and PROCESSMacro, based on the results that were analysed using SPSS software Version 29. As a mediating variable, corporate social responsibility increased the control of organisational green culture on improving the firm's competitive advantages. The results will be covered in more detail in the following chapter.

## CHAPTER 6: DISCUSSION AND CONCLUSION

### 6.1 Introduction

The overall results of this research will be presented in based on the respondents' responses in the previous chapter, the study's objectives are addressed in this chapter. The disclosures are for the purpose of confirming points, and the after-effect hypothesis research includes additional speculation. In addition to the study's description of the part that demonstrates the genuine results for methodology and experts, this section proposes a research topic for future research.

### 6.2 Hypothesis of Study

In this study, the four study hypotheses are examined using multiple regression method, and it is part of the research model. Table 6.1's hypothesis testing findings are summarised in the paragraphs that follow: -

**Table 6.1: Summary of Hypothesis**

|    | <b>Hypothesis</b>  | <b>Relationship Direction</b> | <b>Regression Results</b> |
|----|--|-------------------------------|---------------------------|
| H1 | There is significant relationship between an organisational green culture and its competitive advantage in the manufacturing industry.   | Positive                      | SUPPORT                   |
| H2 | There is significant relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry.                                 | Positive                      | SUPPORT                   |
| H3 | There is significant relationship between corporate social responsibilities activities and a company's competitive advantage in the manufacturing industry.                          | Positive                      | SUPPORT                   |
| H4 | Corporate social responsibility plays a significant role in mediating the relationship between organisational green culture and competitive advantage in the manufacturing industry. | Positive                      | SUPPORT                   |

All four of the study's hypotheses have been proven true, according to the data in table 6.1 above. This decision is based on the results of the previous chapter's multiple regression analysis. This is the point at which the significance level for all of these analyses is less than 0.050. (See Tables 5.7 to 5.12). As a result, the researcher found that

all hypotheses were supported. The goal of this research is to support empirical evidence for the development of competitive advantage by corporate social responsibility and organisational green culture. The following are the standards for judging the mediation effect (direct and indirect effects) (Awang, 2016). CSR activities have an indirect impact on organisational green culture in order to achieve competitive advantages for the company.

### **6.3 Discussion of findings**

The results of the study are summarised and discussed in connection to its goals in this section. The results are offered for debate and interpretation utilising the research questions of the study as a guide. The following are the goals of the research:

**RO1:** To investigate the relationship between an organisational green culture and its competitive advantage in the manufacturing industry.

**RO2:** To investigate the relationship between organisational green culture and corporate social responsibility activities in the manufacturing industry.

**RO3:** To investigate the relationship between corporate social responsibility activities and a company's competitive advantage in the manufacturing industry.

**RO4:** To investigate the mediating role of corporate social responsibility activities in the relationship between organisational green culture and competitive advantage in the manufacturing industry.

#### **6.3.1 The Relationship between Organisational Green Culture and Competitive Advantage**

The first hypothesis intent to study the impact of organisational green culture on organisations' competitive advantage. The findings demonstrate a significant and positive

relationship between organisational green culture and competitive advantage. The beneficial effect demonstrates that if organisational green culture is implemented more effectively, then the competitive advantage of a company will be even greater. The findings back up this proposition, and they are in line with past investigations that have established a relationship between organisational green culture and performance-based outcomes (Chang, 2015; Wang, 2019). Governments and decision-makers are gravely concerned about the stability of future development and growth and the long-term survivability of humanity in light of escalating global warming and adverse environmental circumstances. But as industrial growth has progressed, there is now more environmental stress due to the intense use of natural resources and reliance on energy.

Higher processing efficiency and satisfying advancements are made possible by the development of technology in human existence. The importance of an organisation's green, responsible culture for businesses is being promoted in the current environmental era for a multiple of reasons. In the first place, the idea of sustainable development needs to be considered by all nations as a global issue rather than a regional or national one. This makes it especially important for today's globalised economies, which heavily rely on trade, foreign investments, and international alliances (Saboori and Sulaiman, 2013). Second, contemporary firms are compelled to embrace eco-friendly practises and scale back on activities that are seen to be ecologically harmful due to government-imposed tight laws (Salem et al, 2017).

Manufacturing managers in Malaysia are encouraged to be aware of the resources utilised, waste created, and energy used through an organisational green culture that supports environmentally friendly ideals. Our findings advise managers to embrace organisational green culture traits, even if they acknowledge that current green environmental legislation and quickly evolving technology settings may be a severe obstacle (e.g., Wang, 2019). To ensure that green culture is a top priority for a

manufacturing company, the firm should employ management devoted to environmental causes and who share the values of the green culture it seeks to promote. Managers should adopt environmentally friendly practises to increase their businesses' market potential and strengthen their competitive advantages in light of the strict environmental legislation and attitudes that are currently in place.

The result is consistent with previous studies (Chang, 2015; Wang, 2019) The managers should act sustainably in light of the strict environmental regulations and mind-set that are currently in place in order to grow their companies' market opportunities and enhance their green based performance. This finding illustrates how organisational green culture may strengthen competitive advantage. Practically speaking, managers must adopt a workplace culture that promotes environmental values since a green culture inside the organisation may help the business stand out from the competition. This discovery furthers Russo and Fouts (1997) earlier research, RBV theory supports this contribution as it maintains that organisations must have the capacity to produce new resources in order to respond to changing environmental pressures..

To keep an edge in the market, managers may adopt an organisational culture that values green manufacturing techniques and reduces their negative environmental effects. When environmental issues arise, the managers in the manufacturing sector to be well informed about their organisation's environmental policy in order to make the best judgements possible, even though the present environmental protection pressure may not be easily controlled. They obviously base their competitive advantage choices on whether or not their company plans to participate in green culture initiatives.

### **6.3.2 The Relationship between Organisational Green Culture and CSR Activities**

The second hypothesis intent to study the impact of organisational green culture on CSR activities. The findings demonstrate a positive and significant relationship between organisational green culture and the implementation of CSR activities. The beneficial

effect demonstrates that if organisational green culture is implemented more effectively, then the application of CSR activities in an organisation will be even easier to conduct. CSR activities refers to a group of self-regulatory and self-stimulating organisational actions that maintain an organisation's reputation and acknowledged capacity to be trusted and held accountable by its stakeholders and may give rise to social values that serve as feedback for the organisation's own value. Since the mediation has largely been disregarded in prior studies, our discovery that CSR activities have a mediating effect is important. This discovery is important since it affects strategy. The phrase "corporate social responsibility" covers a broad range of business practises, including ethical employment procedures, volunteer work, and environmental conservatism. In actuality, CSR may take many other forms, including charitable gifts, support for local development initiatives, and the resolution of social issues, among others. Businesses enhance communities and create thriving ecosystems through their CSR activities, in addition to adding value to the economy. When companies are held accountable for advancing the green movement or when they take sustainability goals seriously, especially in the manufacturing sector, CSR may be stimulated, in some ways similar to organisational green culture (Tang et al., 2016).

Awan et al. (2017) claim that all CSR initiatives undertaken by the organisation and associated with stakeholders serve as the cornerstone of strengthening environmental preservation by exhibiting a strong assurance to the environment. To attain the aim of environmental sustainability, it is also helpful to reduce CO<sub>2</sub> emissions, pollution, water contamination, industrial waste and use less energy. The organisational green culture in manufacturing organisations acts as a driver for CSR since it is essential to control the social, environmental and economic risks during the policymaking process (Abinakad and Firoz, 2016).



A team of employees who understand the fundamentals of environmental management are responsible for the achievement of the organisational green culture. Therefore, employees who work for a firm with a strong green culture are supportive of taking part in CSR projects. Companies with a green culture prosper in the sustainability industry, taking steps to safeguard the environment and luring the most brilliant workers in the process. This is what is meant by corporate social responsibility. Businesses and talent alike are drawn to organisations that embrace green culture. People wait to assess how well a firm is doing in terms of its corporate social responsibility, and companies are now judged on that basis (Clark et al., 2019).

Sustainable industry practises call for promoting plastic trash recycling, cleaning up plastic garbage from waterways, and adding solar panels to households that rely on fossil fuels for illumination. These are just a few examples. Cultural matrices, which unite individuals with nature in a community, have an impact on how humans conduct their everyday lives. A distinction between a culture's environment and its members is difficult to understand. All business operations will be consistent with the green movement for environmental preservation thanks to an organisational green culture, especially those that deal with human resources (Cordeiro and Tewari, 2015). Therefore, the current study investigated the organisational green culture's role in promoting corporate social responsibility initiatives in order to assess firm competitiveness in Malaysia's manufacturing sector.

### **6.3.3 The Relationship between Corporate Social Responsibility Activities and Competitive Advantage**

The third hypothesis intent to study the impact of CSR activities on organisations' competitive advantage. The findings demonstrate a significant and positive relationship between CSR activities and competitive advantage. This beneficial effect demonstrates that the competitive advantage will increase with improved CSR activities application.

The study's findings provided examples of how corporate social responsibility initiatives may provide businesses an edge. The results demonstrate that corporate social responsibility initiatives and competitive advantage are positively correlated. To put it another way, corporate social responsibility initiatives provide a mediating function between organisational green culture and increased business competitiveness. Through empirical research, the crucial part that CSR concepts play in boosting a company's competitive advantage through promoting sustainable development has been identified. To achieve their targeted sustainable objectives and gain a successful competitive advantage, organisations may be able to use corporate social responsibility to bring all stakeholders together on a single platform.

Corporate social responsibility actions in the production process might transform the company into one that is innovative and ecologically friendly. Senior management and regulatory agencies in the manufacturing sector are recommended to pledge to secure a competitive advantage in the future and then to follow this pledge with a revived interest in CSR initiatives. Success in CSR projects gives the company a stronger competitive advantage. Thus, performance is improved in terms of financial, operational, and environmental performance due to increased competitiveness. According to the core ideas of RBV, organisations are given more power to increase their competitiveness when they have sporadic, valuable, unique, and non-transposable features. Having a greater competitive destination for operating well in the areas of growth, finance, and environmental performance will make a company's performance more sustainable. The findings also indicated that an organisation's CSR commitment would promote economic and environmental sustainability to gain a competitive advantage. Manufacturing industries must prioritise corporate social responsibility efforts for the environment in order to progress organisational green culture and gain a competitive advantage.

#### **6.3.4 The Mediation Effect of Corporate Social Responsibility Activities in the relationship between Organisational and Competitive Advantage**

The fourth hypothesis intent to study the indirect impact of organisational green culture on competitive advantage through CSR activities. This advantageous effect demonstrates how a more environmentally conscious organisational culture, mediated by CSR activities, will enhance organisational advantage performance. By making sure the distribution of green value within the organisation, organisational green culture can also help to create favourable conditions for green innovation. From this research, it was found that the level of application of corporate social responsibility activities is relevant among Malaysian manufacturing organisations. This is because the organisational green culture concept was well understood by a Malaysian manufacturing organisation. This is due to the Malaysian government's guide and reference in implementing the concept of organisational green culture. This study shows the corporate social responsibility activities of Malaysian manufacturing organisations. Therefore, corporate social responsibility activities were carried out among Malaysian manufacturing organisations. Corporate social responsibility activities managed to get confirmation of the use of materials at the Malaysian manufacturing organisation stage in most federal agencies. They have used structuring, concrete, and rectification methods by using products that have been certified as green technology. Corporate social responsibility is a useful resource for a manufacturing industry to enhance competitive advantage, according to resource-based theories. It has the capability to help companies attain a competitive advantage while both protecting the environment and attaining long-term growth (Barney, 2001).

Moreover, Anthony Majid et al. (2020) claim that it isn't difficult to implement organisational green culture in an organisation if the proper measures and methods are implemented properly. This is because there are many methods that can be used, and the

company will also benefit from them. If an organisation wants to implement organisational green culture, high costs are not an excuse because the implementation of organisational green culture can save costs and will be profitable in the future (Tan, Goh, et al. 2017). The Ministry of Malaysian Energy, Green Technology, and Water has allocated a green technology financing scheme to encourage the development of green technology activities. Kasayanond, (2019) also suggest that each company apply for funds and assistance from the government to overcome the problem of lack of costs to implement organisational green culture. Meanwhile Fernando and Wah (2017), also added that corporate social responsibility activities are an important corporate activity, just as important as business activities to generate financial resources (income and profits) to each corporate organisation. Therefore, Islam, Jantan, et al. (2020) urges that every corporate organisation, regardless of size needs to implement and manage efficiently and effectively each corporate social responsibility activity to benefit as many may be stakeholders.

This study found that study respondents have a high awareness of the importance of corporate social responsibility activities to their corporate organisations, and the majority of respondents are willing to learn about corporate social responsibility. Tan, Goh, et al. (2017) also realised that CSR activities are important for their career development. The staff of corporate organisations engaged in CSR activities do not have complete and adequate information on corporate social responsibility activities in particular. There are respondents who are still not ready to implement CSR activities individually. However, this can be overcome with the support of employers and all staff in their departments to increase the level of readiness to implement CSR activities by sharing information and completing related corporate social responsibility programmes organised by the company. These staff should also be involved in social responsibility-related programmes organised by the company (Kanniah, 2017). This is because social responsibility is a

medium for organisations to grow business empires, strengthen business reputations, and strengthen relationships with customers and stakeholders. Researchers found that the role of employers in a company is important in raising awareness and providing space for their staff to perform CSR activities. This supports previous studies that highlight the role of organisations in promoting CSR activities among organisational staff (Islam, Muthaiyah, et al. 2020).

In conclusion, there are many benefits that can be obtained by an organisation if they adopt the concept of corporate social responsibility because such programmes can contribute to societal and environmental well-being demonstrate the organisational commitment to social obligations to society. It can be concluded here that a corporate body that wants to be active in CSR activities needs to complete organisation with accurate and relevant information for the effectiveness of CSR activities that will be implemented in the future.

## **6.4 Research Implication**

### **6.4.1 Theoretical Implication**

This research looks into the relationship between organisational green culture and competitive advantage in Selangor manufacturing firms, as well as the interest sparked by corporate social responsibility. The RBV theory is used in this study to determine whether there is an empirical relationship between the variables. The results show a positive effect. The study clarifies that organisational green culture can create suitable conditions to attain a competitive advantage by make sure the provision of green value within the organisation. The study also clarifies that CSR activities have the ability to enhance and improve employees' green abilities, motivate them to make a contribution to competitiveness, and give them the opportunity to participate in environmental behaviour based on RBV theory and, specifically, the perspective of a company that uses natural

resources (Hart, 1995). The study discovered that a company's preference for a green culture that promotes development is a result of the sustainability of unique capabilities that may be utilised as a strategic tool to increase overall competitiveness, as evidenced by better environmental performance.

RBV also promotes the development of an environmentally friendly culture in businesses, claiming that when environmental concerns are ingrained in a company's culture, performance improves and environmental skills become difficult to duplicate by competitors. Corporate social responsibility has been proven in the study to act as an intermediary between organisational green culture and competitive advantage, and organisational green culture is regarded as a analyst of both competitive advantage and corporate social responsibility. Global concerns that force businesses to preserve economic and environmental sustainability drive businesses to use organisational green culture management. In order for the firm to function well in terms of finances, operations, and the environment, it must be able to manufacture goods that are highly competitive, environmentally friendly, and try to lower long-term production costs.

#### **6.4.2 Practical Implication**

Companies need to execute both a green strategy and green management for operations and services. Creating a green plan is becoming popular management for operations and services. A green strategy must be focused on pursuing long-term initiatives that emphasise organisational success, taking into account economic, operational, and environmental factors. Economic development and environmental protection should be prioritised from a performance standpoint based on the needs of businesses. As a result, manufacturing firms' managers should develop an organisational green culture based on CSR activities and a competitive advantage market.

Companies that want to compete globally and preserve a competitive advantage in sustainability need to have an organisational green culture, since this plays a crucial role

for the business. The corporation developed an organisational green culture, and it is an organisational green culture that is difficult for rivals to copy. Moreover, an organisation that encourages organisational green culture as part of its values and proposals is more likely to develop a commitment to environmental stewardship and social responsibility. This is good for society and, in particular, for human health and well-being. In order to create a green culture inside businesses, action must be taken and preventative methods must be used. Employees will become more conscious of the concept that by caring for the environment, and have the opportunity to leave a better place for future generations while also being socially responsible.

### **6.5 Limitations of the study and Recommendation for future studies**

The limitation of this research was that it looked at only one dependent variable (competitive advantage), which can be considered a weakness of the research. It was thus wise to do more research on the topic of the difficulties that all Malaysian manufacturing enterprises encountered during the COVID-19 epidemic in the future. In contrast, the goal of this study was to collect information from a small population. of 600 participants by targeting a narrowly defined set of managers from the manufacturing companies in Selangor. The researcher only collected data from one specific group (Selangor-based manufacturing industry managers), which is reflected in these phenomena as bias in data collection. In the future, the research can be expanded to all Malaysian manufacturing industries. Neither the employer's nor the employee's viewpoints on implementing an organisational green culture were taken into account (Adebayo et al., 2020). This study uses quantitative and cross-sectional data. Future research might involve a longitudinal study with a large sample size conducted over a longer time span. Because this study is being done in the manufacturing business, it may be compared to future research in other areas, such as the service industry. Respondents may have been reluctant to participate due to the span of the survey or the sensitive nature of the study's focus on environmental

concerns. The questionable answer pattern, where some respondents seem to employ a straight-line approach, is another reason.

In order to further analyse the study and learn more about it, it will be crucial to perform a research project that covers all of Malaysia in the future. At the beginning of this study, it was very difficult to find journals and articles that were closely related to the title of the research study. There are some articles, but only a few are closely related to the study. There are also journals and articles that are blocked and have to be paid to get access from the web, and it's costly. Another challenge was to distribute the questionnaire via email because the respondent was so busy with their work that he frequently ignored it and required repeated follow-ups. There were also some respondents who were not participating in the survey. Even after all the limitations, the findings of this study could be helpful to Selangor-based manufacturing companies in resolving issues in the future. This research provides knowledge about organisational culture by taking into account green environmental concerns with CSR initiatives, which have only been limitedly empirically investigated. This research also includes a cutting-edge theoretical justification of the RBV theory approach for the connections that account for the mediating role played by CSR initiatives.

## **6.6 Conclusion**

In conclusion, giving CSR activities and green management a high priority in long-term planning is one step that should be taken in order to attain and maintain competitiveness in the manufacturing sector. Organisations should reevaluate the idea that these procedures are a cost when, in reality, they are an investment that ensures the longevity and viability of the company. The goal of maximising wealth for all stakeholders is not at odds with how ethically and responsibly an organisation behaves when it has a green culture. Government decision-makers could develop incentives and regulations to entice companies to adopt CSR and green culture practises that will



increase their competitiveness and have a cascading effect throughout the supply chain, eventually reaching the regional and national levels.

Therefore, organisational green culture that actively engages in CSR initiatives has a positive impact on the manufacturing sector. This research will provide more exposure to Selangor-based manufacturing industries to implement organisational green culture, which is the best choice to successfully attain competitive advantage with the help of CSR activities. Companies that have both the ability and knowledge to implement a comprehensive organisational green culture in management and business activities would be able to increase productivity and enhance their reputation. This study will provide more exposure to Selangor-based manufacturing industries in order to implement organisational green culture, which would be the best choice to successfully attain competitive advantage with the help of CSR activities.

Additionally, the researcher suggests that manufacturing industries in Selangor should take on the challenge of implementing an organisational green culture at every level of management. They should encourage their suppliers and customers to adopt an organisational green culture along with CSR-based management. Every individual in management should be involved in implementing an environment-based culture. Green management is applicable to every industry and has a unique way of approaching management to attain competitive advantage. Further research can be done to increase understanding and belief about the effectiveness of organisational green culture and CSR activities in other sectors for competitive advantage. This study sheds light on the relationship between organisational green culture and competitive advantage triggered by CSR activities.

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