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Strategies Aircraft Manufacturing Organizational Leaders Use for Proper Material Pricing

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
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Abstract

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MS, University of Texas at Arlington, 2007

BS, National Chang Kung University, 2001

Doctoral Study Submitted in Partial Fulfillment

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Doctor of Business Administration

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Abstract

The lack of proper material pricing strategies can challenge manufacturers' profitability and growth. Aircraft manufacturing leaders are concerned because understanding and developing material pricing strategies are essential to increasing profitability. Grounded in price theory, the purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. The participants were four aircraft manufacturing organizational leaders from a successful aircraft manufacturing business located in the state of Georgia. Data were gathered from semistructured interviews and document reviews and analyzed using Yin's five step approach. The four themes that emerged were the impact of unplanned events, supplier manufacturing capability and performance, sourcing selection and regulation, and supplier partnership and long-term agreement. A key recommendation is for aircraft manufacturing organizational leaders to transform their supply chain management approaches to include a team to quickly respond to unplanned events, vendor management strategies, and a systematic approach to selecting vendors. Implications for positive social change include the potential for business growth that increases revenues to support community transformation, sustainability, and volunteerism through active partnerships with different local charity programs, employees, and their families.

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Dedication

This doctoral study is dedicated to my wonderful bride who provided me with steadfast support, encouragement, and humor at each stage of my doctoral journey. Without her, I would have never accomplished this dream. I also dedicate this work to my children. They provided me with a constant stream of encouragement and energy-instilling hugs when I sorely needed both, even they had no idea what Daddy was doing. I wish I have taught them an example that learning, and growth are possible at any age.

Finally, I dedicate this study to the memory of my parents, my role model for how to live a life of endless learning, passion, humility, and integrity. I can only hope that what I have accomplished personally, professionally, and academically is an honor to the gifts they gave me and the values they instilled in me.

Acknowledgments

Completion would not have been possible without the generous and unwavering support from my doctoral committee. First and foremost, to express my deepest gratitude to my committee chair, Dr. Wentz, for her wisdom, encouragement, humor, and friendship. I wish to thank Dr. Stokes and Dr. Knight for their service on my committee and for giving so unselfishly of their time, knowledge, and motivation at every step of my doctoral study journey.

My heartfelt special thanks to fantastic colleagues in my career who were willing to share their many years' professional experiences, engineering knowledge, and thoughts during my journey. Without them, I would not have been able to reach this milestone.

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Section 1: Foundation of the Study

According to Federal Aviation Administration Aerospace Forecast Reach and Markets (2019), the aerostructures market was expected to grow from $52.17 billion in 2016 to $75.97 billion by 2022, a compound annual growth rate of 6.5%. This growth was mainly because of the rise in aircraft deliveries in the general aviation and commercial sectors (De Toni et al., 2022). Liozu and Hinterhuber (2021) used pricing assessments and systems to respond quickly to market changes, competitors' pricing tactics, effective pricing products/services, and monitoring competitors' price and price change. With proper material pricing strategies, aircraft construction manufacturers can set target procurement pricing and business budget planning in terms of a forecast margin percentage. Therefore, business organic growth and profit goals align with performance goals.

Background of the Problem

Business leaders use material pricing strategies to improve earnings margins, increase the security of supply, and improve supply chain operations (Kohli & Habibi, 2022). Even under the best of business scenarios, material pricing differentiation represents near-constant challenges for any kind of manufacturers worldwide. Understanding and designing material pricing strategies is essential to achieve cost reductions (Porter, 1998). Procuring proper material pricing is one of several key factors to maintaining business operations and maximizing revenue not only to enhance business competition in a global marketplace but also enable to the growth of market share. Xu et al. (2021) found that when business leaders procure material in the

right way with solid strategies, they can achieve operational effectiveness and profitable maximization. With strong alliance linkages with suppliers, business leaders can negotiable better price terms and deliver merchandise to customers through operational effectiveness. To ensure and maintain optimal material pricing strategies with suppliers, business leaders should be fully aware of a wide range of pricing factors which influence the total cost of a product.

Problem and Purpose

The lack of proper material pricing strategies challenges manufacturers' profitability growth (Calik, 2020). Material pricing discrepancies in the competitive marketplace create tension between aircraft manufacturers and suppliers, which has led to a decrease of 30-40% in general aviation business profit margin (Coster et al., 2019). The general business problem was that aircraft manufacturing organizational leaders experience pricing discrepancies because of inconsistent material cost appraising estimation. The specific business problem was that some aircraft manufacturing organizational leaders lack strategies for proper material pricing estimates.

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. I selected four aircraft manufacturing organizational leaders from a successful aircraft manufacturing business located in the state of Georgia. The implications for positive social change included the potential for growth that increases profits to support community investments, sustainability, and volunteerism. Community support may come

through active partnerships with different local charity programs, employees, and their families to create a positive social transformation in the communities.

Population and Sampling

I selected my participants through purposeful sampling in my single case study. This study sample included four leaders located in the state of Georgia with successful experiences in using proper material pricing strategies. I selected participants with more than 10 years of experience in a leadership role. Each participant must have had knowledge in the aviation industry and experience working in at least one of four areas: supply chain, sourcing, purchasing, and manufacturing. Data sources included semistructured interviews that were held virtually in a nonwork-related location of the interviewee's preference and document review.

Nature of the Study

Yin (2018) indicated three research methods exist: qualitative, quantitative, and mixed. Researchers use the qualitative method to identify and understand activities or events related to a chosen phenomenon (Mahoney & Goertz, 2006). I used a qualitative study to identify successful material pricing strategies through each participant's experiences. In contrast to a qualitative study, Venkatesh et al. (2013) explained that quantitative research studies include measurable variables with a hypothesis, to examine the relationships among variables. I did not consider a quantitative study because I did not examine the significance of the relationships among variables. Venkatesh et al. also stated that mixed-method research methodology includes both qualitative and quantitative methods. To explore strategies for proper material pricing, I did not test

hypotheses about variables' relationships or groups' differences, which would have been a required part of the quantitative portion of a mixed-method study.

I used a qualitative single case study, which was a proper research design for this study because interview participants could provide relevant information by answering research questions. Yin (2018) stated that a multiple case design may prove more substantial than a single case design because scholars are able to investigate similarities and differences among cases. However, I did not use a multiple case study design because a single case study design allowed me to investigate one organization in depth and in real-life context.

Shen (2018) indicated that when using an ethnographic design, researchers must engage themselves in the participants' environment to understand the goals, cultures, challenges, motivations, and themes that emerge. However, ethnographic design was not appropriate in this study because I did not seek to explore in any live cultural environments or to report nonbusiness stories involving individuals or groups. Shen further noted that a narrative design usually includes one or two individuals' personal stories related to a phenomenon. However, the four leaders participated in the interview process of this research study discussed strategies for proper material pricing. Consequently, a narrative design was not appropriate for addressing the purpose of my study.

Research Question

What strategies do aircraft manufacturing organizational leaders use for proper material pricing?

Interview Questions

1. How do you assess the effectiveness of business strategies for proper material pricing?
2. What strategies are you using to achieve proper material pricing?
3. What processes did you find worked best to achieve proper implementation of your material pricing strategies?
4. How, if at all, did your organization revise its material pricing strategies?
5. What additional information, if any, can you provide about the successful strategies your organization has developed and implemented for proper material pricing strategies?
6. What additional information, if any, can you provide about the successful strategies your organization has developed and implemented for proper material pricing strategies?

Conceptual Framework

The price theory was the conceptual framework for the study. Price theory was introduced by Friedman in 1962. Price theory aligns with the allocation of resources among different uses, and the price of one item relative to another. According to Friedman (1962), four key sectors affect price, which are the (a) government, (b) household, (c) nonprofit institutions, and (d) market. Business leaders negotiate raw material price acceptance conditions with suppliers based on where material resources remain in need the most (Friedman, 1962). Through understanding the major material pricing mechanisms, business leaders can develop and implement pricing strategies

further to increase profits across industries. Based on the alignment with price theory sector, the value of this research may help business leaders to achieve cost-effective opportunities and improve profitability because leaders are able to understand how to appropriately set price strategies.

Operational Definitions

The following were key terms and definitions used in this study.

Behavior based pricing (BBP): A strategy to collect customer's shopping behavior data (online shopping history, purchasing records, etc.), analyze it statistically, and then predict or offer the best deal to future customers (Liu et al., 2019).

Business to business (B2B): Any commercially conducted transaction between companies (Indounas, 2020).

Corporate social responsibility: Actions taken by business to demonstrate accountability in all aspects of society, environment commitment, and humanity (Singh et al., 2020).

Small and medium enterprise (SME): Business that maintain revenues, assets, or a number of employees below certain limit (e.g., revenue less than $10 million dollars annually; Achterberg et al., 2018).

Assumptions, Limitations, and Delimitations

Assumptions

Trabelsi and Matsukawa (2020) defined assumptions as researchers seeking adequate evidence to support hypotheses which scholars assume to be true but cannot be verified. There were several key assumptions in my study. The first assumption was

aircraft manufacturing organizational leaders have strategies for proper material pricing estimates. The second assumption was that interviewees would provide accurate interview answers. The third assumption was that aviation businesses have similar proper material pricing strategies.

Limitations

Indounas (2022) indicated that limitations are potential weaknesses that are beyond the researcher's control. The limitations of my study were: (a) I have limited research experience which may increase potential bias, (b) my interview questions may not capture all information, and (c) participants' personal viewpoints may be biased.

Delimitations

Liu et al. (2022) defined delimitations as the research boundaries of the study. In my research, I explored strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. The first delimitation was that the aircraft manufacturer was located in the state of Georgia. The second delimitation was a limited sample size. I interviewed four leaders.

Significance of the Study

Contribution to Business Practice

The findings of this study may help aircraft manufacturing organizational leaders identify proper material pricing strategies. Early pricing visibility strategy could fill gaps between manufacturers and suppliers before aerostructures material pricing becomes difficult to improve (Hamamura, 2022). Findings of the study may allow aircraft manufacturing organizational leaders to change the way the aviation business leaders

consider material pricing strategies and realize cost estimates process improvements for improving pricing and profitability.

Implications for Social Change

The implications for positive social change include an increase in progressive business profit growth that could lead to leaders making contributions to local communities through enabling organization to increase contributions for effecting humanitarian development. By collaborating with several social facilities and welfare programs, business leaders could increase support to communities through both financial and voluntary contributions.

A Review of the Professional and Academic Literature

Introduction

The purpose of a literature review is to provide a systematic and logical review of the appropriate literature and utilize the literature to provide insights into how these topics have been approached and theorized (Inouye & McAlpine, 2019). This literature review covers the topic of pricing strategy using the conceptual framework of price theory. Through the Walden University library, I used peer-reviewed literature from ProQuest, Emerald Insight, EBSCOHost, Research Gate, Google Scholar, and SAGE Primer to conduct my investigation. I focused on peer-reviewed articles published from 2019 to 2023 and used the following key terms: *pricing*, *procurement*, *supply chain, cost benefits, business to business, supplier management, sourcing*, *inventory, aerospace, airliner, aerostructure* and *general aviation*. I used the Ulrich database to verify peer-reviewed articles.

Table 1

Peer-Reviewed Literature Sources

	Sources Prior to 2019	Sources After 2018	Total No. of Sources	Percentage of Sources
Peer-Reviewed Articles	67	81	148	94.3%
Books & Gov. Publications	8	1	9	6%
Total Sources by Year	75	82	157	100%

Literature reviews provide a deep understanding of the conceptual relationships from existing peer-reviewed studies that support a researcher's topics (Inouye & McAlpine, 2019). Literature reviews are crucial for bringing fragmented forms of learning together, understanding typical cumulative evidence in a field of inquiry, and finding gaps in the existing knowledge on a topic. A thorough literature review informs a scholar's thought-process by creating a coherent, rigorous, and relevant review of articles (Bodolica & Spraggon, 2018). In my study, Friedman's (1962) price theory was used as the conceptual framework, and the four major sectors that impact this model of pricing are analyzed in the first section of the literature review. Then, I discuss how price theory is applied to business to business, including supplier selection, sourcing risk and allocation, supplier management/material availability, sustaining the supply chain, and joint ventures. Next, I discuss supporting and contrasting theories related to price theory: product theory and intrinsic theory are supporting theories, and subjective theory and

exchange value theory are contrasting theories. Finally, I present different types of pricing strategies that relate to price theory.

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. During my literature search, I searched for research on aerostructure component's pricing strategies. Information is limited because material pricing availability is highly confidential in the aviation industry. As such, I include a discussion of price theory and pricing strategies as it relates to the aviation industry as well as other industries that closely aligned with commercial aviation materials (e.g., automotive industry, airliner industry, aerostructure sub-tier business). I included 157 sources, of which 94.3% were peer-reviewed and 52.2% were published from 2019 to 2023 (see Table 1).

Price Theory Framework

Price theory was the conceptual framework for my study. In price theory, the allocation of business resources across different uses is explained, as is the price of one item relative to another (Friedman, 1962). The theory was introduced by Friedman in 1962. The term *pricing strategy* encompasses all the methods that business leaders use to determine how much to charge for a product or service. The following four key sectors affect price: (a) government, (b) household, (c) nonprofit institutions, and (d) market. Business leaders negotiate raw material price acceptance conditions with suppliers based on the greatest need of material resources (Friedman, 1962). Based on the alignment with price theory sector, leaders can determine how to appropriately set price strategies.

Government Sector Affecting Pricing

The government sector is the first sector that affects price. Given the extremely large capital-intensive investment that is required to complete infrastructure projects, government projects require an appropriate risk and price assessment to ensure success. Government regulations highly impact construction project implementation successes, from development to execution (Taghizadeh et al., 2022). To lower raw material commodity price fluctuation risk, government departments should sign contracts based on the law to prohibit price gouging related to any economic circumstances or material shortages (Vahdatmanesh & Firouzi, 2018). Business purchasing organizations can work with the government collaboratively to enhance business performance and future growth (Bhat, 2019).

Small- and medium-size businesses in developing countries are commonly involved with government contracting, which can be a challenge because of the regulations and policies in place. In a survey with 38 firms, small- and medium-size businesses that integrated operation systems into enterprise resourcing management systems, experienced less faulty data, provided documents more easily, and had more easily traceable records (Hummel et al., 2019). Similarly, Singh at al. (2020) found that a better operation integration system was able to help India's small- and medium-size businesses to gain more government contracts. During government contract audit processes, business leaders were easier to work with because internal integration systems provided transparency and traceability.

Household Sector Affecting Pricing

In price theory, the household sector is the second sector that impacts pricing. Customers use online stores or other price comparison resources as references to attempt to negotiate better price deals while shopping at physical stores. According to customer behavior research, product quality, affordability, and delivery convenience are factors used to determine price, regardless of whether the product is sold online or in a physical store (Carlson & Compeau, 2018). Based on this research, business leaders should be aware of customers' thought processes in making purchasing decisions, so they can set pricing accordingly. Retailers constantly experience competition with manufacturers, which may impact business-to-business partnerships. The pricing model between customers and businesses themselves can influence business performance, profitability, and long-term relationship (Coster et al., 2019). Patrucco et al. (2022) found that retailers and manufacturers have their own pricing determination challenges which lead to different strategies for determining innovative price models that can affect customer behaviors. How business strategies are determined can consider many stakeholders, including competitors, suppliers, customers, and employees.

Merchandise prices are highly related to customers' quality expectations, and therefore influence customers' purchasing behaviors (Carlson & Compeau, 2018). When comparing pricing in certain industries, final product price can be determined by using original overall costs plus expected profit (Guerreiro & Amaral, 2018). Factors such as brand reputation and popularity are affected by customer purchasing determination, especially when needed or wanted goods are involved in the decision (Tripathi & Pandey,

2018). Business leaders consider the market overall to determine the best practices of pricing strategies.

Nonprofit Organization Sector Affecting Pricing

In price theory, nonprofit organizations are the third sector affecting price. During the supplier selection process, nonprofit organizations' procurement teams negotiate with suppliers to ensure quality and delivery. For example, school libraries that are seeking service providers can apply assessment metrics to determine services needed, request or analyze providers, and select the best service offer (Macy, 2018). Macy (2018) also provided insight into how assessment metrics help librarians create bargaining power during the selection process. Price is very sensitive for nonprofit organizations and is an opportunity for business leaders to explore different approaches to pricing and seek pricing best practice strategies.

More consumers are willing to support environmentally friendly products from nonprofit organizations, thereby reducing the impact on the global ecosystem. When business leaders sell products to customers, price is a consequence of goods created from raw material and made into finished products (Hinterhuber & Quancard, 2019). Current social media can exert a significant influence on businesses and green purchasers' decision-making processes (Taghizadeh et al., 2022). Some business critics who evaluate business performance outcomes include the business's environmental impact and social responsibility.

Market Sector Affecting Pricing

In price theory, the market sector is the fourth sector impacting price. Many business leaders consider customer orientation pricing approaches to respond back from market feedback and determine pricing strategies in order to increase business profitability. A market-response-based decision-making process can help businesses obtain real-time dynamic information and decide the best pricing for products (Thrane et al., 2019). Using survey data from 193 businesses, Indounas (2022) revealed that different pricing strategies attract customers of different levels of purchasing abilities. Proper product pricing determination is a challenging task for business leadership teams because pricing impacts business profitability.

Factors of success for businesses include quick response to customers, adequate business planning, reliable quality of products, and operational flexibility (Adesi et al., 2018; Smolarski et al., 2019). These key variables of success that influence business pricing positions also impact the quality of service provided to customers (Adesi et al., 2018). Between economic uncertainty and business performance, business leaders may transfer pricing mechanisms into the financial systems to have more operational flexibility because of traceability and transparency (Smolarski et al., 2019).

Many business leaders struggle to maintain performance maximization between market competition and social responsibility. Achterberg et al. (2018) concluded small- and medium-size enterprises rely on external pricing sourcing information to decide flexible product pricing strategies, which increase business competition and performance. Even when taking into consideration market complexities and competitiveness, if small-

and medium-size businesses position their products correctly, customers will still demonstrate willingness to pay and ultimately buy products (Achterberg et al., 2018). Mohammadzadeh et al. (2019) concluded that small- and medium-size businesses adjust pricing strategies accordingly to respond to the speed of market changes and the variety of customer preferences.

Price Theory Applied to Business

Price theory has been applied extensively to business, including aviation, automotive, and manufacturing sub-tier business. For example, U.S. aviation business leaders need to reduce costly material prices and enhance cash flow improvement. Through understanding the major pricing mechanisms, business leaders can develop and implement pricing strategies that further increase profits across industries. Aviation manufacturers are subject to many material pricing discrepancies during material procurement and negotiation with suppliers (Sinha & Adhikari, 2017). Sinha and Adhikari (2017) found aerostructure supplier business sizes were different and used different pricing calculations to determine price because profit margins were set up differently. With proper material pricing strategies, aircraft manufacturers can set target procurement pricing and business budget planning in terms of a profit forecast margin percentage.

Material pricing is one of many critical success factors for the aviation business. However, according to Nagle et al. (2010), a large proportion of U.S. manufacturers still rely on old cost and pricing schemes without proper pricing strategies. Changing pricing formulas is an inevitable foundation for profit improvement. In particular, businesses

competing successfully on a worldwide scale required new and innovative ways to identify and reduce material costs when proper pricing strategies were in place (Rathke et al., 2021).

The coronavirus pandemic era had a tremendous impact on the tourism industry, including the airline industry. Bakir et al. (2021) stated that airline companies have put quality of work as the current number one priority and stressed that ground supporting service company selection is critical. When airlines prioritize safety, ground supporting companies also focus on passenger well-being and keeping safety as top priority. The airline industry is now focusing on rebuilding and gaining customer confidence back.

Airlines rely on ground support service companies to manage aircraft ground service. Ground service equipment is often visible to travelers and can impact passengers' perceptions of their safety. Bakir et al. (2021) suggested service provider credibility and validity was a major factor affecting passengers' decisions on which airline to use because safety is travelers' first priority. Sarlay and Neuhofer (2021) surveyed frequent North American and European travelers and found that many were willing to pay more for safer and more secure travel provided through private air travel. Sarlay and Neuhofer argued that private air travel offers travelers an increased feeling of safety at a premium price. Based on the research from Bakir et al. and Sarlay and Neuhofer, understanding market demand trends and customers' preferences, such as for safe airline travel, is key to making a business successful.

Another key to successful business development is evaluating market competition and applying competitive strategies. Market competition exists in every industry, in

global markets and domestic markets. To increase business sales and maintain business market share, competitive strategies should be developed by a leadership team. Windisch (2020) evaluated manufacturing companies with different growth development plans which engaged advance manufacturing upgrades leading to businesses becoming very profitable. After analyzing completed questionnaires from 80 companies, Mohammadzadeh et al. (2019) concluded that there is a strong correlation between a business leaders understanding of competitive approaches and market condition.

Mohammadzadeh et al. (2019) stated competitive strategies determination depends upon business position and market readiness assessment. Business leaders recognize that profit margins are especially challenging in tight market competition. Some business leaders use the RITE model (for relation, intention, technology, and environment) to determine best business pricing practices. Indounas (2020) found that some business leaders adjust pricing based on market conditions and other businesses' responses to pricing variation. Smolarski et al. (2019) suggested profitable organizations seek the best price position when evaluating supplier proposed pricing and they consider alignment to business strategies. Without a deep understanding of fundamental pricing strategies, a business leader might experience profit loss or revenue reduction. Sometimes, profit loss in one area is balanced out in another.

Coster et al. (2019) stated developing business-to-business pricing capabilities and supplier comparisons is a critical success factor. Indounas (2022) conducted service business analysis using dynamic pricing strategies to determine best pricing practices. The commodity material market is great example to show dynamic pricing strategies to

maintaining profit maximum. According to Webster (2007), business leaders can maintain operation flexibility to be dynamic, fast–paced, and responsive to uncertain economic environments.

Service businesses are commonly sensitive about pricing and adjusting with the partner business. In the case of the airlines, ground service companies adjust when the airline(s) they are partnering with make a change. Smolarski et al. (2019) argued that companies should have, or develop, a modern centralized corporate price determination tool to help them select proper business partners during joint ventures. If ground support companies followed such a tool, they could determine which airlines they would like to partner with at a given time and what pricing they think is fair or reasonable rather than just reacting to the airline's pricing and changes. After reviewing 22 journal articles, Coster et al. (2019) found business's pricing models are influenced by relationships, intentions, technology, and environment. Coster et al. and Smolarski et al. suggested that ground service support companies need to develop their own pricing models to most benefit from the partnerships with airlines. Developing service pricing models could help ground support companies' response to market structures and better seek profit maximization.

Another avenue for maximizing profit is product pricing strategies. Companies need pricing strategies to capture the most profit from the market. Runfola et al. (2021) conducted 36 interviews with 16 key employees with pharmaceutical industries and concluded that highly regulated prices could slow new pharmaceutical businesses' attempts to enter the market. Highly regulated prices are just one of many challenges new

businesses face as they try to enter new territory and face existing competitors. Liozu and Hinterhuber (2021) conducted 49 interviews with c-level business officers and found that dedicated pricing strategies benefit business growth even with all challenges businesses encounter. Runfola et al. argued that regular functioning business-to-business networks could potentially create positive business partnerships to eliminate roadblocks during entry into the market. However, Liozu and Hinterhuber also found that only 22% of global businesses have the full picture of pricing strategies and developing proper implementations.

Other researchers in this area often focused on relationships between businesses. Researchers used transaction cost analysis to understand how pharmaceutical manufacturers and wholesalers' profit margins correlate, especially when facing business competition (Jambulingam & Kathuria, 2020). For example, Jambulingam and Kathuria (2020) tested hypotheses regarding business asset specificity, operations, and strategy planning coordination to verify relationships between manufacturers, wholesalers, and retailers. Finally, Jambulingam and Kathuria also found that pharmaceutical manufacturers can build direct relationships with wholesalers and retailers at three different levels – transactional, operational, and strategic.

Supplier Selection

In business-to-business environments, stable supply chains keep businesses running and able to face future challenges. Kaviiani et al. (2020) offered that the most critical factors influencing business supplier evaluations are technical ability and quality. In competitive markets, Sabri et al. (2021) argued when business leaders are seeking new

suppliers to become part of new product development programs, supplier performance is a major consideration. The energy industry has multi-criteria selections for suppliers, and these criteria can apply to different industries. Kaviiani et al. indicated 21 criteria (e.g., quality of products, delivery, aftermarket service, etc.) had been identified that affect business-to-business partnerships in the energy industry.

Energy industries heavily rely on reliable oil and gas providers to ensure supply to downstream businesses. Sabri et al. (2021) stated that when business leaders select their supplier cost should not become the only major factor to affect decision making, quality and delivery are also very important. Based on this research, to be successful, it is important that businesses focus on quality delivery and service level in addition to price.

Selecting reliable suppliers is very important for business leaders. Calik (2020) suggested that contemporary business supply chains should add supplier quality scorecards into consideration to assure they receive high quality material. Fazlollahtabar and Kazemitash (2022) found that suppliers may need to improve quality and delivery to get their contracts extended. While business leaders seek reliable suppliers, they may move between suppliers to meet objectives or facilitate stable partnerships with different vendors. Tayyab et al. (2022) argued that some service industries may not need entire supply chain networks to maintain business efficiency; however, without supply, businesses may not be able to support unpredictable demand increases. Gijo (2021) indicated that business leaders must be willing to build robust, streamlined systems to monitor manufacturing process and control quality.

Businesses constantly change suppliers and seek new suppliers through their supply chain network. Holma et al. (2021) stated business leaders terminate existing supplier contracts and begin working with new suppliers simultaneously to minimize or eliminate disruptions. Business leaders can seek better suppliers to support market demand. Nonconforming suppliers should be terminated as soon as possible instead of damaging business operation capabilities. During business-to-business supplier switching process, Holma et al. found buyer and supplier relationship impacts the transition process significantly. Business leaders develop a transition process plan to change suppliers, and this is important for private sector and public sector work.

Fazlollahtabar and Kazemitash (2022) indicated that business leaders use different factors to determine best supplier selection. Calik (2020) proposed 3 factors in the assessment regarding global supply chain network development and suppliers' allocation; these factors are quality, delivery, and cost. Shabani-Naeeni and Ghasemy Yaghin (2021) concluded that three essential factors to determine proper supplier are quality level, on time delivery score, and purchasing risk. Sachdeva et al. (2021) argued that well-defined selection criteria would be able to narrow down a large protentional supplier pool to a manageable size and determine best supplier selection. Business supplier development can help business support uncertain demand.

When trying to implement supply chain best practices, business leaders use risk assessment to understand existing suppliers and evaluate future suppliers. Shevchenko et al. (2020) suggested that business leaders should not use third parties to monitor supplier performance because there may not be a practical way to control supplier's quality.

Tayyab et al. (2022) stated that business leaders need prioritized strategies to ensure that the supply chain is running smoothly. Business supply chain management strategies should support future growth and increase demand.

To reduce supply chain uncertainty, business leaders build their own supply chain networks that support business operation. Sachdeva et al. (2021) analyzed two business cases and proposed a special approach to help business leaders select proper suppliers and balance out quality, cost, and delivery. Stable business partnerships between businesses and suppliers can enhance operation productivity. Ellegaard et al. (2022) stated that because of global sourcing uncertainty, businesses need to consistently build up alternate plans and supplier lists for use in worst-case scenarios occurring.

Alrasheedi et al. (2021) found that in a highly competitive global market with outsourcing to different suppliers, cost, quality, and delivery are major drivers affecting business selection. During supply chain difficulties and economic headwinds, Yazdani et al. (2020) stated pricing becomes a very important factor and is sensitive to maintaining business profitability because pricing is associated with operation costs. Small- and medium-sized enterprises struggle to determine proper evaluation for supplier selection because of limited financial budgets.

Manufacturing is one area where leaders constantly seek a sustainable supply chain to prevent potential material shortage. In supplier selection decision-making approach, Modibbo et al. (2022) considered four different criteria to evaluate suppliers' capability: cost, delivery, financial health, and quality. Applying these criteria to rank suppliers helps business leaders find support partners. Businesses also demonstrate

pricing factors as important parameters (Yazdani et al., 2020). According to surveys conducted by Alrasheedi et al. (2021), 40% of manufacturing companies agreed that, with early supplier engagement during the product development stage, failure potential is reduced significantly. Implementing practices which reduce failure potential is a practical aspect of business-to-business partnership which involves many variables and multi-criteria decision making.

A robust supplier management system would be able to help business leaders ensure less risk of material shortage to stop operation. Pratap et al. (2022) argued e-commerce is needed to build up long term strategy and have reliable sourcing to meet customer's demand. Acar Alagoz et al. (2021) suggested that businesses develop supplier networks to limit the potential of unpredictable events happening without any alternative options. With stable supplier management, e-commerce businesses can grow organically.

E-commerce is another business area with supplier selection challenges. Acar Alagoz et al. (2021) indicated that several common tools can be used to help e-commerce businesses evaluate supplier performance. Pratap et al. (2022) found integrated supply chain network would make business production performance more stable because less uncertainty during supply. Businesses constantly monitor supplier performance to support business organic growth.

Sourcing Risks and Allocation

Global businesses use outsourcing to manage supply chains and apply lean six sigma to seek lean processes. Bagul and Mukherjee (2022) indicated there are seven steps to assessing sourcing strategy to help business leaders understand risks in every supplier's

performance. Modibbo et al. (2022) indicated that manufacturing industries determine make or buy decisions by evaluating supplier availability, cost benefit analysis, and market evaluation. Agrawal and Singh (2021) stated that local economies could benefit from businesses outsourcing through small size businesses such as veteran-owned or woman-owned companies. Supply sourcing plays an important role as businesses achieve competitive advantages to meet businesses' goals and objectives. Business leaders keep supplier conditions up to date as one of the risk assessment factors to prevent unknown situations from happening.

Business leaders use supplier performance scorecards to determine whether to renew existing contracts or change to different suppliers. Agrawal and Singh (2021) revealed that businesses meet needs when they outsource to different suppliers and rely on better supplier management systems for performance. Huma et al. (2020) collected data from 223 buyers from different industries and found that to lower supply chain uncertainty and address unpredictable market turbulence, business could have strong relationships with suppliers.

One challenging area with sourcing risks is transportation. Zhang and Yu (2020) found that transportation issues happened when logistic planning was not coordinated with routes, schedules, and weather difficulty. Transportation became a huge issue during the pandemic worldwide. Ali et al. (2022) presented an example of how to allocate material sourcing suppliers and effectively enhance supplier network performance with their research on the automotive industry. Zhang and Yu suggested manufacturing business utilize modularization as a better way to simplify production operation processes

during how to reduce transportation time and maintain supplier stability. Operating with a worldwide supply-based network can also enhance business performance. Ershadi and Ershadi (2022) conducted different criteria weight assessments to examine sourcing allocation decision making, then incorporated selected global suppliers.

When challenges are in place or arise unexpectedly, business leaders must evaluate their performance and make changes as needed if they wish to remain profitable. Understanding business market position can ensure that a business is able to maintain competitiveness and cost efficiency. Business leaders pay attention to supply chain performance. Business leaders measure current supply chains effectively through transaction cost economics analysis. Festa et al. (2021) stated that global supply chain stability is an important factor in business success and this stability was negatively affected during the pandemic.

Supplier Management/Material Availability

One of the challenges that was particularly problematic during the pandemic was product availability. Brubakken et al. (2020) found alternative supply sourcing can lead to a 12%-17% decrease in exceeded costs and reduce potential material shortage. Festa et al. (2021) argued that multiple sources may not be able to guarantee supply and solve supply chain issues, especially during the pandemic, so businesses must develop approaches outside of the box. Successful businesses can consolidate resources to prevent material shortages and improve effectiveness between business and suppliers. The automotive industry integrates supply chain best practice approaches to tackle sourcing uncertainty.

Without any production interruption, sourcing material availability plays an important role in a manufacturing business. Tay and Aw (2021) conducted a case study and found that indicated that standard operating procedures to maintain effective supply chains can lead to more stable performance from suppliers. Festa et al. (2021) surveyed different countries on their outsourcing policies and found that local government guidelines affect businesses moving forward with using international or domestic service providers. Businesses keep multiple suppliers to minimize the chance that unstable situations happen.

When businesses do not have multiple suppliers, or are unclear in their own direction, mission, and vision, businesses fail to provide good quality products to customers. Ullah and Narain (2021) indicated there is a negative impact to the supply chain when businesses do not concentrate on the major factors involved in supplier management. Missing these components is an indicator of poor supplier management. Jin and Smith (2021) confirmed that business leaders maintain good relationships with suppliers to ensure supply can meet market demand.

Sustaining Supply Chain

Another area where there are special supply chain considerations is with sustainable or "green" suppliers. For many businesses, selecting a supplier that will align with, or improve upon, green supply chain performance is a prime consideration. Suppliers' sustainability strategies impact automotive business responses to green initiative approaches and utilize resources at strategic, tactical and operation levels. Ghosh et al. (2021) found large automotive corporations use integrated multicriteria

decision making to rank suppliers' eligibility to support green supplier initiatives and help the environment. Ghosh et al. and Adesanya (2020) also compared 5 companies' supplier selection criteria and found that carbon dioxide emission is the major factor affecting how some businesses move forward with selecting their suppliers. Manufacturing businesses have increased focus on suppliers producing goods that are more sustainable and will help to protect the environment. Business leaders use sustainable procurement guidelines to select business partners and help the environment. Business leaders rarely select suppliers in the third world because sustainability affects their business decisions and many suppliers in these areas are unable to considerable sustainability efforts in their productions.

León Bravo et al. (2021) found two different business decision approaches, traditional supply chain network and sustainable supply chain network. Both lead to different business outcomes and growth. Amoako et al. (2021) found that many suppliers who start their green initiative to attract business partners buy in to their eco-friendly strategies. Small and medium-sized suppliers develop sustainable programs which can connect business partners more easily and help business leaders grow in the future. Lopez-Jauregui et al. (2021) argued that small or medium suppliers are not able to have enough resources to support sustainability so these business leaders may have fewer opportunities to connect with business partners. Barbanti et al. (2022) found that only 20% of global world-class businesses can adopt ISO standards to support sustainable business and the rest would not be able to fully adopt a sustainable program.

A sustainable supplier network helps businesses manufacture products that are more environmentally friendly. Amoako et al. (2021) found that green supply chain initiatives drive businesses to care more about environmentally friendly productions. Considering less environmental impact during business operations is an adoptive strategy used by most businesses.

Joint Venture Partnership

Businesses maintain corporate fleets to support field representatives and respond to local customers very quickly. Wagner (2021) explored new business opportunities needed to connect the industry supply chains and corporate fleets by using tradeshows, advertisements, and professional resource platforms to get access to the market. Startup businesses can also support corporate fleets.

Startup businesses can become part of supply chain networks to speed up business operations. Owners of startup businesses have a hard time engaging in existing mature markets and continuously growing. Wagner (2021) argued that startup business not only face internal quick response challenges but also face external dynamic environment challenges. To make business capital investment favorable for existing and startup businesses, evaluations should be done by a leadership team and all efforts could be made to make their decision-making easier.

The automotive industry is one of the most well-known for joint venture partnerships. Liang et al. (2021) stated that business agreements between automotive manufacturers and businesses should achieve win–win conditions from cost and maintenance perspectives. Liang et al. also found that businesses purchase fleet vehicles

through different sourcing with deals such as rent to own or direct leasing to keep expenses low. This kind of joint venture partnership supports all businesses involved and their relationships with each other.

Supporting Theories

Product theory and intrinsic theory are two theories that support price theory. These two theories will be discussed in the next sub-section.

Product Theory

Product theory is based on understanding what happens with a product from when it is first introduced until it is phased out. Product theory was first suggested by Raymond Vernon (Patrucco et al., 2022). Several different merchandise life cycle stages are associated with product theory, such as product development, raw material, and sales.

Product Development. The first life cycle stage, product development, relies on product innovation and use of environmentally friendly practices. Product innovation contributes to business success and creates stronger customer motivation, because it adds more value to products. To support sustainability and environmentally friendly initiatives, leadership teams should select suppliers who use sustainable practices to help the environment (Rathke et al., 2021). Using data from 524 company leaders and applying maximum likelihood estimation, Patrucco et al. (2022) found a significant positive impact between making sustainable and environmentally friendly decisions during product joint development and business and supplier's collaboration. Green supply chain strategic planning may help businesses not only meet government regulatory requirements but also support the environment.

Raw Material. The second life cycle stage, raw material is dependent on the supply chain. Utilizing global supply chain sourcing can help business leaders achieve better material management and reduce inventory levels. Sustaining suppliers affects the environment and demonstrates corporate social responsibilities (Parguel et al., 2022). Supply chain strategies affect success factors and reduce potential costs during robust supply chain operations (Xu et al., 2021).

Sales. The third life cycle stage, sales, includes a focus on customer perceptions and customer price acceptance. Retail stores determine sales prices not only based on initial cost but also based on customer price perceptions. When business leaders determine their product pricing strategies, many key factors are involved in the decision-making process, such as customer willingness to pay, competitors' prices, and manufacturing costs (Thrane et al., 2019). According to feedback from 350 customers, customers' price acceptance is based on several factors, such as competition, product quality, customer service, and personal economic conditions (Rondan-Cataluna et al., 2019). Because customers' responses to product prices can have a direct influence on the marketplace, business leaders can be more sensitive about product sales price variations.

Intrinsic Theory

Intrinsic theory is also known as the theory of objective value. Intrinsic theory was developed by David Ricardo and Karl Marx (Sharma & Jain, 2019). In intrinsic theory, business leaders determined the sales price value of goods based on the costs associated with several areas such as material, manufacturing process and overhead.

Price Value. Business leaders can collaborate and assess costs during sustainable resource exploration. The best pricing options for manufacturers and customers can be decided using correlations between manufacturers and customers through the supply chain model (Taleizadeh & Sherafati, 2019). Customers' brand preferences are determined in part by sustainable sourcing (Normann et al., 2017). Specifically, contemporary businesses determine sales price in ways that are more creative. Sharma and Jain (2019) conducted a case study analysis of the Stackelberg game theoretical framework and examined how pricing strategies are derived between manufacturers and retailers. They found that when retailers adopted pricing strategies more aggressively, manufacturer fairness concerns decreased profit margins because of competition.

Contrasting Theories

Subjective theory and exchange theory are two contrasting theories to price theory. These two theories will be discussed in the next sub-section.

Subjective Theory

Subjective theory was created by William Jevons, Leon Walras, and Carl Menger (Bozkurt & Gligor, 2019). In subjective theory, product value relies strongly on customers' feelings and price determination is not based on logical thinking. In subjective theory, value is impacted by brand reputation, entitlement, and social status based on individual buys or sells products.

Consumers shop and purchase either new or used products not only based on personal needs but also based on financial affordability. Consumers are motivated to shop for apparel based on the visual impression they aim to leave on others, as well as their

understanding of how they are perceived. They are often willing to pay based on their desired personal image (Dodds et al., 2018). Manufacturers and retailers should coordinate with one another to provide customers with optimal pricing, because consumers determine the best price consideration (Crosno & Cui, 2018). When businesses know what customers are willing to pay for products or services, it can help them to achieve effectiveness and competitive pricing strategies.

Customers feel deceived when product prices are changed at the time of purchase, either intentionally or accidentally. Wakil et al. (2019) suggested a new way to evaluate the success of e-commerce platforms and customer satisfaction based on customer purchasing history, product classification, and price criteria. Bozkurt and Gligor (2019) conducted a regression analysis from 84 samples and found post-purchasing behaviors and satisfaction are highly correlated with unfavorable pricing errors and customer reaction. Based on this research, business leaders have to be quick to respond to online shoppers' feedback in regard to price inaccuracies, at both a strategic planning level and within organizational infrastructure.

When customers do not consider how pricing affects product value, it could lead to an overpricing scenario. Business pricing strategies involve several key factors such as customer affordability, price competition, and manufacturing costs (Thrane et al., 2019). Businesses must adopt proper marketing strategies not only to keep current customers, but also to explore potential customers and extend market share (Indounas, 2022). In a fast, aggressive, competitive atmosphere, all sizes of businesses can apply any kind of cost measurement strategy to increase the profit margin for future growth.

Exchange Value Theory

Adam Smith considered the prices of final, finished goods to be associated with tangible and intangible cost factors of production (Kohli & Habibi, 2022). The economic and political atmosphere in which goods are made can highly affect labor, raw material, transportation, and many other factors. The relative price of goods and services indicates the sourcing allocation influence on business profitability.

The global supply chain is an important aspect of exchange theory. Global supply chain operation highly influences the world economy, regardless of whether the business is in a developed country or developing country. Consumers' decisions on goods or services can influence and be influenced by price promotion, price information transparency, willingness to pay fairly, and competitor offerings (Leinsle et al., 2018). When a company decides to relocate a facility overseas to reduce cost and near sourcing, they may face hidden costs and potential risks such as standardized process replication, local government regulations, and workforce skillsets development that could impact the overall revenue (Gibbs et al., 2018). Thrane et al. (2019) suggested that pricing strategy experts could pay attention to not only price fairness but also consumer decision-making when outsourcing overseas.

To eliminate geographical constraints, customers can use online shopping platforms to buy merchandise based on their personal preferences, user reviews, and price comparisons. Errors online that cause unfavorable pricing can lead to customers' dissatisfaction and an increase in negative feedback (Bozkurt & Gligor, 2019). Wakil et al. (2019) conducted a survey with 224 survey responses and found that product pricing

strategies such as dynamic pricing, exchange pricing, and group pricing can influence different types of customers and impact purchasing behaviors. Unless businesses can address potential errors in pricing on online platforms, corporations can experience lower profitability and a decrease in brand reputation.

When business leaders provide services or products to customers, pricing can be highly adjustable based on the customers' needs and personal objectives. Positive efforts can influence supply chain modernization and positively impact a country's GDP by implementing innovative supply chain concepts and operation systems (Trabelsi & Matsukawa, 2020). Leinsle et al. (2018) indicated when expenses exceed customers' expectations, consumers are prompted to consider different options that are more fit for their needs.

Developing a strong partnership between businesses can lead to better product quality and improved customer service. The leader of one of Italy's business operations utilized supply chain practices to enhance operation productivity, product quality, and competitiveness (Patil et al., 2021). Ferreira et al. (2017) and Indounas (2020) conducted a case study and found when manufacturers are seeking and developing long-term business relationships with suppliers, reliable sourcing does ease potential supply chain risk and lower material shortages. Businesses' operations and global supply chains that interact with one another may improve overall business performance.

Local small- and medium-sized business owners can use different approaches to distinguish their product or service niche from large businesses or corporations. Du et al. (2018) analyzed service-level data from distribution centers from the time they received

orders from customers to when the merchandise was delivered to the destination. According to Liu et al. (2022), consumers might be less interested in where the product is made than they are interested in getting a great price and reliable quality. Business leaders can gain a competitive advantage by providing better service and attracting more customers.

Customer satisfaction and service-level performance are highly correlated because a stable manufacturer and supplier relationship can deliver higher-quality products. Hamamura (2022) identified that businesses that deliver reliable products with on time delivery have an impact on customers satisfaction. To enhance supply chain performance, manufacturers should evaluate supplier service level, production demand productivity, and quality performance (Xu et al., 2021). Flexible supply chain sourcing strategies can allow retail businesses to continue improving inventory, delivery time, and unexpected delay expenses.

Strategies Associated with Pricing

Determining best practices for a business and implementing them can bring maximum profit. I will discuss three types of strategies associated with pricing in the following section. These are (a) competitive-based pricing strategy, (b) cost-based pricing strategy, and (c) demand-based pricing strategy.

Competitive-Based Pricing Strategy

The competitive-based pricing strategy is the strategy of businesses determining the cost of merchandise or services relative to target competitors' prices (Leinsle et al., 2018). Understanding competitor products or service pricing strategies and customer

expectations allow businesses to attract more customers and expand their market share. From the customers' perspective, seeking the best value among similar products or services can drive purchasing decision-making (Xie et al., 2018).

To maintain and provide different levels of customers and buyers, many business leaders must create product variety. Customers with limited budgets are most sensitive to price variation, but nearly all customers are willing to pay more for better quality and performance (De Toni et al., 2022). When businesses dictate their research and development based on customer needs and market performance, they will have greater opportunities to compete with others and gain more market share (Liu et al., 2022). When businesses position their product in the open marketplace, the best price strategy practice is determined by the marketing and sales leadership team and is based on customer purchasing ability.

Understanding customer needs and focusing on customization can help maintain business competitiveness. Brand perception can impact how customers evaluate brand selection and make decisions, whether they are shopping at a retail store or a wholesale store (Yuan et al., 2022). Businesses willing to apply new technologies to their current operations may reduce costs and improve quality to increase customers' confidence in every aspect (Niaki & Nonino, 2017). New technology can lead to innovation and improve existing manufacturing methods for business growth.

When mature products are sold in a competitive marketplace, business leaders should be willing to reduce prices to increase customer sales and increase profit, while being mindful of customer satisfaction. When five major U.S. airlines lowered airfares to

boost sales, the increase in customers led to many issues, such as connecting flight delays, over-bookings, and flight cancelations (Enomoto et al., 2017). According to Indounas (2022), business price perceptions and consumer pricing sensitivity led to purchase and magnitude determination for the purchasing behaviors.

On the contrary, when connecting flight delays cause passengers' travel inconvenience, U.S. airlines commonly compensate with cash vouchers to reduce customers' complaints. The price fairness of nondurable goods may not result in favorable purchasing behaviors from long-term customers (Indounas, 2020). When customers' complaints increase, they have more of an impact on business reputation, and company brand damage might require businesses to restore customers' confidence over a long time and at a huge cost (Enomoto et al., 2017). To avoid issues or damage to the business brand, airline marketers can pay attention to ways to enhance sales.

Through research and development strategy implementation, businesses can maintain market share competition. Singh et al. (2020) found during difficult times, businesses cut down operational costs and adjust research and development investments to lower expenses, which can hurt business performance in the long run. Companies that continue to invest in research and development during hardship can see a sales rate increase and enlarged market share when the economic conditions improve (Taghizadeh et al., 2022). To improve product quality and enhance market share, it is important that business future investment strategic planning include research and development.

Pricing determination varies between retail stores and outlet stores. Businesses that collaborate with customers' suggestions can improve product value (Niaki &

Nonino, 2017). De Toni et al. (2022) agreed that any price reflection of merchandise can influence customer decision-making related to price sensitivity. Based on this research, it is important that retail businesses be more cautiously aware of merchandise pricing adjustments and ways to incorporate pricing strategy.

Consumers commonly use market research to understand price and compare with similar or same products from different stores. French and Gabrielli (2018) identified appropriate validation steps and methods to help customers determine the best market value for themselves to purchase. When consumers determine optimal market price value, it creates a better negotiation environment to help both sides understand how and why something is priced how it is (French & Gabrielli, 2018). Businesses can have a better strategy to help customers comprehend pricing, which may increase sales over time.

Cost-Based Pricing Strategy

Vahdatmanesh and Firouzi (2018) stated that manufacturing businesses commonly utilize cost-based pricing for their products or services because it is a simple strategy to utilize. In cost-based pricing strategy, the final price of the products or services is determined using the standard costs and adding a certain percentage of costs for profit margin (Rofin & Biswajit, 2018). Business leaders can use cost-based pricing strategies to adjust the product or service prices based on the cost to create the product or execute the service.

Product pricing determination is an essential business factor. When comparing competition-based and cost-based pricing approaches, Guerreiro and Amaral (2018)

concluded that cost-based pricing strategies are close to the reality for many businesses. Customers' responses to cost-based pricing are easier to forecast.

Business operation strategies should align several key factors, including products, customers, competitors, and desired profit margin. At the same time, businesses use complex scoring assessments to evaluate cost, delivery, and quality when the economic situation is uncertain. The optimal price exists on two sides of the service market, between monopoly and duopoly competition, while incorporating the quality-of-service industry (Xue et al., 2019). De and Singh (2021) agreed the lowest-price supplier selection decision leads to a higher risk of uncertainty related to quality and addressing those issues may cost. Business leaders can improve the quality of service to gain more market share and attract more potential customers.

When customers make any purchasing decisions in the traditional marketplace, they commonly consider product quality and aftermarket service if the price is in their target budget. Making purchases at higher prices than those that are within the target budget may be an acceptable option when quality performance is a major concern of the product (Xue et al., 2019). Procurement supplier-selection criterion play an important role in and affect manufacturing operation activities (Kohli & Habibi, 2022). When significant cost and time are derived from unreliable component sourcing, procurement decisions are driven by high-quality performance, not lowest price.

In a very competitive market environment, customers are willing to pay more depending on which businesses provide more benchmarking. Competitors' successes and failures can provide lessons and teach businesses to adapt when transactions shift into

different market-orient phases (Stranieri et al., 2017). Tu et al. (2018) indicated that, when customers engaged with one another and co-created better price deals, business leaders can stimulate sales and increase revenue growth. Organization risk and response assessment frameworks can support business growth with strategic planning. At the same time, businesses and customers can work together and create a win-win situation. Tu et al. found a positive impact between customers and retailers through partnership. Stranieri et al. and Zhou et al. (2018) found that supply chain risk evaluation framework can help management teams work toward more strategic decision-making. During different kinds of headwinds, businesses can take a proper assessment of and respond to risks effectively.

Business leaders seek global outsourcing strategies because they want to utilize different sourcing and lower the risks associated with single sourcing. Real-time pricing adjustments impact retail business profitability (Rofin & Biswajit, 2018). Business leaders can better manage multiple sources to achieve more stable production and support strong market demand (Sivakumar & Roy, 2017). In a global economy, businesses can focus on more different material sourcing to lower any single sourcing risk and maintain productivity.

Many businesses provide dual sales channels to increase sales. However, online and physical stores can create challenges related to managing the supply chain network. During the new product development stage, the supplier and design teams should have a strong relationship to ensure reliable sourcing, which will benefit the future good when it is pushed to the competitive market (Sivakumar & Roy, 2017). Online stores have more

capacity to adjust prices in an online system, while physical stores can have difficulty maintaining price flexibility because they need more people to manually change price tags (Rofin & Biswajit, 2018). Retail businesses applying dynamic pricing can incorporate it not only online but also at physical stores.

Demand-Based Pricing Strategy

Businesses adjust pricing based on market demand to ensure maximum revenue and future growth. Customers consider product value as the product's worth and whether it might sell out, per demand-based pricing strategy. Any resource's market demand, high or low, drives dynamic pricing.

Oil is a raw material commodity, no matter which country it comes from or the amount of trade value. Zhang and Wu (2018) described an upsurge in demand of the traditional energy market between 2008 to 2015, during which time pump West Texas Intermediate crude oil demand increased. Taghizadeh-Hesary et al. (2019) argued that, with government support in the form of a renewable energy policy, solar system manufacturing could be able to rely on large, capital-intensive investments and government tax breaks to fund expanded research and development. This research points to the importance of using new energy sources.

Traditional energy sources, such as oil or coal, will eventually run out, so business leaders are starting to consider switching to renewable resources to prevent future shortages, outages, and rising prices of traditional energy sources. Based on supply and demand, Xie et al. (2018) created a forecast model on how to determine the break-even points when businesses seek out new renewable energy resources to replace fossil energy

resources. When energy sourcing becomes unstable and prices fluctuates, businesses seeking renewable energy sources as alternative options could help lower the costs of transitioning (Xie et al., 2018). Based on future market demand, renewable energy is another possible reliable energy choice for business leaders to consider.

Merchandise cross-selling is a common approach used to increase brand loyalty among existing and future customers. The two-period pricing model is applicable when the sales revenue sharing approach coordinates with hunger marketing (Yu & Zhang, 2018). Alternatively, consumer's purchasing behaviors can be linked to other factors, such as convenience, time sensitivities, and quality (Vyas et al., 2018). When the supply chain can support limited product marketing strategies' demand, retail businesses are able to increase profit in a short period time. Businesses leaders who provide more variety along with customized cross-buying packages are better able to meet customers' needs.

Clean and renewable energy opportunities are well-known in global business communities, which has led to numerous companies making many efforts to invest in new technologies to further clean energy utilization. Although advanced technologies are more productive and have lower manufacturing costs, Taghizadeh-Hesary et al. (2019) highlighted other factors that influence clean energy prices, such as economic and monetary capital investments, interest rate, and government tax deductions. Zhang and Wu (2018) found a significant linear relationship between oil demand and energy business stock prices. Government plays an important role in the solar energy industry.

Business leaders constantly use price discounts as a marketing tool to get customer attention and stimulate purchasing decisions. When buyers and sellers are in

similar positions, the endowment effect plays an important factor, which means buyers are willing to pay more to purchase goods, instead of giving up on or postponing the sale (Chan & Saqib, 2018). Retail store managers should work closely with the corporate office and have more authority to implement short discounts or promotions regularly to increase sales (Singh et al., 2020). When businesses determine reasonable product prices, pricing managers understand customer purchasing power and attract more customers based on customer desires.

If the price is outside an affordable range, the seller or buyer may negotiate to attempt to secure the best deal for their purposes. Constant sales and promotions affect customers' purchasing quantity and the likelihood of increased willingness to purchase (Rathke et al., 2021). When buyers have more purchasing power to obtain high-priced goods, the endowment effect is not a significant factor to influence purchasing behaviors because the price is not the primary concern (Chan & Saqib, 2018). Businesses leaders who have more essential products on sale attract more customers. Therefore, businesses can increase profit effectiveness in the long run.

Service providers use pricing bundles to attract future customers, because consumers can decrease their shopping time and add value to their purchasing decision. Hong et al. (2018) provided several different scenarios to customer purchasing decision evaluation. Hamamura (2022) argued that, even when businesses do not have any discount offers for customers, demand may decrease if bundles are not offered, because customers consider bundled services more valuable than single items. Providing customers the best deals possible may help achieve maximum profit.

Procurement strategists consider utilizing multiple sources for goods to lower uncertainty risk; however, multiple sources increase the complexities that must be managed when using multiple suppliers. De and Singh (2021) found that bundle size and competitive prices significantly affect business purchasing behaviors and decision-making. Hong et al. (2018) proposed how to manage supply base diversity to lower the supply chain uncertainty in business procurement and sourcing. Businesses seeking to increase profitability can consider bundle strategies to lower costs.

Without procurement, the correct acquisition of raw material resources, and on-time delivery, businesses cannot have a value-additive process to manufacture products and deliver them to customers. In a competitive market, if manufacturers and retailers can give extra discounts and provide more environmentally friendly merchandise, customers will be more willing to purchase the products (Raza & Faisal, 2018). De and Singh (2021) highlighted reliable supplier capacity also impacts businesses, including how they execute mass production and support current market demand. Business leaders can look at every aspect of customer willingness during organization strategy development and help customers make decisions quickly so they will buy products.

Product pricing is the most important consideration factor and is sensitive from the customers' perspective because of impacts to business budgeting. Manufacturers might have more room to negotiate with suppliers with large purchasing orders, which can increase margin during mass production (Trabelsi & Matsukawa, 2020). Raza and Faisal (2018) argued even with a strong green efforts market demand, customers pay attention to a product's pricing and compare similar products. Reliable and secure supply

chain sourcing strategies are key elements for businesses that provide entity products to customers.

Transition

In Section 1, I discussed my purpose statement to explore strategies at aircraft manufacturing organizational leaders use for proper material pricing estimates. I also introduced the problem statement, purpose statement, nature of the study, significance of the study, and literature review. In the literature review, I explored peer-reviewed articles that related to my conceptual framework, price theory, as well as supporting and contrasting theories. In Section 2, I will discuss the role of the researcher, population and sampling, ethical research, data collection, organization, and analysis. I conclude Section 2 by identifying approaches to ensure validity and reliability in my study. In Section 3, I will present the findings, application to business practices and social change, and recommendations for action and further research, my reflections, and study conclusion.

Section 2: The Project

In this section, I include an explanation of the methodology used in the research study. For my qualitative research study, four successful leaders participated in interviews to discuss proper material pricing strategies. My study may help to eliminate material pricing discrepancies and may help leaders make proper material pricing decisions.

Purpose Statement

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. I selected four aircraft manufacturing organizational leaders from a successful aircraft manufacturing business located in the state of Georgia. The implications for positive social change include the potential for growth that increases profits to support community investments, sustainability, and volunteerism. Community support may come through active partnerships with different local charity programs, employees, and their families to create a positive social transformation in the communities.

Role of the Researcher

Yin (2018) stated that researchers should be fully aware of maintaining integrity, asking applicable questions, and listening to the participants without using any bias during the interview. My responsibility as a researcher was to collect, identify and analyze data. To obtain unbiased data, my role was independent observer and data collector. Because the boundaries between a phenomenon and its context are not always

clear, a case study relies on multiple data sources for evidence (Yin, 2018). Therefore, I used interviews and document review for this case study.

Fusch and Ness (2015) indicated that the researcher–participant relationship refers to the relationship between investigator and individuals who provide data. Therefore, participants can describe and reflect on real life situations experienced through the interview process. I started my aviation career after being hired by an aircraft manufacturer in United States. My insight was influenced by my experiences and aviation knowledge related to my research topic. I have had a working relationship and friendship with aviation leaders for many years in every aspect of the aviation industry. However, I did not have any personal relationship with any of the participants who were selected for this study.

The Belmont Report was created by the National Commission for the Protection of Human Subjects of Biomedical and Behavior Research (NCPHSBBR; NCPHSBBR, 1979). *The Belmont Report* includes a summary of ethical principles and guidelines for research involving human subjects and three core competencies are identified respect for persons, beneficence, and justice. To fulfill my role and mitigate bias, I described relevant aspects of myself, including any biases and assumptions, and expectations and experiences to qualify my ability to conduct research. To minimize personal bias, I approached this study as an independent observer and followed a script for the interview questions and probes. As a qualitative study researcher, I asked probing questions, then listened, and then asked more probing questions to get to deeper levels of conversation.

An effective qualitative researcher seeks to build a picture using ideas and theories from a wide variety of sources (Barratt et al., 2011).

Yin (2018) argued that a participant's as well as the researcher's bias/worldview is present in all social research both intentionally and unintentionally. To minimize bias, I acted as an independent investigator to collect data through a dialogue process. The intent of the interview was to explore each participant's familiarity regarding strategies successful aircraft organizational leaders use for proper material pricing. Yin suggested interview protocol questions guide the interviewer to better understand phenomena. I used an interview protocol throughout the entire process, not only to ensure integrity of the research, but also to protect participants' rights and confidentiality.

Participants

Four aircraft manufacturing organizational leaders at a successful aircraft manufacturing business participated in an interview to explore proper material pricing strategies. Each leader had worked in the aviation industry for at least 10 years and had experience in one of four different business functional areas: (a) procurement, (b) supplier development, (c) sourcing, and (d) manufacturing. They must also have been involved in aircraft manufacturing operations in the state of Georgia. These criteria ensured that participants had insight and knowledge related to the research topic.

To gain access to the participants, I first reached out to the company president who was located at one aircraft manufacturing organization and asked for names of potential participants that met my criteria. When I received the suggested names of the potential participants after the president signed the letter of cooperation. I contacted each

candidate via email, provided the informed consent form, and explained the purpose of the study. Each interviewee who agreed to participate in my study provided their informed consent by replying with the words "I consent." Before the interview started, I reviewed the informed consent document with the participant. The informed consent process ensured participation was voluntary, and responses were kept confidential. When starting data collection from each individual participant interview in the process, I explained the purpose of my study and how I was going to collect information by following my interview protocol (see Appendix A).

To ensure confidentiality and privacy to establish a working relationship with the participants, the interview occurred in the participant's preferred selected location through virtual video conference. I hosted an hour-long interview with each interviewee. At the start of the interview, I informed the interviewee that they were able to withdraw at any time by letting me know.

Research Method and Design

Research Method

Yin (2018) identified three research methods, which are qualitative, quantitative, and mixed. Mahoney and Goertz (2006) indicated that researchers use a qualitative method to identify and understand activities or events related to a chosen phenomenon. I used this qualitative study to identify successful material pricing strategies through each participant's experiences. In contrast to a qualitative study, Venkatesh et al. (2013) clarified that quantitative research studies include measurable variables with a hypothesis to examine the relationships among variables. I did not conduct a quantitative study

because I did not examine the significance of the relationships among variables. Venkatesh et al. (2013) also stated that mixed-method research methodology includes both qualitative and quantitative methods. To explore strategies for proper material pricing, I did not test hypotheses about variables' relationships or groups' differences, which was part of the quantitative portion of a mixed-method study. As such, the most appropriate method for this study was qualitative.

Research Design

I conducted a single case study, which was an appropriate research design for this study. Yin (2018) stated that a multiple case design may prove more substantial than a single case design because scholars are able to investigate similarities and differences between cases. However, I did not use a multiple case study design because using a single case study design allowed me to investigate one organization in depth and in a real-life context. Shen (2018) indicated that when using an ethnographic design, researchers must engage themselves in the target participants' environment to understand the goals, cultures, challenges, motivations, and themes that emerge. However, the ethnographic design was not appropriate in this study because I did not seek to engage in any live cultural environments or to report stories involving individuals or groups. Shen further indicated that a narrative design usually includes one or two individual personal stories related to a phenomenon. Four leaders participated in the interview process of this research study discussing strategies for proper material pricing. Consequently, a narrative design was not appropriate for my study.

When researchers determine the study design, they should clearly address how to reach data saturation. Fusch and Ness (2015) noted when interviewees' answered research thoroughly and themes repeatedly, researchers could have confidence to claim no new perceptions from any additional resources. When I heard common themes repeatedly from the interview data and no new themes emerging, I ascertained that I had achieved data saturation.

Population and Sampling

Yin (2018) concluded appropriate sampling selection from the population is important in helping researchers to understand a phenomenon. Therefore, researchers use a sampling technique to select participants appropriately. Swanson et al. (2018) described purposeful sampling as identifying participants based on pre-selected criteria through researchers' research questions. I selected my participants through purposeful sampling in my single case study. In the snowball sampling method, Emerson (2015) indicated that participants may guide researchers to others who may be able to potentially contribute or participate in the study. However, snowball sampling method was not an appropriate sampling technique for my single case study because four interviewees were pre-selected by the researcher and not from others who may be able to potentially contribute or participate in the study.

Fusch and Ness (2015) synthesized the literature to identify some key characteristics of reaching data saturation, which include no new data, no new themes, no new coding, and ability to replicate the study. Ultimately, the required number of participants should depend on when saturation is reached, and then further data collection

and analysis is not necessary (Aldiabat & Le Navenec, 2018). Saturation occurs when adding more participants to the study does not result in additional perspectives or information. Therefore, repeating themes are consistent with the research question(s), and the theoretical position and analytic framework adopted. I selected four participants to increase the likelihood that I would see the same themes repeated.

This study sample included four leaders located in the state of Georgia with successful experiences in using proper material pricing strategies in the aviation industry. I selected participants with more than 10 years of experience in a leadership role. Each participant must have had knowledge in aviation industry and experience working in the following at least one of four areas: supply chain, sourcing, purchasing, and manufacturing. Each participant received an interview invitation and detailed study information. Semistructured interviews were held in a nonwork related location of the interviewee's preference through virtual video conference. Therefore, the researcher and participant were able to discover and develop rich dialogue during the interview time.

Ethical Research

Research ethics govern the standards of conduct for scientific researchers. Parguel et al. (2022) argued it is important to adhere to ethical principles to protect the dignity, rights, and welfare of research participants. I used a written consent form and communicated with participants regarding the interview process. The informed consent document outlined ethical considerations for each interviewee. My consent form explained my study's purpose and affirmed the participant's rights. I first sent an invitation of study participation and an informed consent document through e-mail to the

selected participants. I contacted each candidate via email and explain the purpose of the study and asking interviewees to provide their informed consent by replying with the words “I consent.”

Before contacting prospective participants, I obtained approval from the Walden University Institutional Review Board (IRB) and approval number is 10-31-22-0641931. The consent form contained the information about the research procedures to allow each participant to review, ask questions, and indicate if they agree to participate in the study. The participants had the opportunity to review the form prior to the interview. The consent form addressed the following: research study data collection process; privacy and confidentiality expectations; voluntary participation with the option to withdraw from the study at any time. I reviewed the information with each potential participant and addressed any concerns or questions and prior to conducting the interview or collecting any study data. All participants received a copy of the consent from for their records.

The Belmont Report explained the concept of voluntary participation (NCPHSBBR, 1979). All participants received verbal and written communication of the voluntary nature of their participation and were made aware of the option to withdraw from the study at any time and without prior notification, even after completion of data collection. I provided my contact information to all participants in case they had any questions or wanted to withdraw from the study through a verbal request or e-mail notification. The procedure of honoring a participant request to withdraw from the study included removing all participant information from my files, shredding printed information, and deleting electronic information.

Regarding incentives, as a token of appreciation for participants' contribution to the research, I provided each interviewee a $25 gift card from Starbucks for their virtual participation since I did not use face to face interviews for my study. In addition, each participant received a copy of the final summary of my study results in a two-page document sent to them as an e-mail attachment. *The Belmont Report* underscored the importance of following confidentiality requirements (NCPHSBBR, 1979). Barker (2013) illustrated strategies to protect the confidentiality of study participants and their organizations by disguising characteristics of the case organization or participant. I used a sequential code as a pseudonym to represent each participant or case so that neither the participant nor the case organization was identifiable. The interview transcriptions and audio files contained only the participants' assigned pseudonyms.

I kept track of the research data via a password-protected flash drive, and a backup copy will be maintained in my One Drive. Hard copies of the data were securely stored in a locked file cabinet and will be destroyed after 5 years. Electronic copies of the data will be securely stored utilizing a password protected Dropbox account and will be permanently deleted after 5 years.

Data Collection Instruments

Researchers use qualitative data collection methods to provide information useful to understand the processes behind observed results and assess changes in people's perceptions of their well-being. According to Yin (2018), there are several primary data collections instruments which researchers can use (e.g., informal interview, semistructured interviews, phenomenological in-depth interviews, etc.). Covell et al.

(2012) also argued the purpose of data collection is to capture quality evidence that seeks to answer all the questions that have been posed by researchers. I was the primary data collection instrument in this qualitative single case study. To ensure uniformity of the interview process, I followed the same interview protocol (Appendix A) with all interviewees. I collected interview data from four aircraft manufacturing business leaders. During the in-depth interview process, I used only open-ended research questions. The interview instrument consisted of six open-ended questions which aligned to my key research question (see Appendix A).

Bowen (2008) also suggested document review is another method for collecting data by reviewing existing documents either internally or externally. During the interview, I reviewed any documents that interviewees provided in alignment with company confidentiality policies (e.g., company webpage, procedures and manuals listed on the company supplier portal, annual financial reports, etc.) and additional documents obtained through online sources such as Federal Aviation Administration, European Aviation Safety Agency, and International Civil Aviation Organization. These supporting documents provided evidence to further define my themes and assist with data saturation.

Researchers use member checking to validate data or results for accuracy and creditability (Harvey, 2015). McConnell-Henry et al. (2011) also pointed out when using data mediated through a human instrument, describing, and evaluating a member checking technique assists with establishing exactness of responses. I used member checking to validate each individual participant's results to ensure accurate interpretation of responses to the interview questions. Interviewees had the opportunity to validate and

confirm my interpretations of the transcripts through member checking after the interview is complete, transcribed, and summarized.

Data Collection Technique

Covell et al. (2012) defined data collection as the gathering and measuring information on variables of interest through systematic processes. Yin (2018) indicated researchers can use methodological triangulation such as online/paper survey, focus groups, and observations to able to help understand data and confirm findings. I used semistructured, face to face interviews as my primary data collection technique and document review was my secondary data collection technique to improve the reliability and validity of my study.

Lalanda Nico (2016) also suggested using a standard device to collect related information from interviews as a direct observation tool and help the researcher attain more in-depth understanding of the subject. During the interview process, I used an audio recording device from my smart phone to record the conversation. At the same time, a second voice recorder device was used as a backup device. Therefore, I was able to transcribe the interview conversation into documents, which allowed for me to capture any related information as an observer.

Once I obtained approval from Walden University's IRB, I started my research study process. Before I started this research, I first reached out to the company president to obtain approval on the Letter of Cooperation and received potential eligible candidate's names. When I collected at least four eligible candidate's names, I contacted them via email and attached the formal invitation package including invitation letter,

explaining the research purpose, and the consent document. Once participants replied with "I consent," the research process began. When each interviewee accepted my invitation, the interview was scheduled at a quiet place and proper period of time based upon participant's preference. At the beginning of the interview, I reviewed the informed consent form. During the 1-hour interview, I captured the rich information through an open-ended, semistructured interview. During the interview, I used two audio recording devices to record each participant's response. I did not do a pilot study.

The advantage of data collection through interviews was to gain insight into participant's thoughts and behaviors. Researchers use qualitative data collection to focus on words, sounds, thoughts, feelings, and other nonquantifiable data. Using open-ended questionnaires allows respondents much more freedom and flexibility when providing answers. Heath et al. (2018) pointed out when participants feel uncomfortable with the process, it has the potential to twist the data. Hence, the primary potential disadvantages of face-to-face interviews were researcher bias, untruthful responses, and misunderstanding questions by participants.

Yin (2018) suggested when researchers need to obtain information through physical access, researchers may use document review. Researchers can use document review as a tool either internally or externally to provide supporting evidence (e.g., company webpage, procedures and manuals listed on the company supplier portal, annual financial reports, etc.). However, document review may not represent the whole picture because in some cases, the author remains unknown, and documents are mostly unstructured. Scholars may be misled by these documents if they are unstructured

because they may introduce bias. To reduce potential biases from document review, I extracted evidence (e.g., company webpage, policies listed at company supplier portal, annual financial reports, etc.) that related to my research question: what strategies do aircraft manufacturing original leaders use for proper material pricing?

Saunders et al. (2015) suggested a way to obtain reliability is through member checking. I used member checking to validate the accuracy of my data analysis. Member checking occurs when participants review the researcher's interpretation to confirm accuracy of interpretation and offer additional interpretation. (McConnell-Henry et al., 2011). I asked each participant to review the conversation summary to make sure my interpretation is accurate without any bias. Participants were given the chance to make corrections and add any new information.

Data Organization Technique

Researchers use data organizing techniques for tracking and organizing data (Marshall & Rossman, 2016). One of the most important responsibilities and crucial aspects for every researcher is protecting the research study participant's privacy (Morse & Coulehan, 2014). To lower risks and enhance trust from every participant, scholars have to maintain the confidentiality of qualitative data, including identities and recordings (Ranney et al., 2015). Using proper codes instead of representing each individual interviewee's respective names is a mechanism to protect personal identity.

I used P1 for participant 1, P2 for participant 2, P3 for participant 3, and P4 for participant 4. Cox and Pinfield (2014) emphasized that researchers should store any related physical records or files on dedicated servers with authentication. Therefore,

related paper documents, research logs, digital voice recordings, and Microsoft Word were essential means to keep track of all research data. All the data will be stored on my personal computer hard drive with password protection for 5 years. After 5 years, all relative documents will be deleted from my personal computer hard drive.

Researchers are responsible for managing and organizing research data (Sotiriadou et al., 2014). I created personal storage from my personal computer to store personal logs, interview transcripts, and other documents. I will secure all the data with password protection for 5 years. After 5 years, I will destroy all the information which I have from my research study.

Reviewing the content of data results and organizing appropriately assisted in the coding of themes during analysis (Taghizadeh et al., 2022). The purpose of data organization was to assist the researcher in the retrieval of information from data analysis. Protecting the identity and confidentiality of research subjects is a critical component in research (McDermid et al., 2014).

Data Analysis

Yin (2018) identified the following types of case study triangulation: data, investigator, theory, and methodological. I chose methodological triangulation over other approaches because investigator, theory, and data triangulation do not apply in my study. I was only one investigator, using one method and theory to conduct my study. Therefore, I used methodological triangulation for my qualitative single case study. To perform data analysis and methodological triangulation, I utilized two data collection techniques by using semistructured, one on one interviews and reviewing company

documents regarding proper material pricing strategies. I also used member checking. De and Singh (2021) indicated that researchers may use member checking to verify the accuracy of the initial interview and to gain additional information and insight during the second member-checking interview. I employed methodological triangulation with one-on-one interviews and company document analysis to identify emergent themes to understand and interpret the data collected.

The 5-step data analysis process I used to identify and code themes from the data will be: (a) compiling data, (b) disassembling the data, (c) reassembling the data, and (d) interpreting meaning of the data, and (e) concluding the data (Yin, 2018). I created descriptions and explanations during organized data. The coding and sorting process of research data was necessary to identify different arrays and common themes (Wilson, 2014). Qualitative data analysis involves unraveling the data collection. An accurate transcription of recorded data records is necessary to achieve proper data coding. I transcribed the recorded data records into a Microsoft Word file to upload into the NVivo12 software program for data coding. Coding is a tool which researchers use to categorize, classify, sort, and arrange interview data in the most effective and logical way (Bishop & Lexchin, 2013). Researchers should carefully ponder the selection of codes as the code names have a significant impact on the quality of the data analysis (Garrett-Howard, 2012).

Houghton et al. (2014) pointed out that researchers can utilize NVivo software to improve research quality. I used NVivo to manage, organize, and facilitate data analysis, identify of themes, glean insight, and develop my observation conclusion. I uploaded

interview transcripts and company documents into NVivo. In the second step, disassembling the data in the database, I broke down the compiled data into smaller fragments and coding. The third step consisted of reassembling the data and seeing emerging themes and patterns. I analyzed the data collected for themes. Themes can assist and interpret finding to connect with conceptual framework and literature review. For this study, the findings are connected to the conceptual framework of price theory.

The price theory was the conceptual framework for the study and was introduced by Friedman in 1962. To capture main themes through data collection and analysis, De Toni et al. (2022) stated researchers can utilize the literature review and conceptual framework as a guide tool to maintain alignment. After I completed the theming process, I compared the themes to the conceptual framework and literature review. Therefore, I was able to identify areas where my findings were supported by the literature and areas where my findings may conflict.

Reliability and Validity

Reliability

Reliability refers to how the researcher will address dependability during the research. Donatelli and Lee (2013) considered dependability in qualitative research as the stability of data over time and conditions. In other words, dependability is an evaluation of the integrated process of data collection, data analysis, and theory generation. Feldt and Koch (2011) also considered dependability as associated with consistency. To ensure the research findings are consistent and repeatable, researchers have to practice dependability in a qualitative study. Researchers should ensure that if any other

researchers obtain data, scholars would arrive at similar findings, interpretations, and conclusions about the data.

Researchers use member checking to maintain study process accuracy (Harvey, 2015). Member checking is a quality control process in which investigators seeking accurate feedback from what the participants stated during the interviews (McConnell-Henry et al., 2011). I used member checking to address dependability. At the conclusion of each interview, I reminded each participant that I contacted them to arrange for member checking. Each participant had the opportunity to validate my interpretation of their responses. I contacted each participant within a week after the interview by phone to review and validate their feedback to ensure accurate interpretation of responses to the interview questions. If the participant suggested changes to the interpretation responses, I incorporated those changes. The researcher may use the strategy of member checking to assist with establishing exactness of responses (Harvey, 2015).

Validity

Jonsen and Jehn (2009) concluded that researchers using methodological triangulation of qualitative research may test validity through the convergence of the information on the same topic from different sources. Data and methodological triangulation were used by qualitative researchers to check and establish validity in research studies. By analyzing interview questions from multiple perspectives, data saturation should reveal consistency across data sources or approaches. Inconsistencies should not be seen as weakening the evidence but should be viewed as an opportunity to uncover deeper meaning in the data.

The purpose of qualitative research is to describe or understand the phenomena of interest from the participant's eyes; the participants are the only ones who can legitimately judge the credibility of the results (Cho & Trent, 2011). I used methodological triangulation and members checking to ensure credibility. As part of the member checking process, I had a conversation with each interviewee after I finalized my summary report. I ensured that my research findings were robust, rich, comprehensive, and well-developed.

From a qualitative research perspective, transferability refers to the degree to which an investigator can transfer to other contexts (Street & Ward, 2012). I enhanced transferability by doing a thorough job of describing the research context and the assumptions that were central to the research. Therefore, other researchers might be able to determine whether my study can be applied to their work.

Confirmability refers to the degree to which the research results may correspond to other research (Tiira & Lohi, 2014). I used NVivo to structure coding and theme development to ensure objective analysis decisions. Assigning specific attributes to data can helped confirm propositions formulated during analysis of evidence such as responses to interviews. The researcher can document the procedures for checking and rechecking the data throughout the study (Yuan et al., 2022). Study findings included descriptions of paths to interpretations and direct quotations from study participants.

Denzin and Lincoln (2011) defined saturation as occurring when there are no new themes or repetitive data coming forward. Investigators observe that redundancy yields

similar results and achieve research purpose during data collection. Researchers are able to achieve the point of data saturation through data collection.

Transition and Summary

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. In Section 2, I re-stated my purpose statement, then addressed the role of researcher, participants, research method and design, population and sampling, ethical research, data collection instrument, data collection technique, data organization techniques, data analysis, and reliability and validity. In Section 3, I will discuss the results of my study. I will present my findings, applicable best business case practices, social change impacts to business and suggestions for further study, reflections, and study conclusion.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders use for proper material pricing estimates. In Section 3, I discuss the (a) presentation of the findings, (b) application to professional practice, (c) implications for social change, (d) recommendations for action, (e) recommendations for further research, (f) reflections, and (g) conclusion. The findings came from semistructured interviews with four aircraft manufacturing organizational leaders in the state of Georgia and aviation-related documents. The themes were determined using Yin's (2018) five-step data analysis process. Four major themes emerged: (a) the impact of unplanned events, (b) supplier manufacturing capability and performance, (c) sourcing selection and regulation, and (d) supplier partnership and long-term agreement.

Presentation of the Findings

Four aircraft manufacturing organizational leaders at a successful aircraft manufacturing business participated in interviews to explore successful material pricing strategies. Each leader had worked in the aviation industry for at least 10 years and had experience in at least one of four functional areas of the business: (a) procurement, (b) supplier development, (c) sourcing, and (d) manufacturing. Leaders were also involved in aircraft manufacturing operations in the state of Georgia. These criteria ensured that the participants had insight and knowledge related to the research topic.

The price theory was the conceptual framework for this study and was introduced by Friedman in 1962 (Friedman, 1962). To capture main themes through data collection

and analysis, Yuan et al. (2022) stated researchers can utilize the literature review and the conceptual framework as a guide to maintain alignment. After I completed the theming process, I compared the themes to the conceptual framework and to the literature. I identified areas where my findings were supported by the literature and areas where my findings conflicted. The following four themes emerged from the data collection and analysis: (a) the impact of unplanned events, (b) supplier manufacturing capability and performance, (c) sourcing selection and regulation, and (d) supplier partnership and long-term agreement (see Table 2).

Table 2

Frequency of Theme Responses by Participants

Participant	Theme	Number of Responses
P1	The impact of unplanned events	4
	Supplier manufacturing capability and performance	6
	Sourcing selection and regulation	4
	Supplier partnership and long-term agreement	2
P2	The impact of unplanned events	7
	Supplier manufacturing capability and performance	2
	Sourcing selection and regulation	5
	Supplier partnership and long-term agreement	8
P3	The impact of unplanned events	6
	Supplier manufacturing capability and performance	2
	Sourcing selection and regulation	7
	Supplier partnership and long-term agreement	6
P4	The impact of unplanned events	2
	Supplier manufacturing capability and performance	8
	Sourcing selection and regulation	3
	Supplier partnership and long-term agreement	2

Theme 1: The Impact of Unplanned Events

The first theme that emerged was the impact of unplanned events. Within this

theme, five key factors were identified: supply chain disruptions, effective response plan, natural disasters, inflation, and COVID-19 (see Table 3). The International Civil Aviation Organization (ICAO) annual procurement report document obtained from ICAO provided supporting evidence for these five key factors.

Table 3

Key Factors Associated with Impact of Unplanned Events

Theme	Key factors
The impact of unplanned events	Supply chain disruptions Effective response plan Natural disasters Inflation COVID-19

Connection to the Literature

All four participants indicated that the COVID-19 pandemic impacted aviation in a way that had never happened previously, and leadership team members had never worked so closely with government regulations. Since COVID-19 had a significant effect on the global economy, different countries implemented different approaches to reduce the negative impact COVID-19 had on all aspects of business. During this challenging time, Bandyopadhyay and Kim (2022) found that business leaders not only adopted government health policies facilitated by an emergency committee, but also created new ways to reduce the impact such as granting flexible work hours and using more domestic suppliers instead of international suppliers. The pandemic disrupted supply chain performance, created a sharp drop in global consumer demand, disrupted growth in connectivity, and increased operation costs due to the limited supply of services and the application of restrictive non-tariff measures. Over the long-term, the application of

stringent measures by both exporters and importers minimized the economic impacts of the pandemic on regional economies especially global inflation and geopolitical tension (Difrancesco et al., 2022). Learning from successful experiences and using the above strategies helped business leaders to control not only the present COVID-19 effects but also future pandemic economic impacts.

Connection to the Conceptual Framework

Transportation pricing became a huge issue during the pandemic worldwide, especially shipping costs. During the pandemic, Ershadi and Ershadi (2022) found that transportation pricing issues happened when logistics planning was not coordinated with routes or schedules, and when oversea foreign countries caused difficulties. Ali et al. (2022) presented an example of how to allocate material sourcing suppliers and effectively enhance supplier network performances with their research on the automotive industry. Operating with a worldwide supply-based network was also found to enhance business performance. Zhang and Yu (2020) conducted different criteria weight assessments to examine decision making about sourcing allocations used by selected global suppliers. Zhang and Yu suggested manufacturing businesses utilize modularization as a better way to simplify production operation processes to reduce transportation time and maintain supplier stability. P2 described how COVID-19 affected business strategies. P2 indicated that COVID had a broader impact on business operations and the suppliers. There was also fear from employees that they would get sick. This was particularly concerning given that the organization was unable to provide options to work from home.

Theme 2: Supplier Manufacturing Capability and Performance

The second theme that emerged was supplier manufacturing capability and performance. Within this theme, 10 key factors were identified: cost of creating a product, higher quantities, meeting specs requirements, labor hour, on time delivery, supplier production process, quality, complexity of the component, tribal knowledge, manufacturing ability and long lead times (see Table 4). The Aviation market forecast document obtained from Federal Aviation Administration (FAA) provided supporting evidence for these key factors.

Table 4

Key Factors Associated with Supplier Manufacturing Capability and Performance

Theme	Key factors
Supplier manufacturing capability and performance	Cost of creating a product Higher quantities Meeting specs requirements Labor hour On time delivery Supplier producibility process Quality Complexity of the component Tribal knowledge Long lead times

Connection to the Literature

Supplier manufacturing performance is an important determinant of business productivity, and business purchasing departments can help to translate performance sustainability into performance benefits (Ali et al., 2022). Businesses are continually trying to leverage large volume orders with different customers. Because of

manufacturing capabilities, organizations can overcome potential trade-offs between different manufacturing performance and different customer demands.

Manufacturing technologies have been improving and more precise production systems have forced companies to identify and use new business management techniques (Dong & Truong, 2022). To gain and retain a competitive advantage, companies need to produce high-quality goods and aftermarket services in a brief period of time, and at the lowest possible cost. Because of the reality of the market, a supplier may not increase the selling price to ensure no loss takes place on some of the manufacturing runs; however, to keep a good customer, they have to do some manufacturing runs at a loss.

Calik (2020) suggested that contemporary business supply chains should add supplier quality scorecards into consideration to assure they receive high quality materials. In addition, Fazlollahtabar and Kazemitash (2022) found that suppliers may need to improve quality and delivery to get their contracts extended. In relation to this, P1 stated,

> Suppliers have to provide parts which meet our requirements and that are delivered on time. Any late deliveries will cause a penalty or payment rejection, based on the contract. During the contract negotiation and prior to awarding the bid to supplier, those supplier performance scorecards have to meet our selection requirements.

While business leaders seek reliable suppliers, they may move between suppliers to meet objectives or to facilitate stable partnerships with different vendors. Gijo (2021) argued that some service industries may not need entire supply chain networks to maintain

business efficiency; however, without sustainable supply, businesses may not be able to support unpredictable demand increases. Tayyab et al. (2022) indicated that business leaders must be willing to build robust, streamlined systems to monitor manufacturing processes and to control quality.

Manufacturing is one area where leaders constantly seek a sustainable supply chain to prevent potential material shortages. In the supplier selection decision-making approach, Modibbo et al. (2022) considered four different criteria to evaluate suppliers' capabilities: cost, delivery, business financial health, and quality. According to surveys conducted by Alrasheedi et al. (2021), 40% of manufacturing companies agreed that, with early supplier engagement during the product development stage, potential producibility failure is reduced significantly. A practical aspect of business-to-business partnerships is that it involves many variables and multi-criteria decision making. Applying multi-criteria to rank suppliers helps business leaders find supportive partners. In addition, businesses also demonstrate pricing factors as important parameters (Yazdani et al., 2020). P4 further explained that supplier manufacturing capabilities are important due to their role in providing excellent quality and good workmanship.

Connection to the Conceptual Framework

Kumar and Ganguly (2021) stated that manufacturing business leaders commonly utilize cost-based pricing for their products or services because it is a simple and lucrative strategy to use. In cost-based pricing strategy, the final price of a product or service is determined using standard costs and adding a certain percentage of costs for the profit margin (Ates & Memis, 2021). Business leaders can use cost-based pricing strategies to

adjust the product or service prices based on the cost to create the product or execute the service.

Business operation strategies should align several key factors, including products, customers, competitors, and desired profit margin. At the same time, businesses use complex scoring assessments to evaluate cost, delivery, and quality when the economic situation is uncertain (Maestrini et al., 2021). Optimal price exists on two sides of the service market, between monopoly and duopoly competition, while incorporating the quality-of-service industry (Maestrini et al., 2021). Lelkes and Krueger (2020) agreed the lowest-price supplier selection decision leads to a higher risk of uncertainty, may affect quality, and that addressing these issues may be costly. P1 talked about supplier performance when there is this type of contract and P3 had concerns that using the lowest cost supplier may result in poor supplier performance,

> Many times, we have experiences when a supplier awards contracts with a very low price to start the delivery of the first batch. Then, later on, the supplier has late deliveries, quality is poor, and we have to push the supplier to understand what's going on. Otherwise, it will impact our aircraft production and delivery to the customer. What we should do is a cost analysis to make sure supplier's profitability to make outstanding good quality and performance. Manufacturing business can improve the quality of service to gain more market share and attract more potential customers. Right now, in the aviation industry, there aren't really that many qualified OEM suppliers because requirements are extremely high. Therefore, my company sometimes uses 'Aviation Tribal Knowledge' to find

good suppliers along with stable performances like on-time deliveries, reasonable pricing, and excellent quality. We try to look at all sides of the equation to evaluate the supplier, not just based on pricing.

Theme 3: Sourcing Selection and Regulation

The third theme that emerged was sourcing selection and regulation. Within this theme, eleven key factors were identified: specific venders, parts and materials acquisition, bidding process, commodities and materials, regulation of the base upon government law, selection process, domestic but also international suppliers, supply base, raw material cost, cost comparison, and readiness review (see Table 5). The ICAO annual procurement report document obtained from ICAO provided supporting evidence for these eleven key factors.

Table 5

Key Factors Associated with Sourcing and Regulation

Theme	Key factors
Sourcing selection and regulation	Specific vendors Parts and materials acquisition Bidding process Commodities and materials Regulation of the base upon the governments law Selection process Domestic but also international suppliers Supply base Business reputation Cost comparison Readiness review

Connection to the Literature

Holma et al. (2021) stated business leaders terminate existing supplier contracts,

and begin working with new suppliers simultaneously to minimize or eliminate disruptions. Business leaders can seek better suppliers to support market demands, and nonconforming suppliers should be terminated as soon as possible instead of damaging business production capabilities. During the business-to-business supplier switching process, Holma et al. found that the customer and supplier relationship impacted the transition process significantly. Business leaders develop a transition process plan to change suppliers, and this is important for private sector organizations.

Fazlollahtabar and Kazemitash (2022) indicated that business leaders use different factors to determine the best supplier selection. In addition, Mahmoudi (2022) proposed three factors in their assessment regarding global supply chain network development and suppliers' allocation. These factors are quality, delivery, and cost. P2 described how their company makes selections for suppliers,

> Over the years, we have known our suppliers' location - domestic and international. We have a process to choose a potential supplier starting from requesting a sales proposal on how to handle our aircraft components, warranties, etc... Our Engineering does involve the supplier evaluation, and we review supplier's proposal together, then we make the final decision to award the supplier.

P3 provided similar information about the importance of the supplier selection process. Shabani-Naeeni and Ghasemy Yaghin (2021) concluded that three essential factors that determined the proper supplier are quality level, on time delivery score, and purchasing risk. Sachdeva et al. (2021) argued that a well-defined selection criterion

should be able to narrow down a large potential supplier pool to a manageable size and be able to determine the best supplier selection. Business supplier development can help businesses in times of uncertain demand.

Global business supply chain operations are highly impacted by the world economy, including those in both developed and developing countries. Business leaders that use customer feedback to reflect on joint product development with suppliers have improved product quality and increased customer brand loyalty (Yang et al., 2020). When business leaders relocate their facilities overseas to reduce costs and be closer to sourcing, hidden costs and potential risks might impact overall revenue due to issues with standardized process replication, local government regulations, and workforce skill development (Wiech et al., 2020). P1 said,

> During this difficult time for aviation manufacturers, geopolitical conflict affected our suppliers in Europe. Suppliers were suffering with the change to sustainable energy, the slowing down of manufacturing capabilities, and the late delivery of components plus cost increasing a lot. Aerospace OEM suppliers all over the world are facing these challenges. So, when selecting a supplier, it is very challenging for our company and strategic planning is difficult, especially if the company as a whole decided to use international suppliers.

P4 provided similar feedback about the challenges with aerospace suppliers. The participants indicated that maintaining a partnership with suppliers plays an important role for manufacturers during the design phase of production.

Connection to the Conceptual Framework

The global supply chain is an important aspect of business operations. Global supply chain operations highly influence the world economy, regardless of whether the business is in a developed country or developing country. Consumers' decisions about goods or services can influence, and be influenced by, price promotions, price information transparency, willingness to pay fairly, and competitor offerings (Piekkola, 2020). When a company leader decides to relocate a facility overseas to reduce cost and to be near sourcing, they may also face hidden costs and potential risks such as standardized processing policies, local government regulations, and workforce skillsets development that could influence the overall revenue of a company (Sombultawee & Pasunon, 2022). Singla and Sridharan (2021) suggested that pricing strategy experts could pay attention to not only price fairness, but also to consumer decision-making when outsourcing overseas. Consumers commonly use market research to understand pricing and compare their prices with similar or the same products from different suppliers. P1 described how the company handled the change to using a different supplier,

> Structure part suppliers have so many selections, not only in United States but also overseas. We start with letting the supplier produce a test part to see the quality. If everything looks good and the price is right, we go from there. Once we think they are a reliable and capable supplier and cost-effective supplier, we invite them to be a part of our supplier network database.

Ates and Memis (2021) also identified appropriate validation steps and methods to help customers determine the best market demand to make purchasing decisions. When

consumers determine an optimal market price value, it creates a better negotiation environment to help both sides understand how and why a product is priced the way it is (Kumar & Ganguly, 2021). In addition, business leaders may also have a better strategy to help customers comprehend pricing, which may increase sales over time.

When business leaders make any purchasing decisions in the traditional marketplace, they commonly consider product quality and aftermarket service if the price is in the company planned budget. Making purchases at higher prices than those that are within the target budget may be an acceptable option when quality performance is a major concern for the product (Yang et al., 2020). Procurement supplier-selection criterion played an important role and affected manufacturing operation activities (Sombultawee & Pasunon, 2022). When significant cost and time occurs from using unreliable component sourcing, procurement decisions are then driven by high-quality performance, not the lowest price.

Business leaders seek global outsourcing strategies because they want to utilize different sourcing and lower the risks. Business leaders can better manage multiple sources to achieve more stable production deliverable and support strong market demand (Lelkes & Krueger, 2020). Real-time pricing adjustments impact retail business profitability (Dong & Truong, 2022). In a global economy, business leaders can focus on more different material sourcing to lower any single sourcing risk and maintain productivity.

Procurement strategists consider utilizing multiple sources for goods to lower uncertainty and decrease risk; however, the availability and use of multiple sources

increases the complexities that must be managed when using multiple suppliers. Maestrini et al. (2021) found that bundling and competitive prices significantly affected business purchasing behaviors and decision-making. Piekkola (2020) proposed that bundling and competitive pricing helps manage the supply base diversity and these practices lower supply chain uncertainty in business procurement and sourcing. Business leaders seeking to increase profitability can consider bundling strategies to lower costs.

Theme 4: Supplier Partnership and Long-Term Agreement

The fourth theme that emerged was the supplier partnership and long-term agreement. Within this theme, eleven key factors were identified: legal issues, sub-tier suppliers, supplier relationships, bulk discount, supplier agreement, competitive sourcing, non-recurring cost, long term agreement, share cost of development, obligation of supplier, and termination clauses (see Table 6). The ICAO annual procurement report document obtained from ICAO provided supporting evidence for these eleven key factors.

Table 6

Key Factors Associated with Supplier Partnership and Long-Term Agreement

Theme	Key factors
Supplier partnership and long-term agreement	Legal issues Sub tire suppliers Supplier relationships Bulk discount Supplier agreements Competitive sourcing Non-recurring costs Long term agreements Shared cost of development Obligation of the supplier Termination clauses

Connection to the Literature

The automotive industry is one of the most well-known for joint venture partnerships. Liang et al. (2021) stated that business leader agreements between automotive manufacturers and businesses frequently achieve win–win conditions from a cost and maintenance perspective. Liang et al. also found that business leaders purchase fleet vehicles through different sourcing, depending on the available deal and may rent to own or use direct leasing to keep expenses down. This kind of joint venture partnership supports all businesses involved, their relationships with one another, and would be a valuable manner of doing business in the aerospace industry.

Startup businesses can also become part of supply chain networks to speed up business operations. Owners of startup businesses have a challenging time engaging with existing mature markets that are continuously growing. Wagner (2021) argued that startup business leaders not only face slow internal response challenges, but also experience complex, external environment challenges. To make business capital investments favorable for existing and startup businesses, evaluations should be conducted by a leadership team, and all efforts should be made to make decision-making easier.

To reduce supply chain uncertainty, business leaders build their own supply chain networks that support business operations. Sachdeva et al. (2021) analyzed two business cases and proposed a unique approach to help business leaders select proper suppliers and balance out quality, cost, and delivery. Stable partnerships between businesses and suppliers can enhance operational productivity. Ellegaard et al. (2022) stated that because

of global sourcing uncertainty, businesses need to consistently create alternate plans and supplier lists for use in worst-case scenarios. P2 explained how businesses use "buyer furnished equipment" to reduce material uncertainty.

> Our supply chain team buys our own materials for different parts and then we ship these to our designated tier 1 supplier to make parts for us. This helps us to lower costs and have strong partnerships because OEM suppliers do not have to worry about raw material shortages anymore, they only need to focus on manufacturability—how to improve quality and make sure deliveries come on time.

Connection to the Conceptual Framework

Business and supplier cooperation commitments refer to the extent to which a manufacturer leader is dedicated to a long-term relationship. Such a commitment allows for operational excellence through investment in economic exchanges. To boost commitment and have a dynamic and stable relationship, Singla and Sridharan (2021) suggested that a manufacturer leader should identify major suppliers who are willing to share information on cost of raw materials, labor, and overhead for products. To maintain cost transparency, suppliers need to agree to share cost information for the products provided. This would require a manufacturer leader to perform a cost analysis and engineering sanity check in the process of supplier selection and contract agreement. P1 stated that a long-term agreement is a benefit to the company by sharing,

> We have a long-term agreement with suppliers to build a strong relationship and so we can get an idea of anything that would affect pricing. So, as the

> manufacturer we would not accept the supplier increasing the price or changing anything not stated in the contract. In this case, we would definitely contact the supplier and ask them what was going on and to correct the problem.

Aircraft manufacturers using OEM suppliers for a strategic partnership for business may achieve the most by balancing a diagnostic and interactive use of the measurement system as they are both positively related to supplier performance improvement. Wiech et al. (2020) suggested that manufacturers invest substantially in personnel, proprietary expertise and technology, and equipment or support systems to build a relationship with their major suppliers. OEM suppliers in India prefer to have a long-term relationship for building trust, which helps OEM suppliers go the extra mile when needed. Apart from large suppliers supplying technology and proprietary items, OEMs prefer to have an informal relationship so that they enjoy flexibility and attain agility (Dong & Truong, 2022).

Supplier selection, sourcing allocation, supplier management/material availability, supply chain maintenance, and joint venture partnerships are all keyways that price theory is applied to business. P4 and P1 had very similar viewpoints. P4 stated,

> For many components such as avionic, landing gear, flying systems, and a lot more—eligible suppliers are limited. When new aircraft programs are at an early development stage, partnerships with key suppliers are very important to reduce any potential risks and to make sure we incorporate any new aircraft program designs. These are the key factors to making our company a success.

Therefore, identifying mechanisms to determine trustworthy and stable suppliers can become a critical decision to promote business growth. A business-to-business supply chain strategy is considered an important success factor as a part of price theory. Businesses consistently look for alternative suppliers to support operations as needed. P3 said,

> Our company buys raw materials and delivers them to the supplier facility. Because of the potential for raw material shortages, doing it this way makes sure we have what we need because a supplier could experience material issues. At the same time, we can lower parts pricing for repeat orders without having price increases.

Difrancesco et al. (2022) highlighted that reliable supplier capacity also impacts businesses, including how leaders execute mass production and support current market demands. Without procurement, the correct acquisition of raw materials, and on-time delivery, businesses cannot have a value-added process to manufacture reliable and cost-effective products and deliver them to customers. In addition, in a competitive market, if manufacturers and suppliers can determine extra discounts and provide more environmentally friendly merchandise, business leaders will be more willing to purchase the products (Bandyopadhyay & Kim, 2022). Business leaders can look at every aspect of customer willingness during organization strategy development and help customers make decisions quickly so they will buy products.

Applications to Professional Practice

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders used for proper material pricing estimates. The findings of this study may help aircraft manufacturing organizational leaders identify proper material pricing strategies. Early pricing visibility strategy could help business leaders establish connections between manufacturers and suppliers (Yuan et al., 2022).

The four major themes findings of the study included (a) the impact of unplanned events, (b) supplier manufacturing capability and performance, (c) sourcing selection and regulation, and (d) supplier partnership and long-term agreement. These themes represent strategies that aircraft manufacturing organizational leaders can apply to change the way the aviation business leaders consider material pricing strategies. Implementation of these strategies may lead to process improvements to increase profitability.

Aviation businesses leaders should understand the ways that material pricing management affects manufacturers from both a daily operational perspective and a strategic perspective. Material pricing is one of many critical success factors for aviation businesses. Large corporations may have several different business divisions which allows internal segment-to-segment financial transfer pricing processes. Business leaders seeking to maintain competitiveness should not always focus on low prices, instead they should also focus on quality delivery and highest service level. Aircraft manufacturing organization leaders can use the themes as best practice guidelines and make more effective business decisions for the organizations.

Implications for Social Change

The study results could be valuable to organizational leaders by providing proper material pricing strategies and implementation. Findings of the study may allow aircraft manufacturing organizational leaders to improve cost and increase profitability. Business growth can bring more job opportunities to the community locally, then boost the local economy and businesses.

The implications for positive social change include the potential for business growth that increases revenues to support community investments, and sustainability. The business community support may come through active partnerships with different local charity programs, employees, and their families. These impacts may create a positive social transformation in the communities.

Recommendations for Action

These findings are applicable to business leaders, strategic planning implementers, procurement specialists' vendors, and consultants. Business leaders in the aviation industry, vendors and consultants can use these results to improve profitability. Supplier selection, sourcing risks and allocation, supplier management/material availability, sustaining supply chain, and joint venture partnerships are all ways that price theory can be applied to businesses to increase revenue. Therefore, identifying mechanisms to determine good and stable suppliers can be critical to promoting business growth. Business-to-business supply chain strategies can also be considered as a critical success factor as part of price theory to increase revenue. Robust supply chain and logistics support can provide the organization with future growth.

I am planning to publish the study in the Pro Quest/UMI dissertation database. I will also seek to present the results of this research at seminars and other professional forums. I will also seek to present the results of this research at industry-relevant conferences such as National Business Aviation Association, American Aerospace & defense Summit, and American Institute of Aeronautics and Astronautics.

Recommendations for Further Research

I explored strategies aircraft manufacturing organizational leaders used for proper material pricing estimates. Parguel et al. (2022) indicated that limitations are potential weaknesses that are beyond the researcher's control. First, I have limited research experience which may increase potential unexpected bias. Future research could be conducted by more experienced researchers. Future research could also include observations in addition to interviews and documents.

Secondly, my research questions may not capture all the information. Future researchers could explore successful strategies using a larger sample from multiple companies in the same industry, covering an expanded different geographic area in United States. Therefore, findings may have more boarder view of strategies aircraft manufacturing organizational leaders used for proper material pricing estimates.

Finally, participants' personal viewpoints may be biased. The participants in this study were leaders only and from one company specifically in state of Georgia. Future researchers could include other employees from other aircraft manufacturers or suppliers such as buyers, engineers, contract administrators, and mechanics and in different locations.

Reflections

With several years of aviation professional experience in industrial engineering, supply chain, and manufacturing, I have observed the positive benefits of material pricing strategy implementation. In my study, I identified strategies that could increase business leaders' confidence on how to use proper material pricing estimates. The detailed review of scholarly literature provided insights into the development of the framework after the analysis of the study data. The combination of a detailed review of scholarly articles and the research into the knowledge and insight during the interview process provided valuable personal insight.

Through those professional leaders' lenses, I presented a very similar situation which I believe similar to other aircraft manufacturers. However, in my study, I did not use other aircraft manufacturer to deeply dive and understand how price theory affect to aviation manufacturers. I believe future research may focus on different levels of suppliers.

I discussed supplier especially tier-1 level suppliers; however, the whole industry has many different levels of suppliers domestically and internationally which drives supply chain issues and disruption because today's global aviation and aerospace industry are more complex than ever. Since I used a single case study, future researchers could pay more attention on wider range of participants during interviewing such as tier-2 and tier-3 suppliers, other aircraft manufacturers, aviation MRO (maintenance, repair & overhaul) business etc.

Earning trust and access to qualified participants was a challenge in a short period of time. I am grateful for the leaders who volunteered their time and expertise. Through this study, I also learned about my personal biases and how to address them. Since I have significant experience in the aviation industry, I had my own ideas about what I might find. I controlled my biases through using an interview protocol, using methodological triangulation, and conducting member checking. Through this doctoral-level journey, I have grown as a professional, and now the findings have increased my knowledge of how business leaders determine proper pricing strategies. I plan to use these best practice strategies in my current and future profession.

Conclusion

The purpose of this qualitative single case study was to explore strategies aircraft manufacturing organizational leaders using for proper material pricing estimates. The findings of this study may help aircraft manufacturing organizational leaders identify proper material pricing strategies. When business leaders create strategies to determine proper pricing strategies, they also identify opportunities for the next improvement activities. These findings could motivate leaders to be more knowledgeable in the material pricing process. Business leaders could use the results of this study to educate employees on strategies for material pricing. When organizational leaders are more knowledgeable, business can potentially increase business profitability.

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Appendix A: Interview Protocol

Interview Protocol	
What you will do	**What you will say-script**
Introduce the interview and set the stage-often over a meal or coffee	Introductory *Hello, my name is CK Jen. I appreciate your big help and coming to support my study. This interview will take approximately about 1 hour. During this interview, I will ask you about what strategies you have used for proper material pricing in _____ organization.* *The purpose of my study is to explore aircraft manufacturing organizational leaders use for proper material pricing estimates strategies.*
Review consent form. Before participant sign consent, confirm participant understand their rights.	**Consent form** *Before we starting this interview, I would like to go through this consent from which I send you via e-mail.* *This form is address the following: (a)research study data collection process, (b) privacy and confidentiality expectations, (c) voluntary participation with option to withdraw from the study at any time*.
Ask permission to record interview conversation with participant approval	**Recording permission** *In order to support my notetaking, I would like to use my phone to recording our conversation. Therefore, I would not miss any important detail messages.* **If yes:** Great. Let me know please if you want to turn off recording device at any time. **If no:** No problem, I will only take notes during our conversation.
	Initial questions *Do you have any further questions you would like to ask before we start this interview*

	If yes: discuss questions
Reminder participant can ask questions at any time throughout the interview. Watch for non-verbal queues Paraphrase as needed Ask follow-up probing questions to get more in depth	**If no:** If you have any questions feel free to ask at any time, I am more than happy to answer your questions. 1. What are the reasons to consider proper material pricing strategies? 2. How do you assess the effectiveness of business strategies for proper material pricing? 3. What strategies are you using to achieve proper material pricing? 4. What processes did you find worked best to achieve proper implementation of your material pricing strategies? 5. How, if at all, did your organization revise its material pricing strategies? 6. What additional information, if any, can you provide about the successful strategies your organization has developed and implemented for proper material pricing strategies?
	Closing script
Wrap up interview and thanking once again	*Thank you for your time today, Mr./Mrs. (name). Your responses are very clear to explanation regarding to how your organization practice proper material pricing strategies.*
	Follow up interview Request
Schedule member checking follow up interview	*Once I complete succinct synopsis of your responses, do you mind I schedule another follow up interview with you and verify I understood your responses correctly?* **If yes:** Do you have any prefer time? Thank you so much for your time today. **If no:** Thank you for your time today.

Follow Up Interview Protocol	
What you will do	**What you will say-script**
	Follow Up Interview scrip
Introduce follow up interview and set stage	*Thank you for this second time interview with me. This is a follow up interview from our last time initial conversation. I have our last time interview responses synopsis for review.*
Share a copy of the succinct synthesis with	7. What are the reasons to consider proper material pricing strategies?

each participant	
	Add a succinct synthesis of the interpretation- perhaps one paragraph.
Bring in probing questions related to other information that you may have found- notes the information must be related so that you are probing and adhering to the IRB approval.	8. How do you assess the effectiveness of business strategies for proper material pricing?
	Add a succinct synthesis of the interpretation- perhaps one paragraph.
	9. What strategies are you using to achieve proper material pricing?
Walk through each question, read the interpretation and ask: Did I miss anything? Or, what would you like to add?	*Add a succinct synthesis of the interpretation- perhaps one paragraph*.
	10. What processes did you find worked best to achieve proper implementation of your material pricing strategies?
	Add a succinct synthesis of the interpretation- perhaps one paragraph.
	11. How, if at all, did your organization revise its material pricing strategies?
	Add a succinct synthesis of the interpretation- perhaps one paragraph.
	12. What additional information, if any, can you provide about the successful strategies your organization has developed and implemented for proper material pricing strategies?
	Add a succinct synthesis of the interpretation- perhaps one paragraph.