

# Effects of Organizational Resource Capabilities to Competitive Advantage Potential of Manufacturing Companies in Batangas Province

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Abstract— Resource Capabilities has a fundamental role in a company's Competitive Advantage Potential. In this study, the researcher assessed the relationship between resource capability and competitive advantage in the manufacturing sector. Descriptive and Ouantitative Research Designs have been used since both are most appropriate to assess the effect of resource capabilities on competitive advantage potential of manufacturing companies in Batangas province. A total of 38 rubber and plastic manufacturing companies were identified as the subjects of this study. The findings of the research revealed that the competitive power in terms of valuable had a significant positive effect on competitive advantage while other resources in terms rare, physical and financial resource capabilities had a significant effect; on realized competitive advantage the human and physical resource capabilities; on inimitable the human resource capabilities; and on non-substitutable the human and financial resource capabilities. A sustainable development program was proposed to address the sustainability of companies' competitive advantages.

**Keywords**— Resource Capabilities, Competitive Advantage, Manufacturing and Sustainable Development Program.

# I. INTRODUCTION

The global economic climate is evolving quickly. Such factors as shifting consumer and investor needs, escalating product-market competition, and globalization define the transition. Organizations must continuously enhance their performance to compete successfully in this context. And being competitive is key to in surviving these challenges.

The manufacturing industry is still of utmost importance to both the developing and developed countries. More than half of the Philippines' industrial sector is made up of the manufacturing industry, which also contributes over a quarter of the nation's Gross Domestic Product (Catalano & Kailahun, 2022). The employment, income, and output multipliers in the manufacturing industries are higher than those in the agriculture and service sectors. Taking all these factors into account, the Philippines is increasing the manufacturing sector's competitiveness to achieve equitable and sustainable national growth.

Further, manufacturing companies in Batangas Province face unique difficulties and opportunities that affect their competitive advantage. As of August 31, 2021, the province has 15 operational Special Economic Zones, where most of the export manufacturing companies are located. As of November 2022, there are 183 export manufacturing enterprises on the PEZA list, representing 21 different types of

export manufacturing companies. The province has a strong industrial foundation, with enterprises operating in a wide range of industries, including rubber and plastic production, electronics, fabricated metal, automobile component manufacturing, and many more.

Rubber and plastic product manufacturing had the most companies on the list, with 42, followed by fabricated metal products and electrical machinery and apparatus production, which had 35 and 22 on the list. The number stated was solely for the original sort of projects they are operating; additional projects, amendments, and improvements were not included. Rubber and plastic product manufacturing were place within Lima's SEZ technological center and FPIP. However, this manufacturing companies face enormous hurdles because of the changing nature of manufacturing, its market, and environmental conditions. Manufacturing companies face significant challenges due to the changing nature of manufacturing, market dynamics, and environmental factors. These obstacles include technology advances, changing market needs, complex supply chains, sustainability regulations, and a competent workforce. These organizations are trying to thrive in a competitive global market, and as a result, they must maintain and improve their competencies to achieve economic strength and stability.

Furthermore, the study intends to evaluate how these resource capabilities might contribute to long-term competitive advantage, considering the industry's changing demands as well as the requirement for environmental and social responsibility. This paper also wants to address the issue of whether firms are aware of which of their available resource capabilities offer them a competitive advantage in their industry.

Recognizing that a company must seek a comprehensive understanding of its assets and capabilities is critical. This understanding serves as a foundation for selecting a strategy that capitalizes on an organization's primary advantages. The researcher believes that the study is vital to determine the current internal state of these industrial organizations. It will help them discover the areas where they need to improve to keep their operations stable.

# II. METHODS

The researcher used Descriptive Research Method and Quantitative Research Method as research designs of this study since both are most appropriate to assess the effects of



Organizational Resource Capabilities on Competitive Advantage Potential of Manufacturing Companies in Batangas Province. The data indicating the responses of manufacturing company's managers were documented and gathered by means of survey questionnaires. The researcher used a researcher-made survey questionnaire as the main instrument that assessed the Resource Capabilities of Manufacturing Companies in the province of Batangas. All parts of the questionnaire were answered by checking the appropriate column that corresponds to their respective responses which contained portions that are selected by the respondents, particularly: strongly agree, agree, disagree, and strongly disagree. Only managers of registered and operating rubber and plastic manufacturing companies were included in this study.

Furthermore, the data gathered were interpreted and analyzed through Percentage, Weighted Mean, Multiple Linear Regression and One-way ANOVA.

Thereafter, these data were used by the researcher to identify and describe the highest and lowest advantage of resource capabilities. The result was used by the researcher to establish sustainable development program to address the sustainability of company's competitive advantage.

## III. RESULTS AND DISCUSSIONS

A corporation, a quasi-corporation, a non-profit organization, or an unincorporated enterprise are all examples of businesses. Enterprises can be divided into many categories based on their size, number of employees, number of years in operation. Furthermore, business profile can be key to the magnitude of the company's operations. It can be measured using a variety of measures, including assets, revenue, production, market capitalization, and capital invested. It also determines a manufacturing company's capacity to compete in the market, and how this affect into their competitive advantage.

Table 1 presents that the majority of manufacturing companies in Batangas had an asset size of 500,000,001 or above, while the lowest frequencies were observed in the asset size ranges of 50,000,001-100,000,000 and 10,000,000-50,000,000; 14 companies, or 36.84%, had been in operation for six to ten years and 11 months, while 7 companies or 18.42% had 20 or more years of experience; 14 manufacturing companies, or 36.84%, had employees ranging from 101 to 500, and none had 5,000 or more employees; the majority or 92.11% used a centralized structure, only 2 had a decentralized and 1 uses a combination of the 2, and 65.79% of the companies were fully owned by foreigners, 1 was 50 local and foreign, and non were owned by 100% local.

Table 2 on the other hand, presents the weighted mean and its corresponding verbal interpretation on different competitive power of resource capabilities in terms of VRRIN. It can be observed from the table on the assessment of competitive power in terms of valuable, that six (6) out of eight (8) of the valuable competitive power on resource capabilities are very high. With a composite mean of 3.52, this manifest that the respondents have a very strong confidence

that their organizational resource capabilities' competitive power is very high.

TABLE 1. Profile of Manufacturing Companies

Business Profile	Frequency	Percentage
Asset Size		
10,000,000 and below	7	18.42
10,000,001 - 50,000,000	4	10.53
50,000,001 - 100,000,000	4	10.53
100,000,001 - 500,000,000	10	26.32
500,000,001 and above	13	34.21
Total	38	100
Years of Operation in Batangas		
0-5 yrs. & 11 months	9	23.68
6-10 yrs. & 11 months	14	36.84
11-19 yrs. & 11 months	8	21.05
20 years and above	7	18.42
Total	38	100
Number of Employees		
100 and below	11	28.95
101 - 500	14	36.84
501 - 1,000	8	21.05 13.16
1,001 - 5,000	5	
5,001 and above	0	0.00
Total	38	100
Organizational Structure		
Centralized Organizational Structure (Top-	35	92.11
Down management)	33	92.11
Decentralized Organizational Structure	2	5.26
(Bottom-Up management)	2	3.20
Others: Combination	1	2.63
Total	38	100
Form of Ownership		
100% Local Only	0	0.00
100% Foreign Only	25	65.79
75% Local and 25% Foreign	6	15.79
75% Foreign and 25% Local	5	13.16
50% Both Local and Foreign	1	2.63
Others	1	2.63
Total	38	100

TABLE 2. Assessment of Competitive Power in Terms of Valuable

	VALUABLE	Mean	Interpretation
1	The company's brand and trademark are highly recognized.	3.63	Very High
2	The company invested in securities with an anticipated annual return of 8%.	3.32	High
3	The company has readily planned for fortuitous events and unexpected undertakings.	3.55	Very High
4	The company's investors are actively engaged with their portfolio on environmental issues to protect the long-term value of business assets.	3.47	High
5	The company incorporates sound decisions into the future value of projects within the context of the current financial state of the organization.	3.66	Very High
6	The capital budgeting and investment planning established for the company is being maintained without deterioration.	3.55	Very High
7	By investing in employee training and development programs, the corporation built a highly skilled workforce that allows it to create high-quality products more quickly.	3.71	Very High
8	By differentiating itself from rivals, the company employs strategic alliances or partnerships to get access to new business opportunities.	3.66	Very High
	COMPOSITE MEAN	3.57	Very High



The participants were unanimous in their belief that investing in staff training and development programs has helped the organization generate a highly trained workforce. This competent staff, in turn, enables the production of high-quality items in a faster time frame. This element obtained the highest weighted mean score of 3.71, emphasizing its importance in increasing the company's competitive advantage.

Table 3 illustrates the weighted mean and the verbal interpretation on the Rare competitive power of resource capabilities. It can be observed from the table that the composite mean of 3.46 was concluded as high in verbal interpretation. The highest weighted mean with a very high verbal interpretation belong to the company use of specialized equipment and production methods, with 3.58 highest weighted mean. While, it is closely followed by the company has exclusive links with distributors or suppliers which provide it access to distinctive materials or channels of distribution with a weighted mean of 3.53.

The result can manifest that the companies have a strong rare competitive power of resource capabilities.

TABLE 3. Assessment of Competitive Power in Terms of Rare

	RARE	Mean	Interpretation	
1	The company's human resource management (HRM) has a unique program on employees' reward system.	3.42 High		
2	Firm has exclusive access to raw materials needed in the production.	3.34	High	
3	The company demonstrates substantial protection techniques.	3.45	High	
4	The company has exclusive links with distributors or suppliers which provide it access to distinctive materials or channels of distribution.	3.53	Very High	
5	Localized production of the company is responsive and cost-effective that could augment the logistics and demand of firms' customers.	3.47	High	
6	The company's production costs allow it to gain a larger market share.	3.42	High	
7	7. Using specialized equipment and production methods, the company is able to produce goods with features that are unique.	3.58	Very High	
8	The company's procurement-focused projects help improve their sourcing capabilities.	3.50	Very High	
	COMPOSITE MEAN	3.46	High	

Table 4 presents the level of competitive power of resource capabilities in terms of realized competitive advantage. As can be seen from the result, the management, particularly the top managers, directors and CEO recognizes competent employees for promotions and continuous education, to very strong, given weighted mean of 3.55. This result implies that management do realize the importance of employee's competence and existence. There are certain firms that have a program for continuous education and human resource reward systems that recognize employees' weekly and monthly performance, resulting in a more vulnerable workforce. Another very strong items on the level of competitive power of recourse capabilities in terms of realized competitive advantage was the company's supplier relationships that is well managed to ensure the lowest possible cost, got a

weighted mean of 3.53. It is possible that rubber and plastic producers in the province are aware of the potential resource capabilities that they have in the organization.

TABLE 4. Assessment of Competitive Power in Terms of Realized Competitive Advantage

	REALIZED COMPETITIVE POWER	Mean	Interpretation
1	The company's supplier relationships are well managed to ensure the lowest possible cost.	3.53	Very High
2	The company uses procedures for resource allocation to disperse limited resources.	3.45	High
3	Research and development efforts focus on innovation to ensure a high profitability rate.	3.47	High
4	The company managers scout for new potential suppliers, investors, and other stakeholders as partners in the operations for innovations and expansions.	3.45	High
5	Managers examined the environment and rivalry within the industry before allowing the company to join a strategic group in a similar industry.	3.45	High
6	The company's diverse engagement develops innovative goods that generate revenue.	3.47	High
7	The company's employed processes for alliance brings new resources brought in by the company from outside sources.	3.37	High
8	The management, particularly the top managers, directors and CEO recognizes competent employees for promotions and continuous education.	3.55	Very High
	COMPOSITE MEAN	3.47	High

TABLE 5. Assessment of Competitive Power in Terms of Inimitable

	INIMITABLE	Mean	Interpretation
1	The company's patents and ISO accreditation has shaped the organization's brand reputation.	3.55	Very High
2	The company has a tacit knowledge that is based on its talented employees which brings a culture of excellence.	3.45	High
3	The company has historical assets and rare resources that utilizes to implement value-creating strategies.	3.47	High
4	The company's copyrights provide a technological advantage that protects key components of the business.	3.50	Very High
5	The company's distinctive capabilities in areas such as engineering result in the development of new production methods.	3.42	High
6	The business has a unique production method with a large investment in specialized machinery and technology.	3.53	Very High
7	A CEO exemplifies servant leadership concepts that put an emphasis on employee growth and engagement.	3.55	Very High
8	For a long period of time, the company has built strong relationships with its suppliers and customers on the basis of trust and common principles.	3.61	Very High
	Composite Mean	3.51	Very High

Table 5 presents how respondents have assessed the level of inimitable competitive power of resource capabilities in their respective companies showing a 3.51 composite mean indicating the very strong inimitable interpretation. As can be seen from the results, the company's-built relationship with suppliers for long period of time got the highest weighted mean of 3.61. This result implies that the managers' broad



agreement on the company's long-term, trust-based relationships with suppliers and consumers emphasizes the strategic importance of relationship building in attaining a competitive advantage. Majority of them do value the importance of their relationships with its customers (comanufacturing companies, it's suppliers and any other partner agencies. This type of action has the potential to provide an ongoing competitive advantage.

Table 6 represents an overall composite mean of 3.50 or also noted as very strong in terms of non-substitutable competitive power by the company managers of rubber and plastic manufacturing industry. The substantial consensus among managers on the non-substitutability of their resource capabilities provides important insights into the company's competitive advantage. It was discovered that companies' resource capabilities could not be easily substituted. However, company's human-centered work environment was the least and were evidenced by the lowest weighted means of 3.39 and finds it strong indicative of non-substitutable competitive power. These findings can be inferred to mean that the resource capabilities of these companies has potential for sustainable competitive advantage and these areas has a room for improve.

TABLE 6. Assessment of Competitive Power in Terms of Non-Substitutable

	NON-SUBSTITUTABLE	Mean	Interpretation
1	The company's proficiency in production enables it to provide customers with one-of-a-kind and customized solutions.	3.50	Very High
2	The company's human-centered work environment leads to authentic collaborations and shared knowledge.	3.39	High
3	The company's information technology system provides more robust information to suppliers and clients.	3.42	High
4	The business has a large capital investment to swiftly adjust to changes in customer preferences or market trends.	3.45	High
5	The business has qualified personnel who utilizes and maintains the sophisticated machinery and software.	3.47	High
6	The company has a strong brand recognition and reputation for quality and reliability.	3.62	Very High
7	The company has an investment in machinery to automate production processes and increase accuracy and consistency.	3.55	Very High
8	The business has solid relationships with partners and suppliers, including chemical suppliers and equipment developers.	3.58	Very High
	Composite Mean	3.50	Very HIgh

Table 7 presents the weighted mean and its corresponding verbal interpretation on different manufacturing companies resource capabilities. The first assessment is on the human resource capabilities among manufacturing companies.

The composite mean of 3.43 implies that the respondents have assent on the statements pertaining the manufacturing companies resource capabilities with emphasis on human resources. Additionally, the respondents believe with the highly competitiveness of that the company's thorough training for workers in areas including safety practices or legal compliance, got the highest weighted mean of 3.55 that results as very high. This shows that manufacturing companies do not just rely on the available skills of the employees. But rather,

they provide continuous training and development of the workforce for work sustainability, safety, legal and professional development.

TABLE 7. Assessment on Resource Capabilities in Terms of Human Resources

	HUMAN RESOURCES	Mean	Interpretation
1	The CEO of the company is doing a good job of managing the employees.	3.39	Strong
2	The company has intellectual and human resources with a focus on creativity and certain employees' inventiveness.	3.42	Strong
3	3. The company has an excellent employee education and past experiences relevant to the job.	3.29	Strong
4	The company has a thorough training for workers in areas including safety practices or legal compliance.	3.55	Very Strong
5	The company's human assets and intellectual capital are related to the know-how of specialized teams and workgroups.	3.47	Strong
6	The company offers both continuing training opportunities and one-time training events.	3.43	Strong
7	The business employs people with in-depth knowledge of the manufacturing sector, including trends, best practices, and cutting- edge technologies.	3.47	Strong
8	The company has specialized certificates held by employees in relation to machinery or production processes.	3.42	Strong
	Composite Mean	3.43	Strong

Table 8, the respondents are more positive on the importance of physical resources in the level of competitive advantage with a composite mean of 3.55, with an interpretation of very high which means physical resources of rubber and plastic companies was excellent. However, the company's system in place for managing waste and minimizing the impact on the environment got the highest weighted mean of 3.61 which is indicated as very high.

TABLE 8. Assessment on Resource Capabilities in Terms of Human Resources

	PHYSICAL RESOURCES	Mean	Interpretation
1	The company has a secured and pleasant working environment through the implementation of General Safety in Benchwork.	3.53	Very Strong
2	The company has well-maintained facilities.	3.54	Very Strong
3	The company encouraged and supported diversity of workspace.	3.55	Very Strong
4	The organization has a robust system for maintaining and repairing equipment.	3.58	Very Strong
5	The business has an effective inventory level that aims to reduce waste and costs.	3.55	Very Strong
6	The company fostered a culture of inspiration, expertise, and motivation.	3.47	Strong
7	The business has a standardized logistics system that guarantees prompt product delivery and necessitates defined procedures and guidelines for accepting, processing, and shipping orders.	3.55	Very Strong
8	The company has a system in place for managing waste and minimizing the impact on the environment.	3.61	Very Strong
	Composite Mean	3.55	Very Strong



This shows that manufacturing companies do not just rely on the available feature of their physical resources. But rather, they also focused on the environmental effect of their machinery and equipment. These results are very high which has agreed among managers which indicates that the company's proactive commitment to environmental stewardship is viewed as a valued asset that distinguishes it from competitors. The organization can gain various advantages by using effective waste management systems. Proper waste management procedures can assist in lowering disposal costs, optimizing resource usage, and increasing operational efficiency.

The Table 9 shows a composite mean of 3.41, where respondents are confident on the relevance of financial resources in the high level of competitive advantage. The management demonstrated that the rubber and plastic company's financial status is favorable and competitive. This can also be assumed by the larger asset size of that this company's has and the facilities and equipment they use in the day-to-day operations.

Consequently, the respondents are highly believing that the business has funds necessary to purchase new equipment and advances in technology which got the highest weighted mean of 3.58 and is very high. This shows that manufacturing companies utilizes their financial resources to the procurement of state-of-the-art equipment that can be used in their daily operations which can provide them a quality product. Furthermore, the least among the indicators is that the respondents believes that the company's capability for a cloud-based financial reporting technology that offers real-time access to financial data is high, with a weighted mean of 3.24.

TABLE 9. Assessment on Resource Capabilities in Terms of Financial Resources

	FINANCIAL RESOURCES	Mean	Interpretation	
1	The business has access to enough funding to pursue expansion opportunities.	3.42	Strong	
2	The business has a steady and reliable return on investment and liquid assets.	3.37 Strong		
3	The business has funds for initiatives for continuous research and development and innovations.	3.50	Very Strong	
4	The business has access to numerous different finance sources (e.g., bank loans, bonds, stocks, etc.).	3.53	Very Strong	
5	The business has funds necessary to purchase new equipment and advances in technology.	3.58	Very Strong	
6	The business has capability for a cloud-based financial reporting technology that offers real-time access to financial data.	3.24	Strong	
7	The business spreads its investments among many asset classes, including equities, bonds, real estate, and commodities.	3.26	Strong	
8	The company has funds for a thorough grasp of the market, the competition, and consumer needs that are used to establish pricing strategies.	3.39	Strong	
	Composite Mean	3.41	Strong	

Table 10 results revealed that the composite mean of 3.49, managers assessed their knowledge and learning capabilities as high in terms of company's resource capabilities.

Consequently, half of the indicators of these resources have been assessed by managers to as very high and the remaining was high. This can be noted that managers do believe that the companies place a high value on knowledge generation, acquisition, and dissemination, resulting in a strong knowledge and learning infrastructure within the firm but still has room for more improvement.

The result of composite mean as high, may imply that, while the business realizes the value of knowledge and learning, there is still room for development in fully utilizing these resources to gain a competitive advantage.

TABLE 10. Assessment on Resource Capabilities in Terms of Knowledge and Learning Resources

	Knowledge and Learning Reso KNOWLEDGE AND LEARNING	Mean	Interpretation
	RESOURCES		
1	The business offers employees the chance to grow and learn by supporting their career growth in education, seminars and training.	3.45	Strong
2	The company encourages staff to attend industry events and conferences both local and international to keep up with the most recent trends and advancements.	3.53	Very Strong
3	The company utilizes information gleaned from research and development projects to enhance its goods and services.	3.55	Very Strong
4	The learning and knowledge resources of our organization are in line with our strategic goals and objectives including a Strong R & D program.	3.47	Strong
5	The business has access to a wide variety of outside knowledge sources, including reports from the industry and scholarly journals.	3.42	Strong
6	The organization has adopted a knowledge management system that makes use of technology to gather and preserve industry best practices, lessons learned, and other pertinent knowledge in the form of a database.	3.47	Strong
7	The organization uses continuous improvement techniques like Kaizen, Lean, or Six Sigma to pinpoint and address knowledge gaps which enhances knowledge management and overall organizational performance.	3.55	Very Strong
8	The organization has regular employee satisfaction surveys are conducted to get input on learning and development opportunities.	3.50	Very Strong
	Composite Mean	3.49	Strong

The Table 11 presents the result of company's general organizational resource capabilities. As seen in the table, the respondents believed on the importance of this kind of resources in the level of competitive advantage with a composite mean of 3.46. According to the moderate level of agreement which resulted to high, managers are aware of the availability and significance of general organizational resources. The lack of widespread agreement, however, suggests that managers may see some restrictions, difficulties, or opportunities for improvement in using these resources to their full potential in order to gain a competitive edge.



TABLE 11. Assessment on Resource Capabilities in Terms of General Organizational Resources

	GENERAL ORGANIZATIONAL	Mean	Interpretation
	RESOURCES		
1	The company has a superior management system.	3.55	Very Strong
2	The company collaborates with others in a team, particularly specialists who have an impact on many departments of the company.	3.58	Very Strong
3	The company recognizes the value of manufacturing branding that will find it much simpler to keep customers over the long term.	3.45	Strong
4	The company has an effective communication channel that encourages teamwork and knowledge sharing.	3.39	Strong
5	The company employs competent marketers who can handle various marketing-related tasks and comprehend how they relate to one another while navigating the subtleties of a dynamic industry.	3.32	Strong
6	The company utilizes the analytics to drive decision-making, providing data-driven decision-making that can help to enhance operations and spur growth.	3.42	Strong
7	The company has an agile organizational structure that flattens the hierarchy, fosters cross-functional teams, and encourages cooperation.	3.45	Strong
8	The company has an open lines of communication, such as routine team meetings, one-on-one meetings between managers and staff, and feedback mechanisms that allows the sharing of information and ideas.	3.50	Very Strong
	Composite Mean	3.46	Strong

However, table 12 present that valuable, rare, realized competitive advantage, inimitable, and non-substitutable, got the p-values of 2.295, .653, .171, 1.060, and 1.878, respectively. The p-values presented were higher than the significance level; therefore, the profile does not affect the responses towards competitive power of resource capabilities. Moreover, this finding suggests that respondents' perceptions of competitive advantage are not significantly influenced by the asset size of manufacturing enterprises.

TABLE 12. Differences When Grouped According to Profile in Terms of Asset Size

Asset Size						
Asset Size VS	F- value	p- value	Decision on H <sub>o</sub>	Interpretation		
Valuable	2.295	0.080	Failed to Reject	No Significant Difference		
Rare	0.653	0.629	Failed to Reject	No Significant Difference		
Realized competitive advantage	0.171	0.952	Failed to Reject	No Significant Difference		
Inimitable	1.060	0.392	Failed to Reject	No Significant Difference		
Non-substitutable	1.878	0.138	Failed to Reject	No Significant Difference		

On the other hand, in Table 13 show a significant difference in responses to the competitive advantage being valuable, rare, and realized competitive advantage. These findings imply that the length of time a firm has been in operation can have impact on its competitive advantage

However, no significant difference was seen in other variables.

TABLE 13. Differences When Grouped According to Profile in Terms of Years in Operations

Years of operation VS	F- value	p-value	Decision on H <sub>o</sub>	Interpretation
Valuable	7.112	0.001	Reject	Significant Difference
Rare	2.902	0.049	Reject	Significant Difference
Realized competitive advantage	5.452	0.004	Reject	Significant Difference
Inimitable	1.410	0.257	Failed to Reject	No Significant Difference
Non- substitutable	1.343	0.277	Failed to Reject	No Significant Difference

The table 14 shows P-values were higher than the significance level, therefore, the number of employees does not affect these variables. However, the rare indicator have higher assessments than other groups. The data connotes that there is no statistically significant difference in responses to a competitive advantage when the number of employees.

The lack of significant differences in competitive advantage among different groups depending on employee number can be attributed to the complex character of competitive advantage. A firm's competitive advantage is shaped by factors such as the utilization of resources, organizational structure, strategic competencies, and industry dynamics.

TABLE 14. Differences When Grouped According to Profile in Terms of Number of Employees

			1 2		
Number of Employees VS	F- value	p- value	Decision on H <sub>o</sub>	Interpretation	
Valuable	1.800	0.166	Failed to Reject	No Significant Difference	
Rare	1.163	0.338	Failed to Reject	No Significant Difference	
Realized competitive advantage	2.109	0.117	Failed to Reject	No Significant Difference	
Inimitable	1.907	0.147	Failed to Reject	No Significant Difference	
Non- substitutable	1.505	0.231	Failed to Reject	No Significant Difference	

Table 15 presents the computed F-values and p-values show that there is no significant difference in the responses across these dimensions, resulting in a failure to reject the null hypothesis (Ho) for each category. However, valuable indicator have higher assessments than other groups, with p-value of 0.464.

These findings imply that the specific organizational structure examined in this study may not be a crucial differentiating factor in establishing a competitive advantage in manufacturing enterprises. It is crucial to highlight, however, that the absence of relevance does not indicate that organizational structure is unimportant. Instead, it shows that other factors such as resource allocation, strategic decision-making, and human capital management may play a larger role in generating and maintaining competitive advantages.



TABLE 15. Differences When Grouped According to Profile in Terms of Organizational Structure

Organizational Structure VS	F-value	p- value	Decision on H <sub>o</sub>	Interpretation
Valuable	0.786	0.464	Failed to Reject	No Significant Difference
Rare	1.157	0.326	Failed to Reject	No Significant Difference
Realized competitive advantage	1.124	0.336	Failed to Reject	No Significant Difference
Inimitable	1.613	0.214	Failed to Reject	No Significant Difference
Non- substitutable	1.822	0.177	Failed to Reject	No Significant Difference

Table 16 show no significant difference among the various forms of ownership. Each category's computed mean values f-values and p-values, all fell inside the range that failed to reject the null hypothesis. This implies that the type of ownership has little bearing on the competitive advantage of manufacturing firms in Batangas Province.

Surprisingly, the variable inimitable has greater assessments among the various ownership groups. This implies that organizations with certain ownership structures may have resources or competencies that are particularly difficult for competitors to reproduce or imitate. This conclusion shows that the inimitability of resources may be related to the type of a company ownership.

TABLE 16. Differences When Grouped According to Profile in Terms of Business Ownership

Form of Business Ownership VS	F- value	p-value	Decision on H <sub>o</sub>	Interpretation
Valuable/value	1.927	0.129	Failed to Reject	No Significant Difference
Rare/unique	2.059	0.109	Failed to Reject	No Significant Difference
Realized competitive advantage	1.123	0.363	Failed to Reject	No Significant Difference
Inimitable	1.026	0.408	Failed to Reject	No Significant Difference
Non- substitutable	0.984	0.430	Failed to Reject	No Significant Difference

TABLE 17. Differences of Resource Capabilities When Grouped According to Profile in Terms of Asset Size

Asset Size VS	F- value	p-value	Decision on H <sub>o</sub>	Interpretation
Human resources	1.547	0.212	Failed to Reject	No Significant Difference
Physical Resources	0.490	0.743	Failed to Reject	No Significant Difference
Financial Resources	1.171	0.341	Failed to Reject	No Significant Difference
Knowledge and Learning Resources	1.327	0.280	Failed to Reject	No Significant Difference
General Organizational Resources	0.748	0.567	Failed to Reject	No Significant Difference

On the other hand, table 17 showed the differences of manufacturing resource capabilities and profile when grouped according to asset size. As shown, p-values presented were exceeded .05, means there is no substantial difference in

responses to manufacturing companies' resource capabilities based on asset size. The lack of a significant difference in resource capabilities of manufacturing companies when grouped by asset size suggests that asset size alone may not be a determining factor in resource production and utilization.

Table 18 showed a review of the data for resource capabilities that focuses on the years in operation, there are differences in the responses and when it comes to physical resource capability, there is a significant differences. However, other variables has no significant difference when grouped according to years in operations.

TABLE 18. Differences of Resource Capabilities When Grouped According to Profile in Terms of Years in Operations

Years in Operation VS	F- value	p-value	Decision on H <sub>o</sub>	Interpretation
Human resources	1.013	0.399	Failed to Reject	No Significant Difference
Physical Resources	5.845	0.002	Reject	Significant Difference
Financial Resources	2.383	0.086	Failed to Reject	No Significant Difference
Knowledge and Learning Resources	1.541	0.222	Failed to Reject	No Significant Difference
General Organizational Resources	0.924	0.439	Failed to Reject	No Significant Difference

The table 19 shows the rubber and plastic companies differences between their profile in terms of number of employees. However, it is shown in this table, that there is no significant difference in the responses of manufacturing firms when it comes to the various resource categories.

To summarize, the number of employees does not appear to be a determining factor in manufacturing organizations' resource capabilities. The data show that manufacturing firms have persistent resource strengths, as evidenced by high ratings in human, financial, knowledge and learning, and general organizational resources.

TABLE 19. Differences of Resource Capabilities When Grouped According to Profile in Terms of Years in Operations

Number of Employees VS	F- valu e	p- value	Decision on H <sub>o</sub>	Interpretation
Human resources	1.74 7	0.176	Failed to Reject	No Significant Difference
Physical Resources	2.09	0.119	Failed to Reject	No Significant Difference
Financial Resources	2.41	0.084	Failed to Reject	No Significant Difference
Knowledge and Learning Resources	2.07	0.121	Failed to Reject	No Significant Difference
General Organizational Resources	1.36 3	0.271	Failed to Reject	No Significant Difference

Moreover, table 20 showed the result of differences between manufacturing resource capabilities and their profile in terms of organizational structure they are utilizing in their respective companies. The p-values were used to determine whether or not to reject the null hypothesis (Ho). The p-values in all cases exceeded the significance level of 0.05, implying that there was no significant difference.



Overall, the lack of significant differences in resource capabilities among manufacturing companies classified by organizational resources implies that these firms know and prioritize the need of establishing strong resource skills across multiple dimensions. The findings highlight the importance of an effective resource management in order to maintain a competitive advantage in today's volatile business environment.

TABLE 20. Differences of Resource Capabilities When Grouped According to Profile in Terms of Organizational Structure

			Organizationa  Decision	
Organizational Structure VS	F-value	p- value	on H <sub>o</sub>	Interpretation
Human resources	0.765	0.473	Failed to Reject	No Significant Difference
Physical Resources	1.161	0.325	Failed to Reject	No Significant Difference
Financial Resources	2.104	0.137	Failed to Reject	No Significant Difference
Knowledge and Learning Resources	0.758	0.476	Failed to Reject	No Significant Difference
General Organizationa 1 Resources	0.858	0.433	Failed to Reject	No Significant Difference

On the other hand, table 21 shows that the data obtained, which focuses on the form of business ownership was clear that there are no statistically significant differences in the responses pertaining to the resource capabilities of manufacturing companies when categorized based on the form of business ownership.

Overall, the lack of significant differences in resource capabilities among manufacturing companies categorized by the form of business ownership shows that shared industry standards and best practices, rather than ownership structure, influence resource management practices.

TABLE 21. Differences of Resource Capabilities When Grouped According to Profile in Terms of Business Ownership

Form of Business Ownership VS	F- valu e	p- valu e	Decisi on on H <sub>0</sub>	Interpretation
Human	0.69 7	0.59	Failed	No Significant Difference
Physical	2.33	0.07 6	Failed	No Significant Difference
Financial	2.56 5	0.05 6	Failed	No Significant Difference
Knowledge and Learning	1.48	0.22 9	Failed	No Significant Difference
General	1.5	0.2	Fail	No Significant

Table 22 presents the results of the multiple linear regression analysis were interesting. A regression coefficient (B) of 0.938 with a standard error of 0.407 and a t-value of 2.305 suggested that the constant term had a significant positive effect. The null hypothesis was rejected due to the p-value of 0.028, indicating an important relationship between the constant term and competitive advantage. This shows that valuable has significant beneficial effects on the competitive advantage of the firm. The study discovered a substantial effect of valuable indicators on competitive advantage,

demonstrating that the organization's overall worth plays a critical part in its capability to outperform competitors. This implies that the rubber and plastic companies has distinct value propositions, superior products or services, or strong customer and supplier relationships that are more likely to achieve a competitive advantage.

TABLE 22. Effects of Resource Capabilities on Competitive Advantage in

Valuable	В	Std. Error	t- value	p- value	Interpretation
Constant	0.938	0.407	2.305	0.028	Significant
Human Resources	0.247	0.148	1.664	0.106	No Significant Effect
Physical Resources	0.241	0.137	1.757	0.088	No Significant Effect
Financial Resources	0.317	0.171	1.859	0.072	No Significant Effect
Knowledge and Learning Resources	0.060	0.137	0.438	0.664	No Significant Effect
General Organizational Resources	0.105	0.168	0.624	0.537	No Significant Effect

The table 23 offered some fascinating insights into the impact of rare resource capabilities on competitive advantage. Furthermore, statistically significant findings were obtained for the variable rare in the resource capabilities of physical and financial resources. The substantial coefficients and rejection of the null hypothesis in the regression analysis imply that both factors have a beneficial impact on competitive advantage. The variable physical resources has a significant beneficial effect on competitive advantage. The p-value of .001 imply that increasing the uniqueness or scarcity of physical resources results in a higher level of competitive advantage. This study implies that indeed this companies has distinct physical resources, such as specialized equipment, advanced technology, or exclusive infrastructure, are better positioned to gain a competitive advantage in the market.

In the same way, variable financial resources have a strong beneficial impact on competitive advantage. With a p-value of .001, it is clear that firms with ample and strategically distributed financial resources are more likely to gain a competitive edge. This finding implies that having enough capital, good financial management, and investing in critical areas can help a company beat competitors and achieve long-term success. However, human resources, knowledge and learning resources, and general organizational resources did not have a substantial effect on competitive advantage. These findings show that the presence or absence of these resources may not significantly contribute to a firm's competitive advantage.

Overall, these findings emphasize the significance of exploiting distinctive and rare resources, such as physical and financial resources, to boost a firm's competitive advantage. To separate themselves from competitors and create a lasting advantages in the marketplace, organizations should prioritize the identification, acquisition, and successful exploitation of such resources.



TABLE 23. Effects of Resource Capabilities on Competitive Advantage in Terms of Rare

Rare	В	Std.	t-	p-	Interpretation
		Error	value	value	-
Constant	0.375	0.369	1.018	0.316	Not Significant
<b>Human Resources</b>	0.184	0.135	1.366	0.181	No Significant Effect
Physical Resources	0.436	0.124	3.503	0.001	Significant Effect
Financial Resources	0.553	0.155	3.581	0.001	Significant Effect
Knowledge and Learning Resources	0.166	0.124	1.342	0.189	No Significant Effect
General Organizational Resources	0.114	0.152	0.749	0.459	No Significant Effect

On the other hand, table 24 offered some intriguing data. The constant term had no significant effect on realized competitive advantage, indicating that it has no major impact on the outcome. However, when individual resource capabilities were examined, it was discovered that both human and physical resources, having p-values of .031 and .011, have a considerable positive effect.

This means that firms with a competent and effective employees, as well as actual physical assets, are more likely to attain a market advantage. Therefore, rubber and plastic companies employees capabilities has a significant contribution to the overall competitive advantage of the company, this might be because of the continuous training and support on education that was provided to them and by a comprehensive management system in place.

Consequently, financial resources, knowledge and learning resources, and general organizational resources, on the other hand, had no meaningful impact on realized competitive advantage. These findings imply that, while financial resources, knowledge and learning resources, and general organizational resources are vital for overall business operations, they may not contribute directly to acquiring a competitive edge in the market.

TABLE 24. Effects of Resource Capabilities on Competitive Advantage in Terms of Realized Competitive Advantage

	ns of Rea		npetitive	Advantag	ge
Realized	В	Std.	t-	p-	Interpretation
			value	value	
Constant	0.197	0.405	0.487	0.630	Not Significant
Human Resources	0.334	0.148	2.258	0.031	Significant Effect
Physical Resources	0.369	0.137	2.700	0.011	Significant Effect
Financial Resources	0.162	0.170	0.953	0.348	No Significant Effect
Knowledge and Learning Resources	0.146	0.136	1.074	0.291	No Significant Effect
General Organizational Resources	0.043	0.167	0.256	0.800	No Significant Effect

Table 25 shows that the constant term for inimitable was not determined to be statistically significant, meaning that it has no significant impact on total competitive advantage. However, when the specific resource capabilities are

examined, fascinating patterns emerge. To begin, human resources had a considerable positive effect on competitive advantage. This means that when human resources have characteristics that are difficult to imitate, they contribute considerably to the organization's competitive advantage. In comparison, other resource capabilities (physical resources, financial resources, knowledge, and learning resources, and general organizational resources) had no significant effect.

TABLE 25. Effects of Resource Capabilities on Competitive Advantage in Terms of Non-Substitutable

Inimitable	В	Std.	t-	p-	Interpretation
		Error	value	value	
Constant	0.469	0.440	1.067	0.294	Not Significant
Human Resources	0.511	0.160	3.185	0.003	Significant Effect
Physical Resources	0.155	0.148	1.046	0.304	No Significant Effect
Financial Resources	0.368	0.184	1.997	0.054	No Significant Effect
Knowledge and Learning Resources	0.131	0.148	0.889	0.380	No Significant Effect
General Organizational Resources	0.017	0.182	0.095	0.925	No Significant Effect

TABLE 26. Effects of Resource Capabilities on Competitive Advantage in Terms of Non-Substitutable

Non-Substitutable	В	Std.	t- value	p- value	Interpretation
Constant	0.239	0.311	0.767	0.448	Not Significant
Human Resources	0.489	0.113	4.311	< 0.001	Significant Effect
Physical Resources	0.135	0.105	1.288	0.207	No Significant Effect
Financial Resources	0.266	0.130	2.038	0.050	No Significant Effect
Knowledge and Learning Resources	0.179	0.104	1.715	0.096	No Significant Effect
General Organizational Resources	0.124	0.128	0.967	0.341	No Significant Effect

Consequently, table 25 table shows, analysis concentrated on the possibility of gaining a competitive advantage through the utilization of non-substitutable resources. According to the findings, human resources and financial resources have a considerable positive effect on competitive advantage, however physical resources, knowledge and learning resources, and general organizational resources do not. The significant coefficient (B = 0.489, p 0.001) and high t-value (t = 4.311) indicate that human resources have a strong positive effect on competitive advantage. This implies organizations in the rubber and plastic manufacturing industry, understand the value of investing in human resources. Financial resources, on the other hand, had a substantial positive effect on competitive advantage (B = 0.266, p = 0.050). This finding implies that rubber and plastic manufacturing companies has an adequate financial resource that allows organizations to invests.

Proposed Sustainable Development Program

The proposed sustainable development program is intended to gain sustainable competitive advantage among

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rubber and plastic manufacturing companies in Batangas Province. It is composed of areas of concern, objectives, strategies/activities, staff and unit involved, expected outcome, and sustainable competitive advantage. It intends to achieve the competitive advantage and its sustainability to rubber and plastic manufacturing companies.

The motivation for this sustainable development program stems from the awareness that the future success and viability of Batangas province's rubber and plastic manufacturing industry is dependent on the ability to balance economic growth with environmental stewardship and social well-being. Companies can establish a sustainable and resilient business model that not only meets legal standards but also corresponds with global sustainability goals and boosts their overall competitiveness in the industry by implementing this program.

## IV. CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn.

- 1. In the investigation of manufacturing businesses in Batangas, a majority of companies had assets valued at 500,000,001 and above, have been in existence for six to ten years and eleven months and having 101-500 employees with centralized organizational structure which is owned by foreign investors.
- 2. Managers assessed the competitive power of resource capabilities positively, in valuable, highlighting the significance of investing in employee training and development initiatives; inimitable emphasizing long-standing relationships with suppliers; non-substitutable recognizing the company's strong brand reputation being strongly agreed while rare citing the utilization of specialist equipment and production procedures as major drivers; and realized competitive advantage where the recognition of skilled employees was a significant element being agreed.
- 3. The assessment of managers as to competitive power is a positive evaluation, human resources with a focus on extensive worker training; financial resources which emphasize the availability of funding for equipment and technological improvements; knowledge and learning resources emphasizing the use of R&D discoveries and continuous improvement strategies; general organizational resources emphasizing the necessity of teamwork referred to as agree while physical resources strongly agreed which demonstrate the effectiveness of waste management systems.
- 4. In the assessment of differences between competitive advantage and responses when grouped according to profile: the asset size, number of employees, organizational structure, and the form of ownership, no significant difference was observed, suggesting that asset size, number of employees, different organizational structures, and form of ownership does not have a substantial impact on perceptions of competitive power in terms of resource capabilities. However, significant differences were found based on years in operation for the variables valuable, rare, and realized competitive advantage, demonstrating that the period of operation affects the perception of competitive advantage in these specific dimensions.

- 5. The assessment of differences on organizational resources when grouped according to profile showed that, asset size, number of employees, organizational structure, and the form of ownership has no significant differences in responses to resource capabilities. However, when profiles were grouped by years in operation, significant differences in responses related to physical resource capability were discovered. However, no significant differences in other factors were identified, demonstrating that the duration of operation affects the perception of physical resource capability but has no effect on other variables.
- 6. In the assessment of the effect of resource capabilities to competitive advantage, it revealed that valuable had a significant positive effect on competitive advantage while other resources when examined using a valuable showed no effect to competitive advantage. However, on rare the physical and financial resources, on realized competitive advantage the human and physical resources; on inimitable the human resources; and on non-substitutable the human and financial resources, all has a significant effect on the competitive advantage.
- 7. The recommended sustainable development program is critical because it will help manufacturing companies improve their competitive advantage, secure long-term profitability, and effectively navigate the challenges of a dynamic business landscape. Companies that adopt this approach can strategically use their resources, stimulate innovation, and position themselves as market leaders.

# V. RECOMMENDATIONS

Based on the results of the study, the following are recommended for the rubber and plastic manufacturing industry:

- 1.Optimize asset management strategies for companies with high asset values and investigate alternative organizational structures for employee empowerment, and foster partnerships between domestic and foreign-owned enterprises.
- 2.Management should prioritize investment in employee training to enhance the valuable aspects of resource capabilities, foster long-term relationships with suppliers to leverage the inimitable characteristics of the company's resources, and strengthen the company's brand recognition and reputation for quality to capitalize on the competitive advantage of resource capabilities.
- 3. To boost their competitiveness, managers and top management position should be mindful about their resources, look at its potential and be aware on how to properly utilize it.
- 4. Focus on leveraging their resource capabilities to generate a competitive advantage and examine the impact of years in business.
- 5. Prioritize the development of physical resources to improve resource usage and align with the changing needs of their respective industries.
- 6. Focus on maximizing the use of valuable resources, especially by developing and utilizing physical and financial resources, giving priority to improving human resources for both the realization of competitive advantages and inimitable qualities, and understanding the potential of specific resource



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capabilities, such as human and financial resources, in terms of non-substitutability.

- 7. The proposed sustainable development program be used to effectively increase their competitive advantage and guarantee long-term success.
- 8. Further research would concentrate on specific resource capabilities and investigate the impact of technological advancements and digital transformation on the resource capabilities and competitive advantage.

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