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# Strategies Leaders of U.S. Laboratory Testing Organizations Use to Maximize Customer Satisfaction

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This is to certify that the doctoral study by

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Walden University
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Abstract

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Satisfaction

by

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Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Maximizing customer satisfaction is vital for U.S. laboratory testing organizations to succeed within a competitive industry. Leaders of U.S. laboratories are concerned with customer satisfaction because dissatisfied customers can negatively impact customer retention, profitability, and firms' competitiveness. Grounded in the social exchange theory, the purpose of this qualitative multiple case study was to explore strategies that leaders of U.S. laboratory testing organizations implemented to maximize customer satisfaction. The participants were five leaders of laboratories in the southeast United States that held current ISO 17025 certification, were non-medical testing laboratories, and received positive online customer reviews. Data were collected from semistructured interviews, online customer reviews, and online organizational data. Data were analyzed using pattern matching, and two themes emerged: developing customer relationships and providing quality services. A recommended action is for leaders to implement and communicate organizational policies through companywide meetings. The implications for positive social change include the potential for satisfied customers to have more confidence in decisions that positively impact communities and society.

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Dedication

I dedicate this study to my family. To my parents for their unconditional love and encouragement during this journey. They believed in me, even when my own belief faltered. To my children for their daily joy, laughter, and love that fills our home. You make me want to be the dad that you see in me. To my wife for her unwavering support and love. For better, for worse, through late-night studying and lack of sleep crankiness, you have been there, I love you, Tiffany. I love you all.

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Section 1: Foundation of the Study

Satisfying customers should be a strategic goal for leaders of U.S. laboratory testing organizations. Within a highly competitive industry, customer satisfaction has been found to provide a competitive advantage for organizations (Adi et al., 2022). Implementing strategies to maximize customer satisfaction could help organizational leaders create a competitive advantage.

**Background of the Problem**

Customer satisfaction is considered an important topic for leaders of laboratory testing services. Within a competitive business market, an organization's success could depend on satisfying customers (Dam & Dam, 2021). The U.S. laboratory testing industry is often considered by organizational leaders to be a highly competitive industry, with laboratory services including geotechnical, mechanical, radiation, or environmental testing (IBISWorld, 2021). The U.S. laboratory testing is a $23 billion dollar a year industry with average profit margins near 11% (IBIS World, 2020). The industry regulatory requirements guiding customers and U.S. laboratory testing organizations indicates methods offered between competing labs are often similar (IBIS World, 2020). The testing needs of customers and regulatory guidance by U.S. agencies can create standardized testing capabilities between competing labs. With the same information provided from testing methods offered by different laboratories, leaders of U.S. laboratory testing organizations need to develop competitive advantage strategies. A competitive advantage for organizations could be satisfying customers (Adi et al., 2022). Customer satisfaction is defined by researchers as measuring how services of an

organization meets the expectations of customers (Dam & Dam, 2021). If organizations do not meet customers' expectations of provided services, then customers could become dissatisfied and switch to competing organizations. To help reduce potential loss of revenue, leaders of U.S. laboratory testing services could implement strategies for maximizing customer satisfaction.

## Problem and Purpose

The specific business problem is that some leaders of U.S. laboratory testing organizations lack strategies to maximize customer satisfaction. The purpose of this qualitative multiple case study was to explore optimal strategies that leaders of U.S. laboratory testing organizations can implement to maximize customer satisfaction. Using a qualitative multiple case study design, I explored the complex and subjective nature of strategies for maximizing customer satisfaction. The target population for this study was five leaders of testing labs who have successfully maximized customer satisfaction.

## Population and Sampling

The general population for this study were leaders of U.S. laboratory testing organizations. The geographic location of this study included laboratory testing organizations located within the southeast region of United States. Multiple sources of data were collected for this study. According to Yin (2018), data sources for a study may include company documentation, historical trends of the organization, open-ended qualitative interviews, and direct reviews of the organization. Data sources for this study consisted of interviews with organizational leaders along with data gathered from customer reviews and reviewing documentation provided on organizational websites.

Interview participants consisted of leaders from five organizations within the U.S. laboratory testing services industry. My review of multiple data points provided information encompassing customer satisfaction practices. Utilizing multiple sources to develop a triangulation of data helped develop strategies leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

## Nature of the Study

I evaluated three research methods and five designs for this study. The three primary research methods are quantitative, mixed methods, and qualitative (Creswell & Creswell, 2018). A quantitative approach is used to test a hypothesis by analyzing a correlation between independent and dependent variables (Creswell & Creswell, 2018). Likewise, a mixed methods process involves first testing a hypothesis and then exploring the outcome of the analysis. Neither the quantitative nor mixed-methods approach was appropriate for my study because I did not analyze relationships between variables. For my research, I used a qualitative method. A qualitative methodology is appropriate because researchers seek to understand and conceptualize people's experiences and feelings within real-world settings (Ravitch & Carl, 2016). A qualitative research method was appropriate for me to explore the complex and subjective nature of strategies needed to maximize customer satisfaction.

Qualitative researchers have multiple design options for conducting their research studies. Standard research designs used by qualitative researchers include narrative, phenomenology, ethnography, and case study (Creswell & Creswell, 2018). Researchers using a phenomenological design focus on recalling experiences and exploring the

perspectives of participants to understand an outcome (Moustakas, 1994). The phenomenological design was not suited for my study because I did not explore individual experiences or perspectives that lead to customer satisfaction. Researchers use a narrative design to explore the experiences and stories of a select target group (Ravitch & Carl, 2016). A narrative design was not helpful in my study because I did not source the stories and experiences of the leaders. Researchers use an ethnographic design to study the interactions and behaviors of people within a culture (Bloomberg & Volpe, 2016). An ethnographic design was not appropriate for my study because I did not observe the interactions and behaviors between employees and customers.

I used a case study design for my research study. Researchers use a case study design when the outcome of a phenomenon is known, but there is a desire to understand how to replicate the effect within similar settings (Yin, 2018). The case study design is appropriate because I explored strategies to replicate an outcome of a known phenomenon.

## Research Question

What strategies do leaders of U.S. laboratory testing organizations use to maximize customer satisfaction?

## Interview Questions

1. What strategies do you use to maximize customer satisfaction?

2. How, if at all, do you measure customer satisfaction?

3. What types of strategies do you use to motivate employees to engage in customer satisfaction?

4. What strategies do you use to address customer service issues?

5. What types of organizational policies do you use to support customer satisfaction?

6. What employee training strategies do you use to enhance customer satisfaction?

7. In what ways do your firm's service quality standards impact customer satisfaction?

8. What strategies do you use to build positive relationships with customers?

9. What else can you tell me about your strategies to enhance customer satisfaction that I did not ask?

## Conceptual Framework

I used the social exchange theory (SET) as the conceptual framework for my study. The SET framework applied to my study because customer satisfaction could be affected by the interactions within social exchanges. SET is a popular organizational behavior theory used by researchers to describe non-monetary interactions (Cropanzo et al., 2017). The conceptualization of the SET can be attributed to Peter Blau (1964), who explained SET as non-monetary interactions that can establish trust and engagement between parties. Utilizing the SET framework helped me explore non-monetary strategies leaders of U.S. testing laboratory organization use for maximizing customer satisfaction. The primary difference between monetary and social exchange is that interactions within social exchanges involve unspecified commitments between the parties (Blau, 1964). Within organizational behavior, SET is defined as the mutual interactions between parties

where both parties contribute to the benefit of each other (Van Nieuw Amerongen et al., 2022). SET was a suitable conceptual framework for my study because both customers of U.S. laboratory testing organizations and organizational leaders could benefit by maximizing customer satisfaction.

## Operational Definitions

*Competitive advantage:* A competency, skill, or position that enables an organization to have a favorable outcome over competing organizations (Adi et al., 2022).

*Corporate social responsibility (CSR):* The economic, legal, ethical, and philanthropic activities implemented by organizations to meet societal expectations (Lee et al., 2020).

*Customer engagement:* The extent customers invest their time in collaborating with an organization (Farhana, 2021).

*Customer satisfaction:* The overall impression customers develop when evaluating an organization's ability to meet or exceed the customer's expectation (Afiuc et al., 2020).

*Employee engagement:* The extent employees are enthusiastic, motivated, and committed to the organization's success (Zhang, 2019).

*Frontline employees (FLE):* Employees who have direct communication and interactions with customers (Zhang, 2019).

*International Organization for Standardization (ISO) 17025 certification:* The International Organization for Standardization (ISO) provides certification through the

ISO 17025 standard that "enables laboratories to demonstrate that they operate competently and generate valid results" (ISO, n.d., ISO 17025 standards section).

*Organizational culture:* The strategic values, missions, and employee protocols that guide an organization to achieving established goals (Martinailyte et al., 2019).

*Service recovery:* A systematic approach an organization takes to restore customer satisfaction after a service failure (Nik Bakhsh & Riivits-Arkonsuo, 2021).

## Assumptions, Limitations, and Delimitations

In this section, I will describe the assumptions, limitations, and delimitations of my study. Future researchers could expand, explore, or address the items outlined in this section.

### Assumptions

Assumptions are general interpretations of underlying motives and behaviors that are observed during the research process (Ravitch & Carl, 2016). My first assumption was that the participants answered the interview questions honestly. A second assumption for my study was that both the organization and customers were actively interacting in social exchanges. When collecting data on customer satisfaction, I assumed the customers providing reviews on social media platforms were active or have recently engaged with the organization.

### Limitations

A limitation is a potential weakness within the study and findings (Ravitch & Carl, 2016). A limitation was that this research study focused only on non-medical laboratory testing organizations within the southeast United States. Confining a study to a

specific geographic location could limit the transferability of findings within other geographic regions (Creswell & Creswell, 2018). Strategies for maximizing customer satisfaction may vary within diverse cultures or industries. The limitations of my study could help develop a framework for future studies.

**Delimitations**

Delimitations are research parameters that define and reduce the scope of the research study (Cresswell & Cresswell, 2018). Defining and reducing the scope of the research in case studies is referred to as bounding the case (Yin, 2018). Bounding the case is important to strengthen and increase the validity in reproducing the findings (Yin, 2018). A delimitation of this study was that I did not measure customer satisfaction through direct contact with customers. Rather, satisfaction levels were indirectly assessed through data analysis. Another delimitation for this study was that only organizational leaders were interviewed in the research study. Interviewing only organizational leaders could have bound my study to overarching organizational strategies. Delimitations of my study helped bound the research to exploring optimal strategies leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

## Significance of the Study

Findings from my study could help leaders design strategies to maximize customer satisfaction. Maximizing customer satisfaction can provide both organizations and customers with benefits. When leaders of organizations can maximize customer satisfaction, customer purchases and loyalty toward the organization increases (Srivastava & Gosain, 2020). Maximizing customer satisfaction could help reduce the

potential for customers to switch laboratories while securing their future work. Customer

satisfaction is increasingly important for organizations operating in competitive industries

(Zhang & Ahmad, 2022). Industry researchers describe the U.S. laboratory testing

industry as mature and competitive (IBISWorld, 2020). The competitive U.S. laboratory

testing industry means testing laboratories are competing to retain and attract customers.

Implementing strategies for maximizing customer satisfaction could help leaders of

laboratories create an advantage within a competitive market.

Satisfying customers can provide societal benefits. Researchers have found that

maximizing customer satisfaction could impact decisions beyond the customer and

service provider (Baliga et al., 2021b). Customers use laboratory test results to make

decisions on projects within critical societal industries like agricultural, environmental,

and food processing sectors (IBISWorld, 2021). Researchers have found that satisfied

customers are more likely to have increased trust and confidence in the information

obtained from service providers (Dam & Dam, 2021). Satisfied customers could have

trust in the laboratory results and confidence in their actionable decisions that impact

human, ecological, or societal health. Leaders of U.S. laboratory testing services could

thus affect positive social change and enhance organizational performance by

implementing strategies that maximize customer satisfaction.

## A Review of the Professional and Academic Literature

The purpose of my qualitative multiple case study was to explore optimal

strategies that leaders of U.S. laboratory testing organizations can implement to

maximize customer satisfaction. I used the SET to form the conceptual framework for my

qualitative multiple case study.

The first part of my study consisted of conducting a review of professional and academic literature. The purpose of a literature review is for the researcher to become knowledgeable of their topic and provide a detailed review of applicable findings by previous researchers (Hart, 2003). A thorough literature review helps provide more detailed questions and practical applications of the potential findings (Yin, 2018). I conducted my research by searching the Walden University Library database for peer reviewed articles related to customer satisfaction. The primary research phrase I used was "customer satisfaction." I selected subject term searches for customer satisfaction paired with key terms that align with my interview questions, including *corporate social responsibility*, *improvement strategies*, *organizational culture*, *relationship quality*, *service quality*, *service recovery*, and *SET*. The main database I searched was EBSCO discovery service. I utilized the references of peer reviewed articles to identify seminal sources for the conceptual framework of my study. The result of my multiple search strategies helped me provide a through literature review of strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

**Organization of the Literature Review**

The literature review for my study consisted of sources from peer-reviewed articles, industry publications, and books. My research utilized the Walden library and EBSCO databases to find peer-reviewed literature published within the past 5 years. Of the 60 peer-reviewed articles included in my literature review, 56 of the papers were published within 5 years. The 10 books I referenced provided information on conducting

research, and definitions of key components. A total of four industry publications were reviewed and referenced. Table 1 lists the types of literature I used for the literature review.

**Table 1**

*Literature Review Publications by Year*

| Type of Literature | Published within 5 years | Published beyond 5 years | Total | Total percentage published within 5 years % |
|---|---|---|---|---|
| Peer-reviewed articles | 56 | 4 | 60 | 93% |
| Industry publications | 4 | 0 | 4 | 100% |
| Books | 3 | 7 | 10 | 30% |
| Total | 63 | 12 | 74 | 85% |

The literature review is organized to provide a critical analysis and synthesis of strategies that leaders of U.S. laboratory testing organizations could implement to maximize customer satisfaction. The literature review is organized into three main sections. The first section provides a critical review and synthesis of literature pertaining to the SET. The second section provides a review of customer satisfaction, how satisfaction impacts organizations, how satisfaction relates to SET, and how leaders of U.S. laboratory testing organizations could measure customer satisfaction levels. The third section provides an extensive review of important organizational constructs that could help improve customer satisfaction. Within each construct review, I define the construct, describe how the construct connects to customer satisfaction, relate the construct to SET and provide strategies within the construct that researchers have identified that could maximize customer satisfaction. The organizational constructs described within this literature review are service recovery, relationship quality, service

quality, corporate social responsibility, and organizational culture. The purpose of this literature review is to provide a critical analysis and synthesis of strategies that leaders of U.S. laboratory testing organizations could implement to maximize customer satisfaction.

**Conceptual Framework: The Social Exchange Theory**

SET is a popular organizational behavior concept. Blau (1964) indicated that social exchanges are observable in various social contexts, including business interactions. Not all social interactions are considered an exchange (Blau, 1964). Blau differentiated social exchanges as interactions that generate feelings of obligation between the parties to provide future exchanges. Parties within social exchanges could participate with the anticipation of receiving future interactions. Emerson (1976) refined the definition of SET as an exchange of valuable resources through social interactions. A person's time is considered a valuable resource within social exchanges (Blau, 1964). Within the service industry, an employee's time dedicated to customer services would be considered valuable.

Leaders of U.S. testing laboratory organizations may consider evaluating valuable social exchanges with customers when implementing strategies to optimize customer satisfaction. Social exchanges could provide value to both parties. Favorable exchanges occur when both parties perceive value and benefit by participating in the interaction (Bakhsh & Rivits-Arkonsuo, 2021). Positive social exchanges often elicit feelings of obligation to reciprocate and continue the relationship (Farhana, 2021). Parties within a social exchange could continue the interactions based on receiving valuable results. Researchers have found that reciprocal exchanges do not need equal value; rather, the act

of reciprocity indicates the willingness of both parties to continue the relationship (Molm et al., 2003). Social exchanges are voluntary, and both parties can develop feelings of satisfaction or dissatisfaction and trust or distrust (Blau, 1964). Social exchanges within business settings are not bound by contracts and either party may cease the interaction at any given time. For instance, future repurchase intentions of customers are often not defined by a legal contract. SET may be useful for researchers to explain the repurchase intention and satisfaction levels of customers after experiencing positive exchanges with an organization (Farhana, 2021). Both organizations and customers can receive valuable results from interacting within favorable social exchanges.

The conceptual framework of SET could be an important framework to describe the organizational strategies that influence customer satisfaction. Personal interactions between parties could be described by the SET. The relationship context between two parties is essential to understanding the impact of social exchanges (Mitchell et al., 2012). Researchers identify successful social exchanges as a series of reciprocal actions that are equally positive (Cropanzano et al., 2017). Reciprocal social exchanges may lead to a continuation of the relationship, yet business relationships can continue without social exchanges. The following sections will describe three types of exchanges, evaluation of exchanges, and review motivating factors for social exchanges. Critiques of SET with an alternate theory will be described after I further define the SET.

### Types of Exchanges

Exchanges are frequent within business interactions. Resources are exchanged between parties when there is a perceived value to participating in the interaction

(Bakhsh & Rivits-Arkonsuo, 2021). The type of exchange completed is dependent on the perceived value exchanged by participants. Blau (1964) described three types of exchanges as economic, altruistic, and social exchanges. Economic exchanges involve transferring wealth for goods (Blau, 1964). Altruistic exchanges are completed without expecting anything in return (Blau, 1964). Social exchanges function as an intermediator between economic and philanthropic interactions (Blau, 1964). The three primary types of exchanges can be described by the items being exchanged. All three exchanges are observable and distinguishable within business interactions.

Various elements distinguish social exchanges from economic and altruistic interactions. First, social exchanges differ from altruistic interactions because social exchanges develop extrinsic expectations of obligations and reciprocity (Blau, 1964). Altruistic interactions are completed without the anticipation of reciprocity (Blau, 1964). Social exchanges may be better suited to describe customer and organizational interactions because both parties may anticipate receiving future exchanges. Second, social exchanges differ from economic exchanges because social exchanges enhance intrinsic feelings of trust and gratitude between individuals (Blau, 1964). Economic exchanges often cease after the exchange of monetary compensation is complete (Blau, 1964). Service organizations could be defined by social exchanges because the provided services may extend beyond the exchange of monetary compensation. Social exchange interactions range in structure, formality, and expectations (Blau, 1964). The reciprocal nature of social exchanges tends to establish reinforcing interactions that further strengthen the relationship between the participating parties (Wang, 2020). The social

exchanges between customers and testing laboratory organizations can be established to provide future benefit for both parties. The social exchanges differ from the other exchanges because altruistic and economic exchanges have a finite period of interaction whereas social exchanges are completed with the anticipation of future interactions.

Economic, social, and altruistic interactions are commonly linked with an exchange of a valuable item. Within a business setting, exchanges include transferring money, time, goods, services, or recognition (Blau, 1964). Customers can exchange money for goods or services. Frontline employees can exchange their time for recognition by customers. All exchanges involve initiating and receiving participants (Blau, 1964). For this study, the initiating participant will be the organizations, and the receiving participant will be the customers. In the next sections I will further describe economic, altruistic, and social exchanges.

**Economic Exchange.** Economic exchanges are an important aspect in business operations. An economic exchange involves a contract detailing the pre-determined nature of the service to be provided in return for an exact price (Blau, 1964). The customer gives an organization money in return for a pre-defined service or product. The customer then evaluates the exchange based on the tangible benefits they received from their purchase (Ahn & Kwon, 2021). An economic exchange example for a laboratory testing organization is when a customer receives a quote for specific product testing. The quote includes the type of testing and prices. Once accepted, the customer will agree to pay the set price for testing services listed on the quote. The laboratory completes the testing services, the customer pays as outlined in the quote, and there are no further

transactions binding for either participant. The economic exchange does not generate unknown or unscheduled transactions (Blau, 1964). Organizational leaders can measure the economic exchanges between service offered and monetary compensation received.

**Altruistic Exchange.** Altruistic exchanges could be considered philanthropy. An altruistic interaction is completed by one party without anticipating a reciprocal exchange (Blau, 1964). In this type of exchange, the person initiating the altruistic action does so without wanting anything in return. An example of an altruistic exchange could be a person anonymously donating money to a social cause. The person is donating money without any desire for recognition. An altruistic exchange can occur between friends, where one person is helping the other without wanting to receive anything in return (Blau, 1964). An altruistic exchange often needs to be completed anonymously without consideration of a return interaction.

**Social Exchange.** Social exchanges are an important aspect describing service organization and customer interactions. Blau (1964) described social exchanges as the center between economic exchanges and altruistic interactions. A social exchange involves completing a favor or action with a general expectation of a future return (Blau, 1964). A difference between an altruistic and social exchange is that the participant initiating the social exchange does so with the anticipation of a return (Blau, 1964). A difference between an economic and social exchange is that the future return of the social exchange is not pre-determined in advance, and receiving participant is not required to provide additional returns (Blau, 1964). In social exchanges, both parties invest resources with the anticipation of receiving a valued return (Bakhsh & Rivits-Arkonsuo, 2021).

According to Blau, returns could be as minor as an acknowledgment of appreciation or the customer returns to purchase from the business. An example of a social exchange could be a frontline employee providing additional time to discuss the results of a testing report to potentially receive appreciation from the client. The value of time is often not included in economic exchanges and expectations of receiving appreciation are not warranted in altruistic exchanges. The concept of expecting an unspecified future return for an exchange differentiates social exchanges from economic and altruistic exchanges. Parties participating in social exchanges could be motivated by both extrinsic and intrinsic factors.

Extrinsic motivating factors help strengthen the continuation of positive social exchanges. According to Blau (1964), a continuation of positive social exchanges develops into reciprocal interactions. Reciprocal interaction is an extrinsic motivating factor (Blau, 1964). Reciprocity could be quantified by both parties. Reciprocity is the exchange of actions between parties that lead to other interactions and is a critical function of the SET (Qi et al., 2018). Reciprocal social exchanges are defined as voluntary interactions between parties that are not pre-determined nor contractually mandated (Jung et al., 2021). If one of the parties does not provide adequate responses to the social exchanges, the relationship may dissolve (Qi et al., 2018). Participants interact in social exchanges to anticipate receiving reciprocal returns (Blau, 1964). Leaders of U.S. testing laboratory organizations could provide customers with additional valuable services in expectation of customers purchasing future services from the organization. The reward of receiving a return for their interaction is a participant's extrinsic

motivation within social exchanges.

Participants within social exchanges could be motivated by intrinsic factors. Reciprocal social exchanges are voluntary and can develop feelings of obligation and trust (Blau, 1964). Feelings of responsibility and trust are intrinsic motivating factors (Blau, 1964). Individuals could place various values on the intrinsic feelings developed from social exchanges. An obligation is a feeling that a person develops after they receive a voluntary positive action (Blau, 1964). The feeling of trust minimizes concerns that another person will take advantage of the interaction for their gain (Casidy & Nyadzayo, 2019). Feelings of obligation or trust are subjective and intrinsic. As positive reciprocal interactions continue, the feelings of obligation and trust between the participants strengthen (Qi et al., 2018). Social exchanges create feelings of obligation to return to a non-contractual service (Blau, 1964). A decision based on a monetary evaluation does not create feelings of obligation (Blau, 1964). Neither economic nor altruistic exchanges develop intrinsic feelings of obligations and trust between the parties. The intrinsic motivating factors of trust and obligation help the participants generate a desire to continue favorable social exchanges. Social exchanges are motivated by different extrinsic and intrinsic factors as compared to economic and altruistic exchanges.

### Evaluation of Exchanges

A component of the distinct types of exchanges involves evaluating the interaction. The exchanges are reviewed by the returns that participants are expected to receive (Blau, 1964). Parties interested in an economic exchange could evaluate the predetermined contract versus the received outputs (Blau, 1964). Customers may evaluate

the value of the report provided by the testing laboratory and compare it to the cost. Individuals initiating an altruistic exchange could assess the impact of their contribution to the desired outcome of the interaction (Blau, 1964). Both economic and altruistic exchanges could take place between laboratory testing organizations and customers, however, social exchanges are the primary interactions that support reciprocal interactions. Individuals within a social exchange may weigh the cost and benefits of continuing the reciprocal exchange (Balci et al., 2019). Favorable social exchanges could indicate that the exchanges meet the expectations of the interacting parties.

### *Limitations of the Social Exchange Theory*

The use of SET as a conceptual framework for my study is appropriate, but there are limitations and an alternative theory that I will now describe. The SET has a variety of limitations. The primary limitations affecting the practical application of SET are marginal utility, modern workplace technology, and complex workplace interactions. This section will discuss the limitations of the SET.

**Marginal Utility.** Increasing the number of reciprocal interactions could diminish the benefits of additional actions. Blau (1964) identified a limiting factor of SET as marginal utility. Marginal utility is the concept that at an undefined point within a relationship, the perceived value of a benefit diminishes (Blau, 1964). Cook et al. (2013) expanded on marginal utility as the more a person receives a benefit, the less the person values the benefit. Marginal utility could impact customer to organization interactions. Ancillary services provided by testing laboratory organizations could be perceived by the customer to lose value with repeat interactions. If benefits are perceived to lose value,

then the relationship could be in jeopardy. The SET is considered an exchange where both parties provide mutually beneficial actions (Van Nieuw Amerongen et al., 2022). If the benefit of action diminishes, either party could choose not to complete future actions (Blau, 1964). Client to organization relationships built only on social exchanges could diminish due to repeat actions losing value. The result of marginal utility could be relationship between two parties eroding from a reduction of reciprocal actions.

**Modern Workplace Technology.** Technological advancements and modern workplaces could impact the effectiveness of SET. Workplace automatization and digitalization of communication have reduced direct contact between parties, which may reduce benefits from reciprocal interactions (Chernyak-Hai & Rabenu, 2018). SET is often considered to be built upon one-on-one reciprocal interactions (Cooper-Thomas & Morrison, 2018). Modern technology could minimize the opportunities or requirements to reciprocate upon every benefit received. Technological advancements have promoted a team climate that could limit the importance of individual social exchanges (Chernyak-Hai & Rabenu, 2018). The team atmosphere could limit the connection a customer has for any single person within an organization. Additionally, current workforce employees have more employment flexibility and transition between jobs easier than traditional workforces (Chernyak-Hai & Rabenu, 2018). Social exchanges are reinforced during an extended period, when one of the parties leaves the interaction, then the history of the relationship could be lost. Technological advancements that limit direct contact between people could reduce the impact of social exchanges within the workplace.

**Complex Workplace Interactions.** Complex workplace interactions could limit

the effectiveness of social exchanges. The costs and benefits of a relationship within the context of SET are often considered practical between two individuals (Chernyak-Hai & Rabenu, 2018). A complex network of interactions within the workplace could limit the ability for direct reciprocity, thus reducing the impact of social exchanges (Cooper-Thomas & Morrison, 2018). Customers of laboratory testing organizations may interact with different employees which could limit the opportunity for direct reciprocity to individual employees. The effectiveness of social exchanges could further be limited due to the potential development of concurrent positive and negative exchanges within complex interactions (Cooper-Thomas & Morrison, 2018). The complexity of customers interacting with multiple different employees could mean that the customer experiences both negative and positive results at the same time. Social exchanges between customers and frontline employees could have limited positive impact due to the complex interactions experienced within laboratory testing organizations.

### *Alternate Theory: Rational Choice*

The modern constraints of SET could indicate that this theory has limited applications in today's workplace. The rational choice theory (RCT) removes the social benefits of exchanges within the decision-making process and is focused on financial cost benefits (Van Nieuw Amerongen et al., 2022). Customers would be less concerned about the social exchanges with a laboratory and have more concerned with the cost of the testing services. As a classical economic theory, the RCT indicates that people make decisions based on reasonable and justified information (Adryan et al., 2021). Choices are consistently and deliberately made to maximize positive outcomes (Salhieh, 2019). A

study conducted by Fan et al. (2022) found that customers use rational choices when interacting with digitally automated business interfaces. Technological advancements and digitization of communication could limit the impact of social interactions while transitioning customers to take a more rational approach to make purchase decisions. The RCT could be a more applicable theory to maximize satisfaction for leaders of laboratory testing organizations that have limited social exchanges with customers.

The central principles of RCT are based on the preferences of the individual decision makers, the customers. Customers making rational choices are doing so to maximize their interests based on current information (Adryan et al., 2021). Information for customers of laboratory testing organizations may include turnaround time, method availability, and cost. According to RCT, choices made by customers are consistent, deliberate, and logically justifiable (Salhieh, 2019). The RCT could explain the limited impact feelings like obligation and trust could have on customers making decisions. Once a decision is made to utilize a service or product, the customer is not easily persuaded to change providers (Adryan et al., 2021). The customer believes that decisions made to use the product or service will eventually produce the desired outcomes (Adryan et al., 2021). Within the construct of RCT, feelings and relationships between the customer and provider are removed as the customer makes decisions based on financial cost-benefit analysis (Van Nieuw Amerongen et al., 2022). Customers of laboratory testing organizations may base their decisions to use a laboratory based on the costs associated with the testing services rather than the feelings of satisfaction. The RCT could help explain how customers experiencing dissatisfying services would continue using a

laboratory testing organization.

The rational choice theory is a suitable alternative theory to the SET. RTC can be used to describe customer choices that are rationally justified from an evaluation of costs and benefits (Fan et al., 2022). The satisfaction customers experience is based on the ability to maximize their own self-interests (Adryan et al., 2021). A practical example where RTC is a primary construct for decision-making is when customers interact with automated ordering systems. Fan et al. (2022) found that customers are likely to make a rational choice for purchasing when they interact with automated technology, whereas customers interacting with another person are likely to make an emotional choice based on trust. Leaders of laboratory testing organizations may need to consider how their customers interact with the laboratory when deciding on customer retention strategies.

While a suitable alternative theory to SET, the RTC may have minimal practical applications for organizational leaders to use within the U.S. laboratory testing industry. One of the added services provided by laboratory personnel to customers is their technical expertise (IBISWorld, 2021). Technical expertise can also include customer-specific knowledge that can help increase the relationship quality between laboratory personnel and customers (Van Nieuw Amerongen et al., 2022). Van Nieuw Amerongen et al. (2022) found that relationship quality improves customer satisfaction within customer-to-business interactions. Within a service organization, relationship quality is a key component to customer satisfaction (Casidy & Nyadzayo, 2019). Bakhsh and Rivits-Arkonsuo (2021) identified trust, loyalty, and commitment as key constructs of relationship quality. Since RTC removes irrational considerations based on emotions of

trust, loyalty, and commitment (Van Nieuw Amerongen et al., 2022), then RTC is a less

applicable conceptual framework for maximizing customer satisfaction within U.S.

laboratory testing organizations. Customers may evaluate satisfaction for an organization

on factors beyond a cost benefit analysis. Other factors may include the relationship

connection customers have with frontline employees and actions taken by organizations

to improve services. The services provided by laboratory testing organizations could go

beyond a cost-benefit analysis and may depend on the customer's satisfaction evaluation.

**Customer Satisfaction**

A critical component of an organization's success could be customer satisfaction.

Researchers define customer satisfaction as the measurement of an organization's

services to meet or exceed the expectations of a customer (Dam & Dam, 2021).

Satisfaction could be explained by the perceptions and interactions that customers have

with an organization (Shams et al., 2020). Customers' perceptions and expectations are

often guided by the relation to services offered by other organizations (Afiuc et al.,

2020). Laboratory testing organizations tend to offer the same type of testing but may be

differentiated based on added services. Customers could evaluate their received service

by comparing the services offered by other laboratories. Evaluation levels of met

expectations often take place after the purchase process of a service (Adi et al., 2022).

Since customers tend to evaluate service expectations after the testing service is

completed, customer satisfaction may depend on the evaluation of the entire experience a

customer has with an organization. Understanding the customer satisfaction evaluation

process could be an important aspect for organizational leaders to use in identifying

strategies for maximizing customer satisfaction.

There are various evaluation processes customers may use to evaluate their satisfaction levels. Customers can compare their pre-purchase expectations of the service to the actual services received (Wang, 2020). Pre-purchase expectations could be established based on initial interactions with an organization. Next, customers can compare the services received to previous services received by other firms (Afiuc et al., 2020). Customers of laboratory testing organizations may need testing services for multiple projects and could use different laboratories. The use of different laboratories could enable customers to develop a comparison model for evaluating laboratory services. Finally, customers may evaluate their satisfaction levels based on the emotions they feel during and after the service encounter (Rivera et al., 2021). Evaluations of received services could provide customers with various levels of satisfaction.

There are multiple levels of satisfaction that customers can experience. Satisfaction levels can range from highly dissatisfied, to neutral, to highly satisfied (Wang, 2020). Satisfaction levels are dependent on the experiences and evaluations of the customer. Researchers have found that satisfaction levels could help anticipate future customer behavioral actions (Shams et al., 2020). Depending on satisfaction levels, customer actions could realize either negative or positive effects. Leaders of U.S. laboratory testing organizations should understand the benefits and costs of having satisfied customers.

### *Benefits of Satisfied Customers*

Satisfied customers could provide organizations with numerous benefits.

Researchers identify customer satisfaction as vital to an organization's long-term success (Zhang & Ahmad, 2022). Effective laboratory service that meets or exceeds customer expectations could help promote satisfied customers. Researchers have found that an organization can develop a competitive advantage when customers are satisfied (Martinailyte et al., 2019). Satisfied customers could provide an organization benefit, including repurchasing services, providing recommendations for other customers, paying higher prices for the services, and becoming loyal to the organization.

Satisfied customers could return to the organization for additional services. Researchers have identified customer satisfaction as a potential predictor of a customer's future purchase intention (Muralidharan et al., 2019). Repurchase intention is defined as the customer's evaluation of purchasing the same service from the initial organization, a similar service from the same organization, or purchasing services from a different organization (Wang & Olsen, 2018). Customers satisfied with the services of a U.S. testing laboratory organization are likely to return to the laboratory for future services. Repurchasing intention of satisfaction customers could provide organizations with benefits of future purchases.

Another benefit of satisfied customers is the potential for customers providing positive recommendations. Researchers have found that satisfied customers are more likely to recommend the organization's services to others (Leclercq-Machado et al., 2022). Recommendations made by customers could be made within personal networks or on social media outlets (Tan et al., 2021). Positive reviews made on social media networks could help other potential customers to make decisions to use the services of the

organization (Liu et al., 2019). Positive reviews by customers could be an important aspect of obtaining new customers. By utilizing customer recommendations, leaders of U.S. laboratory testing organizations could influence potential customers by satisfying current customers.

Developing customer loyalty could be a benefit from satisfied customers. Researchers have found that organizational services that meet or exceed expectations can transition customer satisfaction into loyalty toward an organization (Balci et al., 2019). Customer loyalty is often defined as the continual repeat purchase intention of a customer and the customer's propensity to consider using the same organization for future testing needs (Famiyeh et al., 2018). Loyal customers could be considered long-term satisfied customers. Busser et al. (2019) ascertained that customer loyalty could be a reflection that an organization consistently meets or exceeds the services promised to the customer. Consistently meeting or exceeding customer expectations could provide benefits for organizations. Loyal customers could create a competitive advantage for organizations as loyal customers have greater repurchase intentions than non-satisfied customers (Adi et al., 2022). Customers loyal to a U.S. laboratory testing organization could continue to purchase the services from the organization. Leaders of U.S. laboratory testing organizations could develop customer loyalty by consistently meeting or exceeding the customer's expectations.

Customer satisfaction could be a critical component of an organization's success. The long-term success of an organization depends on the satisfaction levels of its customers (Afiuc et al., 2020). Satisfying customers could help increase customer

retention, profitability, and competitiveness (Wang, 2020). Researchers have found a variety of organizational benefits derived from satisfied customers. Leaders of U.S. laboratory testing organizations should understand the importance and benefits of developing satisfied customers.

### Cost of Dissatisfied Customers

Dissatisfied customers can negatively impact the success of an organization. When service expectations are not met, customers can become dissatisfied with the company (Shams et al., 2020). A dissatisfying experience can lead to the customer losing trust in the organization and no longer using the provided services (Teseng, 2021). The loss of a customer impacts both the organization's current and future earnings (Afiuc et al., 2020). There are multiple actions that customers tend to take when they are dissatisfied. Dissatisfied customers could no longer use the services of the organization, and they could outwardly express their dissatisfaction to other customers.

In addition to no longer using an organization's services, dissatisfied customers can provide various levels of negative feedback. Customers can complain directly to the frontline employees or management of the organization (Li et al., 2020). Dissatisfied customers can provide harmful word-of-mouth recommendations that could impact the purchase decisions of current and potential customers (Shams et al., 2020). Customers can post negative online reviews that detail their dissatisfying experiences (Adryan et al., 2021). In addition to outwardly complaining about dissatisfying experiences, another segment of dissatisfied customers could silently switch service providers without complaining or providing feedback (Li et al., 2020). When dissatisfied customers leave

without providing feedback, leaders of service providers could be unaware of the issues

that created the adverse outcome (Li et al., 2020). There are multiple ways dissatisfied

customers can express frustration for an organization not meeting the customers'

expectations. Loss of customers and a tarnished reputation are both negative impacts that

organizations could experience by dissatisfying customers. Leaders of U.S. laboratory

testing laboratories should understand the costs associated with dissatisfying customers.

### *SET and Customer Satisfaction*

Customer satisfaction may be explained by the SET. Satisfaction is a uniquely

individualistic attribute that is not able to be mandated (Farhana, 2021). Researchers have

found that satisfaction levels may be influenced by the customer's evaluation of received

services (Teseng, 2021). Customers who perceive value in the exchange with an

organization may consider themselves satisfied with the transaction (Ahn & Kwon,

2021). Blau (1964) ascertained that satisfaction depends on the benefits received from the

organization meeting the service expectations. Satisfaction levels are individual feelings a

customer has for their evaluations of expectations being met. The context of SET could

help better understand driving factors for establishing customer satisfaction.

Within the context of SET, customer satisfaction is an individual evaluation of

feelings. Customers evaluate their satisfaction based on the rewards and costs of the

provided service (Balci et al., 2019). Time, experience, knowledge, and experience could

be included in the transactions (Blau, 1964). The rewards and costs of a provided service

can be both intangible and tangible. Customers could receive benefits from U.S. testing

laboratories including data reports, and positive interactions with employees. Balci et al.

(2019) identified potential rewards and costs of the exchange between the service provider and customer as financial, structural, relational, and social. Evaluating expectations and feelings towards the services provided helps customers develop satisfaction levels (Dam & Dam, 2021). SET could provide the context of better understanding customer satisfaction as an individual's feelings towards interactions received from an organization.

Customers experiencing satisfaction could develop additional feelings for the organization. Customers who are satisfied with their experiences tend to feel obligated toward the organization to purchase the services at a future date (Farhana, 2021). Actions of reciprocity and feelings of obligation are primary responses between two parties conducting social exchanges (Cropanzo et al., 2017). Customers could feel obligated to purchase services from an organization. Repeated actions of future customer purchases could further motivate organizations to strive to exceed customer expectations.

Relationships between customers and organizations could be enhanced with reciprocal interactions. Researchers have found that relationships between two parties are developed as repeated actions are rewarded (Chernyak-Hai & Rabenu, 2018). Positive customer and organization exchanges could satisfy the initial need for the interaction and establish a connection for the next interaction. Repeated actions of positive interactions develop obligations to reciprocate future positive actions (Blau, 1964). Business relationships built upon reciprocal interactions could develop into both parties feeling committed to helping each other succeed (Casidy & Nyadzayo, 2019). Repeated positive social exchanges can help develop relationships between customers and U.S. testing

laboratory organizations. Leaders of U.S. testing laboratory organizations could develop strategies for customer satisfaction that promote recurring interactions.

Continuance of positive reciprocal actions could have additional benefits for both customers and organizations. Chernyak-Hai and Rabenu (2018) ascertained that reciprocal positive actions could develop feelings of trust and goodwill between parties. The concept of trust is often defined as the willingness of one party to be vulnerable to another with the expectation that actions are completed in the vulnerable party's best interest (Farhana, 2021). Trust is a key development within social exchanges (Blau, 1964). Feelings of trust could develop between both organizational leaders and customers. Reciprocal interactions between customers and organizational leaders could lead to increased levels of trust between both parties.

The SET is an appropriate framework for my study because customer satisfaction is best explained by individual feelings customers have towards an organization. Customers can evaluate their satisfaction levels based on their expectations and experiences (Wang, 2020). Personal evaluations based on feelings and experiences are aspects of SET (Blau, 1964). For business interactions, customer satisfaction is an individual's feeling towards an organization. The social interactions between customers and an organization might be important in developing satisfied customers and long-term organizational success. Understanding the foundational construct of customer satisfaction could be an important aspect for leaders of U.S. laboratory testing organizations to develop strategies for improving customer satisfaction.

*Measuring Customer Satisfaction*

As described, satisfied customers could be an important aspect of the success of an organization. Measuring and monitoring customer satisfaction levels could help leaders of U.S. laboratory testing organizations develop strategies for improving customer satisfaction. Feedback provided by customers could contain valuable information that may help organizational leaders identify service problems, improve systems, and enhance customer satisfaction (Li et al., 2020). The potential significance of customer feedback could encourage organizational leaders to act (Liu et al., 2019). There are a variety of platforms customers can use to express their levels of satisfaction.

Leaders of U.S. laboratory testing organizations could utilize communication platforms to evaluate levels of customer satisfaction. The platforms customers can express their satisfaction levels include direct communication to an organization through personal communication (Shams et al., 2020), electronic review media outlets (Liu et al., 2019), or silently evaluating their repurchase intentions (Shams et al., 2020). There are a variety of separate ways customers can communicate their satisfaction levels. To maximize customer satisfaction, leaders of U.S. laboratory testing organizations could monitor and gauge customer satisfaction levels.

Personal communication through front-line employees could be a critical measurement of customer satisfaction. Within service industries, front-line employees often directly interact with customers as a means of delivering the provided service and communication to the customers (Zhang, 2019). The communication of satisfaction levels reported by the customers to frontline employees could go unreported to organizational

leaders. As customers express their satisfaction levels in direct conversations with frontline employees, frontline employees could internalize the communication and become stressed (Zhang, 2019). Increased levels of stress for frontline employees could have negative reciprocal impacts on customers. To help maximize customer satisfaction, leaders of U.S. testing laboratory organizations could implement systems that encourage employees to provide feedback from customers expressing their satisfaction levels.

Electronic media outlets could provide a history of customer experiences. Liu et al. (2019) ascertained that electronic review sites support customers in sharing their experiences, and these review sites can contain valuable information for organizational leaders to evaluate customer satisfaction levels. Customer satisfaction could be measured in the form of customer reviews. Customer reviews are defined as subjective opinions, observations, or information regarding the experience of the service (Wang & Olsen, 2018). The reviews provided by customers could be used as recommendations for other customers to either use or not use the services of an organization (Jung et al., 2021). Customer reviews left on social-media sites could influence future or current customers. Researchers have found that customers could change their attitudes toward an organization based on other customer reviews (Wang & Olsen, 2018). The measurement of customer satisfaction by evaluating reviews could entail the overall feeling customers have toward the organization (Famiyeh et al., 2018). Analyzing online reviews may be an important aspect for leaders of U.S. laboratory testing organizations to measure customer satisfaction.

Measuring customer satisfaction levels could be an important action in developing

strategies to maximize customer satisfaction. Customer feedback often represents the overall judgment and evaluation of an organization's ability to meet or exceed service expectations (Teseng, 2021). Customer satisfaction levels could be measured by a platform for collecting customer feedback. Li et al. (2020) ascertained that customers can express their satisfaction levels directly or indirectly to an organization. Organization leaders should have multiple systems for obtaining customer feedback. Measuring customer satisfaction levels could help leaders of U.S. laboratory testing organizations develop strategies for improving customer satisfaction.

**Strategies for Improving Customer Satisfaction**

Researchers have identified several strategies for improving customer satisfaction. Improving satisfaction is important because satisfied customers are more likely to become loyal and repurchase from an organization (Leclercq-Machado et al., 2022). To develop a competitive advantage, organizational strategic goals should focus on maximizing customer satisfaction (Martinailyte et al., 2019). Strategies that could improve satisfaction involve service recovery, relationship quality, service quality, corporate social responsibility (CSR) initiatives, and organizational culture. The following sections will describe the importance of several topics identified by researchers as components that could be critical to maximizing customer satisfaction.

*Service Recovery*

The practice of service recovery could be an essential aspect of achieving customer satisfaction. Service recovery is defined as a process of events a service provider takes to rebuild a relationship with a customer after a failure of the provided

services (Shams et al., 2020). A service failure occurs when an organization does not provide services that meet a customer's expectations (Sands et al., 2020). Service failures can either be a sudden single event or a series of actions that leads to the need for a service recovery (Fleming et al., 2021). Customers of U.S. laboratory testing organizations could experience a service failure when a report is not delivered on time, or the quality of the provided data is not useable for making decisions. The extent of a failed service could range from large catastrophic breaks in the services to micro-failures that could be viewed as minor inconveniences (Sands et al., 2020). Minor inconveniences could build over a course of multiple interactions and may impact the overall assessment of the service. Whereas a catastrophic service failure would have immediate consequences. Customers can experience a failed service from various organizational actions. Organizational actions that could lead to failed services include core business practices, interactions between employees and customers, or the organization's procedures (Kim et al., 2021). Leaders of U.S. laboratory testing organizations should consider the impact of a failed service, various responses customers can have to failed services, and recovery actions needed to regain customer satisfaction.

Customer responses to a failed service can vary. Responses customers can have when experiencing a service failure include directly complaining to the organization, providing negative reviews, or silently switching to another service provider (Li et al., 2020). If the organization fails to respond satisfactorily to a failed service, the customer could cease using the services of the organization (Shams et al., 2020). A failed service may require an organizational response. The time and way an organization responds to a

service failure could be essential in having effective recovery efforts.

Timeliness of service recovery initiation could be critical in effectively recovering from a service failure. Service recovery is typically initiated after organizational leaders become aware of a service failure (Van Varenbergh et al., 2019). Outcomes from a service recovery could vary. Researchers have found that after a service recovery takes place, relationships between the organization and customer could dissolve, remain fragile, become repaired, or strengthen (Fleming et al., 2021). A primary goal of enacting a service recovery is to satisfy a customer after they experience a dissatisfying service (Yao et al., 2019). Leaders of organizations should implement recovery efforts that are timely and effective. To regain customer satisfaction, researchers have found that the actions within a service recovery need to be effective and tailored to restore the customer's satisfaction after a dissatisfying experience (Yani-de-Soriano et al., 2019). Lack of adequate resolution from a service recovery increases a customer's dissatisfaction and could generate even greater negative emotional responses from the customer (Van Varenbergh et al., 2019). An unsatisfactory recovery attempt from a failed service could add to a customer's dissatisfaction with an organization. Service recovery is a critical action that leaders of U.S. laboratory testing organizations could take to respond to dissatisfied customers.

**Importance of Service Recovery to Customer Satisfaction.** Service recovery efforts could be important in restoring customer satisfaction. Taking action to satisfy customers after a failure is critical for the success of an organization (Yao et al., 2019). Organizational leaders should take action to recover from a service failure or risk losing

the customer. Organizations need a strategic process to recover from a service failure (Oflac et al., 2021). The recovery actions should be designed to provide the customer with a satisfactory resolution to the failure (Yani-de-Soriano et al., 2019). Recovery efforts could be customized and dependent upon the service failure. Researchers have ascertained that recovery efforts could either occur at the time of the service failure or with a future offering (Tan et al., 2021). There is a risk organizational leaders should know about ineffective service recovery efforts. If recovery efforts fail to meet the expectations of the customers, then the customers could retaliate against the organization in the form of providing negative reviews on social media platforms (Tan et al., 2021). Leaders of U.S. laboratory testing organizations could consider recovery efforts that best meet the expectations of customers.

Service recovery efforts could include a series of actions. Van Varenbergh et al. (2019) described the recovery actions taken by an organization as a service recovery journey. The service recovery journey connects the customer with the organization as actions are taken to regain a customer's trust while resolving a service failure (Van Varenbergh et al., 2019). Bakhsh and Rivits-Arkonsuo (2021) found that recovery activities taken by an organization could be perceived as a valuable exchange. The ability for organizational leaders to successfully recover from a failed service could improve customer satisfaction and loyalty (Kim et al., 2021). Organizational leaders could consider a service recovery as taking place over a span of time rather than a single action. Considering recovery efforts over a span of time could enable organizations to establish multiple connections with customers that experienced failed services. Leaders of U.S.

laboratory testing service organizations could use practical service recovery actions to improve customer satisfaction.

**SET and Service Recovery.** The construct of service recovery can be associated with the SET. Within a social exchange context, a customer evaluates their satisfaction based on the cost given and benefit received from a transaction (Blau, 1964). When a service failure occurs, the customer's cost for the service is greater than the benefits received (Shams et al., 2020). A negative transaction balance develops after a service failure, and the customer will often seek justice and fairness (Blau, 1964). Oflac et al. (2021) ascertained that a customer's evaluation of successful service recovery is based on the perceived fairness and justice of an organization's response to a service failure. Customers may become satisfied with recovery efforts when customers feel they were fairly treated by the organizational response (Oflac et al., 2021). The actions of both a service failure and service recovery could impact the personal feelings and evaluations of customers. The relationship constructed within SET contributes to understanding effective service recoveries. Leaders of U.S. laboratories could consider the importance of social interactions while implementing service recovery strategies.

**Strategies for Improving Service Recovery Efforts.** Services recovery actions may be important for restoring customer satisfaction. Failures within service interactions are bound to happen and are often unavoidable (Harun et al., 2019). Organizational leaders should have strategies to recover from service failures. Researchers have found that effective service recovery efforts can lessen dissatisfying interactions experienced by customers (Harun et al., 2019). Strategies may involve organizational responsiveness to

service failures, front-line employee involvement in the recovery process, and the strength of the relationship with the customer prior to the service failure. Leaders of U.S. laboratory testing services should implement effective service recovery protocols to maximize customer satisfaction.

The way organizational leaders respond to a service failure could be essential to the effectiveness of the service recovery. Customers may evaluate their satisfaction levels based on events and actions taken by an organization when the service recovery is complete (Shams et al., 2020). Van Varenbergh et al. (2019) stated that organizational leaders should transition from the idea of recovery from a single event to recovery as a journey. Researchers have identified that the service recovery journey consists of three distinct phases; pre-recovery, recovery, and post-recovery (Oflac et al., 2021). The pre-recovery phase occurs after the initial service failure and prior to contact between the customer and the organization (Van Varenbergh et al., 2019). During this phase, both parties are aware of the service failure (Van Varenbergh et al., 2019). Shams et al. (2020) asserted that during the pre-recovery phase, organizational leaders could potentially minimize the impact of the error by being the first to admit the mistake; this action is identified as stealing thunder. The second phase of the service recovery journey is the recovery phase (Oflac et al., 2021). The recovery phase includes all actions associated with trying to recover from the error and is finished with either an acceptable resolution or the customer ceases to pursue recovery efforts (Van Varenbergh et al., 2019). The final phase of the recovery journey is post-recovery. During the post-recovery phase, customers evaluate the actions taken by the organization and could choose to continue to

use the services of the organization or switch service providers (Van Varenbergh et al.,
2019). The service recovery journey encompasses multiple aspects of a service failure.
The pre-recovery, recovery, and post-recovery phases could impact customer satisfaction
evaluations. Leaders of U.S. laboratory testing organizations could transition dissatisfied
customers into satisfied customers by implementing service recovery protocols.

Distinct factors could contribute to effective service recovery efforts. One
principal factor during the service recovery journey is the effort given by frontline
employees (Oflac et al., 2021). Frontline employees are the primary personal connection
between customers and the organization (Costers et al., 2019). The relationships that may
develop between customers and frontline employees could impact service recoveries. The
attitudes and behaviors expressed by front-line employees during service recoveries could
influence the experiences and evaluations of customers (Zhang, 2019). The
responsiveness of frontline employees during the service recovery is evaluated by
customers (Yani-de-Soriano et al., 2019). Researchers have ascertained that effective
service recovery efforts are dependent upon empathetic frontline employees helping to
solve problems for dissatisfied customers (Costers et al., 2019). Dissatisfied customers
could directly express frustrations to frontline employees with negative comments. If
responses from frontline employees are empathetic, then customers could feel like their
concerns are being received and acted upon. Customers are more likely to feel satisfied
after a service recovery when the customers perceive recovery efforts from employees are
genuine and timely (Yani-de-Soriano et al., 2019). Leaders of U.S. laboratory testing
organizations could improve service recovery efforts by developing frontline employee

interactions with customers.

Organizational leaders can help improve frontline employee responses during service recoveries. Error management training improves the ability of frontline employees to respond during a service recovery (Yao et al., 2019). Increasing organizational support for frontline employees can help improve their engagement levels during service recoveries (Qi et al., 2018). Error management training and organizational support for frontline employees are actionable items that could be implemented by organizational leaders. Improving frontline employee responsiveness and motivation through training and organizational support could be strategies leaders of U.S. laboratory testing organizations can use to strengthen service recovery efforts.

Leaders of U.S. laboratory testing organizations could focus on building relationships with customers to maximize future potential service recovery efforts. Research studies have identified a potential connection between the strength of the organization-customer relationship prior to the service failure and the outcomes of the service recovery (Fleming et al., 2021). A strong relationship could mean that both parties are committed to resolving the service failure (Fleming et al., 2021). Customer satisfaction levels could be supported by strong relationships built before the need for service recovery efforts. The strength of the relationship between the organization and customers could be a strategy for effective service recoveries.

Recovering from service failures could be an important organizational strategy. Effective service recovery strategies could help organizations recover from service failures and meet customer expectations (Harun et al., 2019). Customer expectations are

met after a service failure when organizations complete an effective service recovery (Shams et al., 2020). Strategies for improving service recovery efforts may engage employees, expedite organizational responses to service failures, and build customer relationships. To maximize customer satisfaction, leaders of U.S. laboratory testing organizations could implement strategies to improve service recovery efforts.

### *Relationship Quality*

The relationship quality between an organization and customers could increase customer satisfaction. Relationship quality is defined as the strength of the relationship between the customer and the organization (Bakhsh & Rivits-Arkonsuo, 2021). Marketing researchers have identified quality customer relationships as strategic assets for the organization (Johnston et al., 2018). The potential strategic asset of quality relationships between an organization and customers could result in sustained profitability (Balci et al., 2019). Customers who experience a quality relationship with an organization could be likely to repurchase from the organization. Relationship quality increases trust, loyalty, reciprocity, benevolence, and competence develop between an organization and its customers (Youssef et al., 2018). A complex social construct forms as the relationship quality attributes strengthen (Bakhsh & Rivits-Arkonsuo, 2021). Casidy and Nyadzayo (2019) ascertained that a strong and positive social construct improves relationship quality and could improve customer satisfaction. Improving relationship quality between customers and the organization could help organizational leaders enhance customer satisfaction.

**Importance of Relationship Quality to Customer Satisfaction.** Relationship

quality can have beneficial effects on customer satisfaction. Researchers have found that positive relationship quality can help improve customer satisfaction (Youssef et al., 2018). Satisfied customers have been found to become loyal to an organization (Casidy & Nyadzayo, 2019). Customer loyalty is defined as the level of commitment a customer might repurchase the services of a preferred organization (Teseng, 2021). Customers who are loyal to an organization tend to be confident in the ability of the organization to deliver the services offered (Busser et al., 2019). An essential aspect of the long-term success of an organization involves developing customer loyalty by increasing customer satisfaction (Dam & Dam, 2021). Customer loyalty depends on satisfaction levels developed from the relationship quality with the organization (Teseng, 2021). Further, researchers have found that relationship quality positively impacts customer satisfaction (Balci et al., 2019). The quality of the relationship customers has with an organization could impact customer satisfaction. Customers may have improved satisfaction evaluations when the quality of relationships are strengthened. To increase customer satisfaction, leaders of U.S. laboratory testing organizations may implement relationship quality improvement strategies.

**SET and Relationship Quality.** Relationship quality could be described within the SET context. Customers can evaluate the experience of the relationship with the organization and determine their continued use of the service based on the quality of the relationship they have with the organization (Balci et al., 2019). Evaluations based on experiences and feelings could be described by SET. Customers can perceive receiving social benefits from positive long-term relationships with an organization (Ahn & Kwon,

2021). The connection between SET and relationship quality is further described as the social exchange that can benefit each party (Van Nieuw Amerongen et al., 2022). The customer experiences quality interaction during the service, and in return, the organization could receive return purchases and favorable feedback. Leaders of U.S. laboratory testing organizations could utilize constructs of social exchanges when evaluating relationship quality strategies.

One of the benefits that could develop from quality relationships is customers trusting the organization. Relationships between customers and organizations are built on trust and are not mandated by legal requirements (Shen & Tang, 2018). Customer trust is defined as the confidence that the organization will not take advantage of the customer's dependence on the organization (Fleming et al., 2021). Trust is a key component in SET as positive reciprocal actions develop feelings of obligations to return exchanges (Blau, 1964). As a customer develops trust in an organization, the customer is confident in the exchange and is willing to complete future exchanges (Youssef et al., 2018). Reciprocal positive exchanges that meet customer expectations can improve customer satisfaction (Teseng, 2021). Improving relationship quality may lead to greater customer trust, satisfaction, and loyalty. To help improve customer satisfaction, leaders of U.S. laboratory testing organizations should evaluate and develop the quality of the relationship with their customers.

**Strategies for Improving Relationship Quality.** Researchers have identified a variety of practices leaders could implement to help improve customer relationship quality. Balci et al. (2019) ascertained that social bonding strategies between employees

and customers could help develop quality relationships. Leaders can implement social bonding strategies, including customer visits, meaningful communication, and appreciation gifts (Balci et al., 2019). There are a variety of measures that leaders of U.S. laboratory testing organizations could implement to improve relationship quality with customers.

One way relationship quality could be improved with customers is promoting a shared interest. Researchers have found that creating a platform for mutual interest-sharing with customers can lead to increased relationship quality (Ahn & Kwon, 2021). Casidy and Nyadzayo (2019) found that demonstrating a willingness to communicate shared interests with customers positively affects relationship quality. An evaluation of relationship quality levels by a customer could be influenced when there is a shared interest with the organization. The shared interest between customers and U.S. laboratory testing organizations could include a desire to help communities.

Another way relationship quality could be improved is through employee training. Leaders of service organizations could implement training programs designed to enhance coping, problem-solving, and professional relationship development skills (Casidy & Nyadzayo, 2019). Emotional training of frontline employees can help improve their awareness and sensitivity when interacting with customers (Shams et al., 2020). Employees who receive training and development for their emotional awareness would be better equipped to establish positive customer relationships. Leaders of U.S. laboratory testing organizations could improve customer satisfaction levels by strengthening the relationship quality customers have with the organization.

*Service Quality*

An organization's service quality could significantly increase customer satisfaction. Service quality is defined as the ability of an organization to meet the demands and expectations of delivering services to customers (Dam & Dam, 2021). Once a level of service is established between customers and organizations, the quality of an organization's service helps ensure that customer expectations are met. Customers evaluate service quality based on five accepted aspects. The five aspects of service quality are tangibles, reliability, assurance, responsiveness, and empathy (Islam et al., 2019). Customers could evaluate the five aspects of service to identify their satisfaction levels (Dam & Dam, 2021). Each of the five aspects of service quality could impact customer satisfaction. Leaders of U.S. laboratory testing organizations could maximize customer satisfaction by improving service quality.

Service quality could be important to improving customer satisfaction. According to Famiyeh et al. (2018), organizations can provide good service quality when the services are reliable, accurate, and trusted by the customer. Customers can become satisfied when their expectations of service quality are met (Wang, 2020). Afiuc et al. (2020) ascertained that service quality positively correlates with customer satisfaction and retention. Strategic service quality initiatives may influence customers' evaluation of an organization's performance. To maximize customer satisfaction, leaders of U.S. laboratory testing organizations may implement strategies for improving service quality.

**Importance of Service Quality to Customer Satisfaction.** Leaders of U.S. laboratory testing organizations could enhance customer satisfaction by improving the

service quality. Customers can become satisfied when they perceive value added to the service from high-quality standards (Leclercq-Machado et al., 2022). Customers evaluate service quality based on their perceptions of superiority or inferiority of the quality of services provided by an organization as compared to services provided by other organizations (Afiuc et al., 2020). Researchers have found that service quality could correlate with customer retention (Afiuc et al., 2020). Customer retention could be a representation of satisfaction (Busser et al., 2019). Customers that perceive receiving superior services are likely to have greater satisfaction for an organization than those customers not receiving good services (Famiyeh et al., 2018). Customers can evaluate their satisfaction levels based on the quality of the received services. The quality of services provided to customers could be a factor in influencing customer satisfaction.

**SET and Service Quality.** Customers can evaluate service quality based on perceptions and observations of social interactions with an organization. Social aspects of service quality include reliability, responsiveness, assurance, and empathy (Busser et al., 2019). The social aspects of service quality are generally considered intangible interactions. Positive intangible interactions could help customers develop long-term relationships with an organization (Ahn & Kwon, 2021). Participants within long-term social relationships perceive receiving valuable benefits from the exchanges (Blau, 1964). The longer a relationship with an organization continues, the more valuable social interactions can become. The continued intangible benefits received within the exchanges are fundamental to SET (Blau, 1964). These intangible benefits could be products of quality services. The benefits customers receive from good service quality helps improve

customer satisfaction (Dam & Dam, 2021). Customers satisfied with quality services feel

obligated to stay loyal to the organization providing the service (Farhana, 2021). Feelings

of obligation and trust are derived from SET (Blau, 1964). The SET could explain the

fundamental aspects of service quality. The quality of an organization's services could

build customer trust, and satisfaction. To maximize customer satisfaction, leaders of U.S.

laboratory testing organizations could implement strategies for improving service quality.

**Strategies for Improving the Service Quality.** To help improve customer

satisfaction, leaders of U.S. testing laboratories should improve the quality of their

services. Researchers have found that satisfaction levels may be influenced by the

customer's evaluation of received services (Teseng, 2021). Service quality could enhance

the image of the organization, develop loyal customers, and attract potential new

customers through positive reviews of currently satisfied customers (Famiyeh et al.,

2018). Customers could feel their expectations are met due to the quality of an

organization's services. Researchers have identified several strategies for improving the

service quality of an organization. The strategies for improving service quality could be

developing a customer-centric organization, engaging employees, and engaging

customers.

One strategy for improving service quality is by creating a customer-centric

organizational culture. To improve service quality, leaders of organizations could develop

a customer-centric organizational culture (Afiuc et al., 2020). Organizational leaders

could improve service quality by training, recruiting, and retaining competent and

empathetic employees (Islam et al., 2019). Researchers have found that training frontline

employees in responding to different customer situations could have a positive

relationship with improving service quality (Shen & Tang, 2018). Service quality training

programs could include managers of frontline employees. Managerial training could

focus on engaging frontline employees, creating service awareness with customers, and

communicating critical service information to frontline employees (Jung et al., 2021).

The focus of an organizational culture could be important for enhancing service quality.

Leaders of U.S. laboratory service organizations could create a customer-centric

organizational culture that would focus on improving service quality.

Organizational leaders could improve service quality by engaging frontline

employees. Researchers have found that engaged employees are essential for achieving

customer satisfaction (Islam et al., 2019). Engaged employees could be perceived by

customers as committed to improving the quality of the service (Cain et al., 2018).

Engaged employees are likely to respond to challenging customer requests while actively

improving service quality (Cain et al., 2018). Organizational leaders could improve

service quality by engaging employees. Managerial support and performance feedback

could promote employee engagement (Zahoor, 2020). Organizational leaders may need to

consider methods to improve employee engagement. Service quality could be improved

from strategies leaders of U.S. laboratory testing organizations implement to increase

frontline employee engagement.

Another strategy for improving service quality could be promoting customer

engagement. Islam et al. (2019) found that enhancing service quality can engage

customers and improve their satisfaction with the provided services. Customer

engagement is defined as voluntary actions customers take to interact with services while providing feedback and valuable improvement suggestions (Islam et al., 2019). Feedback received from customers could be essential for improving service quality. The feedback received could help services meet customers' expectations. Customers could be encouraged to invest their time by collaborating with an organization to improve or customize services (Farhana, 2021). Investing time in an organization could enhance the customer's connection with the organization's services (Youssef et al., 2018). Customers could then feel satisfied when they engage with the organization while experiencing improved quality services (Ahn & Kwon, 2021). Customers engaging in the improvement of an organization's services could become more connected to the organization. Quality services designed by customers could have a better chance of meeting customer's expectations of received services.

The practice of engaging customers could improve the services offered by the organization. Engaging customers helps organizational leaders better understand the customers while customizing future services (Patricio et al., 2018). Customers could become satisfied with the customized services as the perceived quality may surpass the customer's expectations (Dam & Dam, 2021). As organizations incorporate the customer's ideas to improve services, customers may feel satisfied with the organization. Leaders of U.S. laboratory testing organizations could enhance customer satisfaction by improving the quality of the offered services.

### Corporate Social Responsibility

Corporate social responsibility (CSR) activities could help organizational leaders

improve customer satisfaction. The primary objective of CSR initiatives includes creating a positive impact on society while enhancing organizational competitiveness and sustainability (Leclercq-Machado et al., 2022). CSR is defined as the ability of the organization to meet legal, ethical, and societal expectations (Leclercq-Machado et al., 2022). CSR activities are intended to meet societal expectations of an organization. Failure to meet societal expectations could result in a loss of sustainability. Leaders of U.S. laboratory testing organizations implementing CSR activities could be viewed as making a positive impact on society.

Organizations can receive several benefits when participating in socially responsible activities. Organizations that are perceived as socially responsible can improve customer loyalty, retain quality employees, and establish a positive reputation in the community (Afiuc et al., 2020). Four main responsibilities comprise CSR: economic, legal, ethical, and philanthropic (Wang, 2020). Afiuc et al. (2020) stipulated that for organizations to be viewed as socially responsible, all four responsibilities need to be fulfilled. Researchers have ascertained that CSR may provide value for an organization and should be considered a strategic activity for organizational leaders to implement (Lee et al., 2020). CSR activities could provide benefits to society and the organization. There are a variety of ways organizations can participate in CSR activities. Organizations perceived to be socially responsible could improve customer satisfaction.

**Importance of Corporate Social Responsibility to Customer Satisfaction.** CSR activities could provide organizations with positive rewards. Researchers have found that CSR could influence customer loyalty (Lee et al., 2020). Socially responsible

measures could help organizations improve customer satisfaction (Wang, 2020).

Customers can feel satisfied with an organization when customers consider the

organization as socially responsible (Zhang & Ahmad, 2022). Researchers have found

that customers' support, satisfaction, and positive evaluation of an organization increase

as CSR activities are fulfilled (Wang, 2020). Zhang and Ahmad (2022) asserted that the

importance of implementing CSR activities increases for organizations operating in

highly competitive markets with increasing client demands. Organizational leaders

participating in CSR activities can provide society, customers, and organizations with

benefits. To maximize customer satisfaction, leaders of U.S. laboratory testing

organizations could implement CSR activities.

CSR activities may be influential in customer satisfaction. The evaluation of CSR

activities could be a defining factor for a customer's using one organization versus

another organization (Leclercq-Machado et al., 2022). Customers feeling satisfied with

the CSR activities of an organization could lead to improved purchase intentions (Wang,

2020). Researchers have found that CSR activities may be a contributing factor for

organizational leaders to create sustainable business practices (Wang, 2020). CSR

activities could improve customer satisfaction and should be considered an important

strategic initiative.

**SET and Corporate Social Responsibility.** The foundation of the SET could be

used to explain the impact CSR has on customer satisfaction. Researchers have identified

that CSR activities impacts customer satisfaction by non-monetary exchanges, trust

building, and obligation aspects of the SET (Afiuc et al., 2020). CSR initiatives could

promote feelings of connection and identity customers have towards an organization (Wang, 2020). As customers connect with an organization the customers could develop reciprocal feelings to continue purchasing from an organization (Afiuc et al., 2020). Feelings of connection, identity, and reciprocity are aspects explained by SET (Blau, 1964). Customers receive non-tangible benefits when organizations fulfill CSR activities (Leclercq-Machado et al., 2022). Customers could be influenced by CSR activities. Personal feelings customers experience from CSR activities could be explained by the non-monetary interactions associated with SET. Non-tangible CSR benefits exchanged within relationships between organizations and customers could be evaluated by leaders looking to improve customer satisfaction.

Organizational leaders may participate in CSR initiatives with the expectation of receiving some form of benefits in return. Within the context of SET, both parties interact with the expectation of receiving future benefits for their initial investment (Blau, 1964). CSR initiatives could enhance the reputation of an organization and have positive impacts on customer repurchase intentions (Lee et al., 2020). Organizations that participate in CSR activities and promote CSR activities may positively influence the repurchase behaviors of customers while developing a positive image within their operational society (Lee et al., 2020). SET could be a framework for describing the social impact CSR has on customers. Organizational leaders implementing CSR activities may do so with the expectation of influencing customer satisfaction levels. To maximize customer satisfaction, leaders of U.S. laboratory testing organizations could implement strategies for improving CSR.

**Strategies for Improving Corporate Social Responsibility.** To help improve customer satisfaction, leaders of U.S. testing laboratories could implement and promote CSR activities. CSR initiatives aim to meet societal expectations of improving social well-being by complying with ethical and legal laws (Wang, 2020). There are various CSR activities that leaders of organizations can implement, including sustainability, philanthropy, workforce education, and ethical corporate governance (Afiuc et al., 2020). Customers could evaluate the effectiveness of CSR activities by the value and contribution the activity provides the society (Zhang & Ahmad, 2022). When CSR activities are evaluated by customers as benefiting society, then customer satisfaction may improve (Zhang & Ahmad, 2022). Positive evaluations of CSR activities could result in customers having a positive outlook for the organization (Lee et al., 2020). For customers to evaluate the CSR activities of an organization, organizational leaders may need to promote CSR activities. If CSR activities are not known by the customers, then the customers may not include the activities within their satisfaction evaluation. Leaders of U.S. laboratory testing organizations could implement strategies to communicate CSR activities.

Organizational leaders should actively promote and communicate CSR activities. Without effective promotion, the activities completed by organizations may not translate into additional customer loyalty (Leclercq-Machado et al., 2022). Organizations that effectively communicate CSR activities can help enhance customers' satisfaction and loyalty to the organization (Wang, 2020). Promotion of CSR activities could be through social media platforms, direct communication, or on the organization's website. CSR

promotion could be considered a strategic component in creating value for an organization (Lee et al., 2020). A potential strategy for leaders of U.S. laboratory testing organizations to maximize satisfaction could be to participate in and promote CSR activities. Effectively communicating the positive societal impacts of CSR activities to customers could help maximize satisfaction.

### Organizational Culture

The culture of an organization could be an important aspect that leaders of U.S. laboratory testing organizations could consider when seeking to improve customer satisfaction. Researchers have found that the adaptability of the organizational culture to respond to customers' needs positively correlates with customer satisfaction (Famiyeh et al., 2018). Martinailyte et al. (2019) emphasized that organizational strategic goals and values should focus on customer satisfaction. Organizational leaders that develop a customer focus could encourage employees to engage in customer-satisfying behaviors (Afiuc et al., 2020). Creating an organizational culture focused on improving customer satisfaction could include motivating frontline employees to engage with customers and providing continual customer-centric training (Martinailyte et al., 2019). The culture of an organization guides employees in their daily activities. A customer focused organizational culture could help improve customer satisfaction.

Organizational leaders could develop a customer-centric culture by promoting strategic activities. Organizational activities, including training programs, demonstrate an investment commitment from the organization to the employees (Shen & Tang, 2018). Training programs could encompass error management (Yao et al., 2019), coping and

problem-solving skills (Casidy & Nyadzayo, 2019), and service quality actions (Islam et al., 2019) for frontline employees. Developing the knowledge and skills of employees could help provide better customer service (Shen & Tang, 2018). Employees receiving training and support may develop feelings of obligation to engage in improving customer satisfaction (Qi et al., 2018). To develop a customer-centric culture, organizational leaders should implement initiatives that focus on providing improved customer services. Improved customer services could help improve customer satisfaction.

Engaging frontline employees could be a key component in satisfying customers. Professional service firms, including U.S. testing laboratory organizations, often rely on medium to high contact between customers and frontline employees (Casidy & Nyadzayo, 2019). Customer services could be improved by engaging frontline employees. Organizational leaders should be aware of the risk of engaging frontline employees in customer service activities. High contact with customers could lead to frontline employees feeling emotionally exhausted (Zhang, 2019). Emotional exhaustion is defined by researchers as a lack of energy to engage in daily work activities that are often a result of high psychological demands (Zhang, 2019). Emotionally exhausted employees may be influenced by organizational support. Frontline employees that perceive a lack of organizational support are more likely to feel emotionally exhausted than employees with organizational support (Zhang, 2019). Frontline employees who feel strong organizational support could provide better service quality and improve customer service (Shen & Tang, 2018). Qi et al. (2018) ascertained that prominent levels of organizational support could motivate frontline employees to provide better services.

Including frontline employees in the decision-making process of improving customer satisfaction could motivate frontline employees to provide better services (Martinailyte et al., 2019). Frontline employees are an essential aspect in creating a customer-centric organization. Maximizing frontline employee engagement could be established through supportive initiatives implemented by leaders of U.S. laboratory testing organizations.

Organizational support for employees could improve employee engagement. Researchers define employee engagement as an employee's willingness to exceed job duty expectations while looking out for the well-being of the organization and striving to achieve organizational goals (Qi et al., 2018). Engaged employees often express positive attitudes, dedication, and eagerness toward daily work activities (Zhang & Geng, 2019). Frontline employees that are engaged in their work could be motivated to provide enhanced services that exceed customer expectations (Martinailyte et al., 2019). Engaged frontline employees could positively influence customer satisfaction. Customers interacting with engaged employees could perceive receiving services that exceed expectations (Busser et al., 2019). Customer satisfaction is likely to improve when the customer's expectations are exceeded (Busser et al., 2019). Researchers have ascertained that employee engagement may be critical to satisfying customers (Islam et al., 2019). Organizational support for frontline employees could help improve employee engagement. In response to feeling supported, frontline employees could improve the services provided to customers, which could improve customer satisfaction. Leaders of U.S. laboratory testing organizations could improve customer satisfaction by motivating employees to engage in providing enhanced services.

The culture of an organization could provide a strategic function in enhancing customer satisfaction. Customers are often considered the primary stakeholder of an organization (Wang, 2020). Famiyeh et al. (2018) asserted that to improve customer satisfaction, organizational strategic goals, mission, and values should align with satisfying customer needs. Organizational leaders should support a culture focused on satisfying customers (Martinailyte et al., 2019). When organizational strategic goals are customer-focused, frontline employees may feel supported to provide customers with high-quality exchanges (Qi et al., 2018). Organizational culture could be an important aspect in establishing satisfied customers. To improve customer satisfaction levels, leaders of U.S. laboratory testing organizations could incorporate customer satisfaction strategies within their decision-making process.

**Transition**

The purpose of Section 1 was to describe the foundation of the study. My research is a qualitative multiple case study to identify optimal strategies that leaders of U.S. laboratory testing organizations can use to maximize customer satisfaction. I am using the SET as a conceptual framework to explore the impact organizational strategies can have on customer satisfaction. Leaders of U.S. laboratory testing organizations should heighten the importance of improving customer satisfaction. Researchers have identified that customer satisfaction positively correlates with an organization's performance and profitability (Wang, 2020). Customer satisfaction is built upon a series of relationships and interactions that could be explained by the SET (Farhana, 2021). A review of the literature found that customer service levels could be affected by service recovery efforts,

relationship quality, service quality, corporate social responsibility, and organizational culture.

Leaders of U.S. laboratory testing organizations should implement strategies that are designed to improve customer satisfaction. Martinailyte et al. (2019) asserted that organizational strategic goals, missions, values, and interactions with customers should focus on meeting or exceeding customer expectations. When the needs of customers are met or exceeded, then customers tend to have a feeling of satisfaction (Dam & Dam, 2021). Satisfied customers can provide organizations with a variety of benefits. Researchers have found that satisfied customers may develop a sense of loyalty to an organization while having a higher repurchase intention and are likely to provide positive feedback to other customers (Busser et al., 2019). Customer satisfaction is a critical component in the sustainability and profitability of organizations (Qi et al., 2018). Service organizations that can meet or exceed the expectations of customers could improve customer satisfaction and create sustainable success. Leaders of U.S. laboratory testing organizations should develop strategies for improving customer satisfaction.

In Section 2, I will provide detailed information on the research methodology and plan. Section 2 will include a description of the research design, participant selection, data collection and analysis, and details for conducting ethical research. The section will conclude with a description outlining the validity and reliability of the study.

In Section 3, I will provide a detailed analysis of the results from my multiple case study. I applied the results from my study to practical applications for strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

The section will include implications for social change and recommendations for future

research. Section 3 will conclude with my reflections and conclusion of the study.

Section 2: The Project

The purpose of Section 2 is to provide an outline of how I conducted my qualitative multiple case study research. Yin (2018) asserted the importance of establishing an explicit research design for case studies because qualitative case study research designs can vary depending on the cases being studied (Yin, 2018). To outline my research design, I describe the actions, definitions, and details for each component in Section 2.

## Purpose Statement

The purpose of this qualitative multiple case study was to explore optimal strategies that leaders of U.S. laboratory testing organizations can implement to maximize customer satisfaction. Using a qualitative multiple case study design, I explored the complex and subjective nature of strategies for maximizing customer satisfaction. The target population for this study was five leaders of testing labs who have successfully maximized customer satisfaction.

## Role of the Researcher

My role as a researcher was the primary data collection instrument for the study on exploring strategies leaders of U.S. laboratory testing organizations use to maximize customer satisfaction. In my study, I collected data from various points to identify strategies leaders of U.S. laboratory testing organizations use to maximize customer satisfaction. The researcher for a qualitative case study is the primary data collection instrument (Yin, 2018). A general criticism of case study research is that a researcher acting as a primary instrument for data collection could introduce bias and inferences into

the study (Yin, 2018). I have worked within the laboratory testing industry for over 15 years and 13 of those years have included client facing positions. I recognize that my own biases, inferences, and experiences could influence the study and results. Minimizing biases and avoiding the introduction of personal perspectives into the collected data is important for enhancing validity for the findings (Yin, 2018). To minimize introducing my own biases and inferences into the data, I established a research design that outlined exact protocols I followed to collect and evaluate data. Increasing the number of cases studied has been found to mitigate potential issues of validity within case studies (Gerring, 2017). Multiple sources of trackable evidence were collected and could ensure future researchers the ability to reproduce results I found. Another way to reduce subjective notions I could have introduced is by exploring strategies of multiple organizational leaders. Analyzing multiple cases could make the study more robust and allow replication of the results (Yin, 2018). Utilizing multiple sources of evidence from five organizations helped reduce the impact that my preconceived ideas had on the findings.

The interview protocol helped mitigate my own familiarity with participating organizations. Yin (2018) asserted that researchers conducting multiple case studies must consistently follow the same interview protocol for each interview while delivering the interview questions with an unbiased approach. To assist with consistency, the interviews were conducted by phone with the assistance of an electronic recording application. The electronic recording application was used to obtain a voice recording and transcribed the interviews. Recording of the interviews was only done if the participants are comfortable

and gave consent. All interviews followed the same guided format, which helped me deliver questions with an unbiased approach. My interview protocol helped guide me in conducting an ethically unbiased research study.

Conducting research ethically was a primary objective of my study. Exceptional care needs to be taken in case study research because the study involves human interactions (Yin, 2018). I used the Belmont protocol to ethically conduct my research. According to the Belmont protocol, there are three generally accepted basic principles of conducting ethical research: respect for people, beneficence, and justice (Department of Health, Education, and Welfare, 1979). Participants of research studies were justly protected while doing no harm to them (Department of Health, Education, and Welfare, 1979). My approach with all participants was conducted with care to protect the participants while maintaining their confidentiality and goodwill.

## Participants

The role of participants within a case study can be critical to the validity of the study. Participants selected for the study should be considered as experts in their field with their experiences being an essential part of a study (Ravitch & Carl, 2016). In my study, I sought the participation of leaders within laboratory testing organizations located in the southeast United States. The southeast region contains 22% of the roughly 10,000 non-medical U.S. laboratory testing organizations (IBISWorld, 2020). The leaders held different leadership positions within the organizations. For this study, I interviewed five participants from five different southeast U.S. laboratory testing organizations.

Participants were selected by identifying laboratory testing organizations with

ISO 17025 certification and positive customer satisfaction reviews. ISO 17025

certification is an industry standard certification provided to laboratory testing

organizations that demonstrate valid and reliable operations (ISO, n.d.). The accrediting

body databases were used to identify laboratories with ISO 17025 certification. The

accrediting body databases used were from A2LA (https://a2la.org/), ANSI National

Accreditation Board (https://anab.ansi.org/), and PJLA (https://www.pjlabs.com/).

Laboratories identified as having ISO 17025 certification were then searched for

customer reviews by using an internet search engine. Leaders of ISO 17025 certified

southeast U.S. laboratory testing organizations with positive customer reviews were then

identified by reviewing the laboratory website and Linkedin profiles. The identified

leaders of the organizations with positive customer reviews were contacted and requested

to participate in the study. Gaining access to candidates that met the screening criteria

was a critical aspect in conducting my study. Contact to the perspective leaders was by an

email sent from my Walden University email account. In one case I contacted a leader by

Linkedin, then followed up with a direct email from my Walden University email

account. The introductory email included the reason the recipient was contacted,

information on my study, and the process for participation.

To build a working relationship with participants, a researcher needs to be

trustworthy, persuasive, and can build a rapport with the participants (Pole & Hillyard,

2016). An important aspect for building a working relationship with participants is for the

researcher to be engaged and knowledgeable in the literature surrounding the area of

study (Pole & Hillyard, 2016). I was open and honest when contacting perspective

participants. To build a working relationship with participants, I provided purposeful reasons why the leaders of U.S. laboratory testing organizations should participate in my study. I helped establish trust with the participants by thoroughly presenting the informed consent form and measures I took to ethically conduct the research. Building rapport with organizational leaders was an important aspect in gaining access to participants. Selecting, gaining access to, and building a working relationship with participants that have a successful history of satisfying customers was important to exploring optimal strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

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**Research Method and Design**

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The research method and design are critical components to a study. My study followed a qualitative research method with a multiple case study design.

**Research Method**

I evaluated three research methods for my study: qualitative, quantitative, and mixed methods. Researchers using a qualitative research study attempt to explore the experiences, interpretations, and feelings that individuals or groups may have within social interactions (Ravitch & Carl, 2016). Researchers using a quantitative research method attempt to identify the strength of an impact an independent variable could have on a dependent variable (Creswell & Creswell, 2018). Researchers using a mixed method approach attempts to explore the results obtained from a quantitative analysis (Creswell & Creswell, 2018). Both the quantitative and mixed methods did not fit my study because I did not seek to identify actions that influenced customer's evaluation of their

satisfaction levels with the services of an organization. Rather, I explored optimal strategies that leaders of U.S. laboratory testing organizations could implement to maximize customer satisfaction. For my study, I used a qualitative research method. Participants of my study were leaders of organizations that had elevated levels of satisfied customers. Leaders of organizations that had elevated levels of satisfied customers may have developed strategies for maximizing customer satisfaction. The subjective nature of customer satisfaction and strategies for maximizing customer satisfaction may be best researched with a qualitative method.

**Research Design**

A research design is an important aspect for researchers completing qualitative research. A research design is a strategic work plan to address case study research questions (Yin, 2018). The purpose of a research design is for the researcher to avoid gathering and presenting evidence that may not help answer the research question (Yin, 2018). The primary research question for my study was "What strategies do leaders of U.S. laboratory testing organizations use to maximize customer satisfaction?" I used a research design that enabled me to gather evidence to help answer my research question.

There are multiple qualitative research designs that I may have used to gather evidence that will help me identify strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction. Researchers use five main qualitative research designs. The five types of qualitative research designs include case studies, ethnographic, grounded-theory, narrative, and phenomenological (Hancock et al., 2021). In ethnographic studies, researchers seek to develop a cultural portrait of a select

group of participants (Hancock et al., 2021). In a grounded theory design, a researcher studies the data to derive meaning on daily situations (Hancock et al., 2021). Researchers utilizing a narrative study design are seeking to interpret or explore the life events of a single participant (Hancock et al., 2021). In a phenomenological design, researchers explore the lived experiences of participants (Hancock et al., 2021). None of the aforementioned qualitative research designs were applicable for my study because I did not develop a cultural portrait, derived meaning from daily situations, studied a single participant, nor explored lived experiences.

My research design was a case study. In a case study research design, researchers explore a better understanding and meaning of a situation (Hancock et al., 2021). I explored strategies that could influence the phenomenon of customer satisfaction. To explore strategies that influence customer satisfaction, I chose to use a case study design. Yin (2018) described a case as studying a practical phenomenon within a real-world context. A case could include individuals, small groups of people, organizations, or projects (Yin, 2018). The participants I selected for the study, interview questions, and data focused on exploring strategies used by leaders of U.S. laboratory testing organizations to maximize customer satisfaction. For my study, I utilized findings from five cases.

Achieving data saturation is an important aspect for researchers conducting qualitative case studies. Researchers have identified data saturation in a qualitative research study as the point when new data does not change the evidence (Creswell & Creswell, 2018). Data saturation is not derived during case studies from a specified

number of collection points, rather data saturation can occur at any given point of a research project (Alam, 2021). To identify the point of data saturation during a study, researchers should code and evaluate data as new evidence is gathered (Alamn, 2021). Meaning, coding, and evaluation should be ongoing throughout the research study. Researched five leaders from five different U.S. laboratory testing organizations. I coded and evaluated evidence as I collected the data. Researching five leaders of organizations with a history of positive customer satisfaction helped ensure that I obtained data saturation. If I had found new evidence that changed the data upon studying the fifth organization, then I would have selected and researched additional cases until I reached data saturation.

### Population and Sampling

The participants for my study helped provide information that developed strategies for maximizing customer satisfaction. Researchers conducting a qualitative study select participants who could help answer specific research questions (Ravitch & Carl, 2016). Researchers selecting participants based on the participants knowledge or experience is often called purposeful sampling (Ravitch & Carl, 2016). I purposefully selected participants who could help answer my research question. The participants for my study comprised of leaders of U.S. laboratory testing organizations with positive customer satisfaction reviews. Leaders are often defined as individuals that influence and engage employees to accomplish common goals (Northouse, 2019). I selected participants who are leaders within southeast U.S. laboratory testing organizations.

For my study, I interviewed five leaders from five different southeast U.S.

laboratory testing organizations. Each organization and leader were considered a case. Yin (2018) described that incorporating multiple cases could strengthen the validity and reproducibility of a case study. The number of cases to study for qualitative research is subjective (Yin, 2018). I chose to research five cases to strengthen the reproducibility and validity of presenting optimal strategies for improving customer satisfaction within U.S. testing laboratory organizations.

Studying five cases helped ensure data saturation. Data saturation can occur when a researcher uses an appropriate sample size for a study (Creswell & Creswell, 2018). Five cases were an appropriate sample size because I obtained data saturation. Data saturation was obtained with the first three case studies. The fourth and fifth case study aligned with previous findings and did not provide new data. Collecting multiple sources of evidence of the same phenomenon can create a triangulation of data (Yin, 2018). The multiple data sources collected from each of the five case studies helped establish a triangulation and data saturation of strategies that leaders of U.S. testing laboratory organizations use to maximize customer satisfaction.

## Ethical Research

As a researcher, I had a responsibility and duty to conduct ethical research. Part of my study included completing interviews. Interviews are an active participation with participants within a study (Pole & Hillyard, 2016). My interview questions were designed to explore and identify optimal strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction. Maximizing customer satisfaction within a competitive industry is often considered to be a competitive advantage for

organizations (Adi et al., 2022). The participants of my study may have felt apprehensive toward discussing strategies that have provided their organization with a competitive advantage. My responsibility was to maintain confidentiality and report all results with anonymity. To conduct my research ethically, I followed the IRB guidelines for conducting ethical research.

Once I identified potential participants, I actively sought the participant's informed consent. The initial contact of participants consisted of an email invitation sent from my Walden University email account. The email invitation included information about the study, requirements for participants, anticipated time commitment, description of a gift of gratitude, and a confidentiality statement (see Appendix A). Follow-up emails and phone calls were conducted to help establish a rapport with the participants. Participants who replied to my email with interest in the study received an informed consent form via email (see Appendix B). I used the informed consent form template obtained from Walden University's office of research and doctoral service (see Appendix B). Participants receiving an informed consent form assume that researchers are guaranteeing levels of confidentiality and anonymity (Pole & Hillyard, 2016). To maintain an ethical research approach during a study, all participants shall have the continuous opportunity to choose their involvement in the study (Department of Health, Education, and Welfare, 1979). Participants had the opportunity to withdraw their involvement in the study at any time by providing me with an email notification. At the conclusion of my study, participants received a nominal gift of gratitude in the form of a $20 VISA gift card.

An important consideration in conducting ethical research is to maintain privacy and confidentiality. Yin (2018) asserted that case studies involve researching human participants and great care must be taken to avoid placing participants in compromising or detrimental positions. Researchers need to be careful in revealing locations or profiles of organizations (Pole & Hillyard, 2016). The participants of my study will include leaders of U.S. laboratory testing organizations. Participants of my study were not confined to a specific location within the southeastern U.S. or department within the laboratory testing organizations. I have omitted any descriptions of locations or revealing profiles of included organizations. Any potentially identifying information including names of participants and organizations have been removed from the study data and replaced with codes. The participants are referenced as CS1, CS2, CS3, CS4, and CS5. The participant codes enabled confidentiality and could limit potential biases that may arise while analyzing the data.

Another concern leaders of U.S. laboratory testing organizations may have had is my ability to maintain the confidentiality of their customers. My data collection procedures and study plan had no direct contact with the customers of U.S. laboratory testing organizations. I asked interview questions that were designed to explore strategies for maximizing customer satisfaction; I did not ask about specific customer experiences. Any customer information that was provided during the interview or observed during data collection was omitted from the study. Data has been secured in password protected files and stored electronically in a secured data system for a minimum of 5 years. After 5 years, I will destroy and delete all data collected for my study. The final doctoral

document Walden IRB approval number is 07-25-23-0550721. Information and protocols I used to protect the confidentiality of participants is provided in the informed consent form (See Appendix B).

## Data Collection Instruments

Data collection instruments are important aspects in conducting valid qualitative research. Researchers conducting qualitative studies utilize instruments to collect data (Ravitch & Carl, 2016). The proper use of data collection instruments is critical to completing a valid and reliable qualitative case study (Yin, 2018). The use of multiple sources of data is important in conducting an extensive real-world case study (Yin, 2018). Yin (2018) described six potential sources of data including documents, interviews, direct observations, and physical artifacts. I incorporated three data sources for my research. The data sources consisted of interviews, customer feedback reviews, and organizational internet reviews. The data collection instruments were me as the primary researcher, social media platforms, and organizational websites.

Data collection instruments are important for research studies. Qualitative researchers function as the primary data collection instrument for their study (Yin, 2018). One process I used to collect data was through interviews. I interviewed five leaders of U.S. testing laboratory organizations. My interview protocol (See Appendix B) was semistructured. A semistructured interview consists of pre-determined questions that are open ended (Cresswell & Cresswell, 2018). I asked the participants of my study nine pre-determined questions. Each participant was asked the same set of questions. As a data collection instrument, I audio recorded and transcribed four of the five interviews. One

interview was not recorded. The interviews took place over a phone call with the aid of a voice recording application. The interviews were recorded with the consent of the participants. The anticipated time for each interview was 30 minutes. Using the same set of questions and setup helped me establish an interview replication approach.

I used social media platforms as the second data collection instrument. Social media platforms enable researchers to observe first-hand accounts of participants within real-world contexts (Ravitch & Carl, 2016). Feedback provided by customers could be found on the service provider websites, or various social media feedback forums (Wang & Olsen, 2018). My qualitative review of social media platforms and organizational websites was an unstructured search for customer reviews. The primary data collected from social media platforms was customer reviews of laboratory testing organizations.

My third data collection instrument was documentation review from the internet presence of the selected organizations. Yin (2018) asserted that documentation is valuable evidence in case study research. Both customers of U.S. laboratory testing organizations and the U.S. laboratory testing organizations are located throughout the United States (IBIS World, 2020). Since both customers and U.S. laboratory testing organizations could be geographically separated, a form of communication and presentation of organizational operations could be in establishment of a website. Researchers have found that customer interactions with website applications could influence customer satisfaction (Teseng, 2021). Websites of U.S. laboratory testing organizations provided a variety of documentation including a listing of certifications, customer service protocols, testimonials, and secure portals to receive testing results. The

websites of selected U.S. laboratory testing organizations provided documentation that was applicable to my case study.

Enhancing the reliability and validity of the data collection instruments was a critical component for my study. Researchers define data as valid when the data is obtained in a trustworthy manner (Ravitch & Carl, 2016). Reliability is defined by researchers as the ability for the research study to be recreated while achieving similar results (Ravitch & Carl, 2016). There are a variety of methods researchers can use to improve the reliability and validity of the data collection process. One action that may enhance reliability and validity is member checking. Member checking allows the participants an opportunity to provide feedback, corrections, or confirmation on the collected data (Ravitch & Carl, 2016). To enhance the validity and reliability of my data collection, I conducted member checking with the participants. The member checking took place during the interviews and was recorded for incorporation into the study.

## Data Collection Technique

My technique for collecting qualitative case study data were aligned to identify strategies leaders of U.S. laboratory testing organizations use to maximize customer satisfaction. Qualitative case studies are defined as studying a phenomenon within real world situations (Yin, 2018). The practical application I studied was strategies to influence the phenomenon of customer satisfaction. The data collection sources for my study consisted of interviews, customer reviews on social media platforms, and documentation found on websites of U.S. laboratory testing organizations.

The data technique I utilized was a systematic approach to collecting data on

strategies for maximizing customer satisfaction. The initial phase of data collection

consisted of screening candidates for my case study. According to Yin (2018), the goal of

the screening stage is to identify candidates prior to conducting formal data collection. A

disadvantage of a screening technique could be spending too much time on researching

organizations. Yin (2018) cautioned that the screening stage should be streamlined and

avoid becoming mini case studies on a variety of organizations. My screening stage of

potential organizations for the case study was streamlined. The advantage of the

screening stage was to identify potential participants systematically and efficiently for my

study. The screening stage consisted of identifying U.S. testing laboratory organizations

that have positive customer satisfaction reviews on social media outlets.

Once U.S. testing laboratory organizations were selected and the leaders were

provided the informed consent form, the next data collection stage was to gather

information on strategies for maximizing customer satisfaction. The data collection

techniques consisted of interview protocols, and document reviews. Interviews are an

important aspect in case study research because the interview process provides a platform

for participants to explain or provide insight to individual perspectives (Yin, 2018). Yin

(2018) ascertained that case study interviews could be prolonged, shorter, or survey-

based interviews. The shorter case study interview follows a more structured protocol and

is completed in one period (Yin, 2018). My interview technique followed the shorter case

study interview approach. I scheduled each interview to be approximately 30 minutes and

had the same semistructured approach. A potential disadvantage for interviewing

participants is that the interview questions could be leading, multi-part, or the researcher

could potentially spend too much time talking and not enough time listening (Hancock et al., 2021). To mitigate the potential issues with interview questions, my interviews consisted of the same nine questions, conducted over an online platform, and recorded if approved by the candidate. The information obtained by the interviews provided strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

A second technique I used for collecting data was a documentation review. Yin (2018) identified multiple types of documentation including announcements, organizational protocols, reports, or news articles. U.S. testing laboratory organizations could provide a variety of documents accessible website and online searches. Systematic Internet searches could provide valuable data for collecting data on real-world phenomenon (Yin, 2018). A disadvantage for using online searches to obtain documentation is a potential concern for the validity of the documentation (Hancock et al., 2021). Hancock et al. (2021) asserted that care must be taken to validate the authenticity of documents being reviewed. To minimize including non-valid documentation in my study, I validated the documentation used by identifying the source and publisher of the document. I conducted Internet searches and website reviews to obtain documentation that could outline strategies leaders of U.S. laboratory testing organizations use to maximize customer satisfaction.

An important action to complete when conducting data collection techniques is to confirm the evidence. A primary technique that researchers use to confirm the evaluation and interpretation of the data is by providing the case study participants an opportunity to

review the findings (Hancock et al., 2021). Providing an opportunity for participants to review and contribute feedback to the findings is described as member checks (Ravitch & Carl, 2016). Member checks enable researchers to engage with the participants and validate interpretation and validation of the findings (Ravitch & Carl, 2016). Ravitch and Carl (2016) asserted that researchers should be respectful of the participant's time and avoid overextending time commitments of the participants. At the conclusion of the interview with a participant, I explained the next steps of my study.

## Data Organization Technique

I organized the collected data in a manner that was secured, stored orderly in a database, and established a chain of evidence. Data for my study was both electronic and hard copy in the form of notes. Yin (2018) asserted that a database is used by researchers to establish an orderly storage of all data gathered within a case study. Further, narrative, and numerical data stored within a database provides reliability and validity to case studies (Yin, 2018). My notes, and voice recorded interviews were transcribed into an electronic file and stored within the database. The electronic data from my study is stored within a single secure file and categorized within an excel dataset. The electronic data and hard copy notes will be destroyed after 5 years.

## Data Analysis

Effectively analyzing the data helped me identify practical strategies that leaders of U.S. laboratory testing organizations can use to maximize customer satisfaction. I utilized the pattern matching technique to analyze data from three sources: online customer feedback, interviews, and organizational document reviews. Yin (2018)

asserted that multiple sources of data can create a triangulation of evidence that establishes validity for the findings. Triangulation is the ability for researchers to establish corroborating evidence from multiple sources to support findings (Yin, 2018). I used methodological triangulation when analyzing data collected during my case study. Methodological triangulation involves utilizing, comparing, and analyzing different methods of data collection (Ravitch & Carl, 2016). Data collected during my study was categorized within an Excel database. The data were coded by method (interview or document), key phrases or words, and type of strategy used to maximize customer satisfaction. The Excel database helped me organize and analyze the data. All interview participants were coded with a corresponding reference of CS1, CS2, CS3, CS4, or CS5. Answers provided by the interviewees were coded based on the interview questions. Customer satisfaction reviews found on social media outlets were coded with numerical reference and categorized based on reasons listed in the reviews. After reviewing documentation for each organization, I coded the organization and categorized the information based on the document type and content. Each code correlated with a code description, code definition, and theme.

Once the data were coded, categorized, and associated with themes, I analyzed the data to triangulate evidence on strategies for maximizing customer satisfaction. Yin (2018) ascertained that case study data analysis depends on the researcher's analytical thinking along with the presentation and interpretation of evidence. A researcher analyzing case study data is effectively searching for patterns and insights within the data (Yin, 2018). Researchers could identify patterns by creating a flowchart, tabulating

events, visually displaying the data with graphs, or organizing the themes in various

arrays (Yin, 2018). Visually displaying the data helped me identify key themes from the

case studies. Key themes within qualitative studies could be findings that do not directly

answer the research questions (Ravitch & Carl, 2016). I identified key themes from the

data analysis and corelated the key themes to my literature review. During the analysis of

the data, I coded and identified themes found within my literature review. Finally, I

reviewed any recently published research papers to potentially identify any new or

corroborating themes. Effective coding and categorization of the data enabled me to

explore and identify potential key themes for strategies that leaders of U.S. laboratory

testing organizations use to maximize customer satisfaction.

A primary data analysis technique I used was pattern matching. According to Yin

(2018), pattern matching is the action of evaluating findings from a case study to findings

presented within a literature review. Pattern matching is effective for connecting

processes with outcomes (Yin, 2018). My literature review identified a variety of

potential strategies leaders can use to maximize customer satisfaction. Pattern matching

data from my case study to the literature review findings established a pattern of

strategies that leaders of U.S. laboratory testing organizations use to maximize customer

satisfaction.

## Reliability and Validity

### Reliability

An important aspect of my research is that the study and findings are dependable.

Dependability is defined as the ability for other researchers to follow the same research

design with the same defining factors and receive similar outcomes (Yin, 2018). For research to be dependable, researchers need to explicitly document all steps and data used to evaluate a case study (Yin, 2018). My case study protocol outlined in Section 2 and a case study database helped establish dependability. A database allows for other researchers to inspect and confirm the presented data of the study (Yin, 2018). All data collected in my study was coded, categorized, and identified within the database. Explicit documentation of my procedures used for conducting the research combined with the thorough documentation of evidence within a database helped me establish a dependable case study.

Another action that I took to help ensure the dependability of my findings was to conduct member checking. Member checking is the action that researchers take to present specific findings, interview interpretations, or themes back to the participants (Yin, 2018). Yin (2018) emphasized that member checking means presenting semi complete or complete sections of a study for participant feedback. The process of member checking allows participants the opportunity to comment on the researcher's interpretation of the data (Yin, 2018). Creswell and Creswell (2018) cautioned that successful member checking does not necessarily represent a dependable study, additional measures are needed to be taken by researchers to ensure dependability. To help establish dependability for my findings, I incorporated member checking into my interviews. Given the confidential requirements of my research, I only discussed selections of data that was related to the participants interview and organization. The following section will present additional measures I took to establish credibility, transferability, confirmability,

and data saturation for my research study.

**Validity**

Establishing validity was another critical component for my research study. Validity for qualitative research studies is often defined as a presentation of the best available evidence to arrive at a reasonable conclusion (Trochim, 2023). There are three common constructs that can establish valid qualitative research findings: credibility, transferability, and confirmability (Trochim, 2023). Credibility refers to the believability the participants of the study will have in the results (Trochim, 2023). A way that I established credibility for my study was by triangulating data. Triangulation of data involves presenting the corroboration evidence gained from collecting multiple sources of data (Trochim, 2023). I used multiple sources of data to gather evidence. The data sources for my study were interviews, review of social media, and document reviews. I collected data from multiple sources to saturate the data and create a triangulation of credible results.

Valid results from my study need to be transferable. Transferability is the ability for results from a study to be used in different settings (Trochim, 2023). Researchers can increase transferability of their findings by providing detailed lists of assumptions and protocols for conducting the study (Trochim, 2023). Results could be considered transferable to other contexts if the researchers provided specific descriptions of the data, findings, and context (Ravitch & Carl, 2016). To help with the transferability of my findings to other contexts and provide ideas for future research, I am providing in-depth details and descriptions of the data and context. The assumptions, limitations, and

delimitations I provided along with the detailed protocols will help readers determine the validity of transferring the findings to other contexts.

Another aspect of validity is to establish results that are confirmable. Confirmability is defined as the ability of other researchers to reach the same results when analyzing the same data (Trochim, 2023). Qualitative research is considered subjective, and researchers need present findings that are free from known biases (Ravitch & Carl, 2016). Confirmability could be established by following a chain of evidence (Yin, 2018). A chain of evidence allows researchers to follow all data collection points and analysis reviews within a case study (Yin, 2018). Establishing a chain of evidence helped improve the confirmability of my study. I established a chain of evidence for data I utilize for my study. The chain of evidence I provide could help future researchers confirm that my data is reliable and without known bias. If my data is considered confirmable, then researchers could use aspects of my study to complete future research.

Another important aspect of establishing valid study results is for researchers to obtain data saturation. Data saturation occurs when additional collected data does not provide new insights or ideas (Creswell & Creswell, 2018). Multiple sources of evidence could ensure that I will obtain data saturation for my study. Researchers have asserted that a set number of data collection points may not create data saturation (Alam, 2021). To ensure data saturation, researchers recommend reviewing and analyzing data as new evidence is collected (Alam, 2021). If new results are created from additional evidence, then data saturation is not obtained (Alam, 2021). My target number of participants was

five. I systematically coded, analyzed, and interpreted the data as new evidence was obtained. If after studying five cases yielded new results, then I would have added an additional participant. Data saturation was obtained in my study by the fourth participant. Both the fourth and fifth participant provided data that confirmed with the previously obtained data. Providing results that are credible, transferable, and confirmable are essential in completing a valid study.

## Transition and Summary

The purpose of my research was to explore optimal strategies that leaders of U.S. laboratory testing organizations can implement to maximize customer satisfaction. Section 2 provided a concise research design for conducting my qualitative multiple case study. Case study research needs a clearly defined research design (Yin, 2018). Within Section 2, I described my role as a researcher along with identifying participants and data sources. My research design consisted of collecting data from multiple sources including interviews of organizational leaders, review of customer satisfaction, and document review of websites associated with selected U.S. laboratory testing organizations. Trochim (2023) emphasized the importance of providing reliable and valid research by ensuring results are credible, transferable, dependable, and confirmable. I strived to provide results that are believable by the participants and able to be reproduced while transferred to other business contexts. Finally, I ensured my research was conducted ethically while seeking to do no harm to participants. Section 3 presents the findings of my multiple case study, practical applications of the findings, implications for social change, and recommendations for future action and research.

Section 3: Application to Professional Practice and Implications for Change

**Introduction**

The purpose of this qualitative multiple case study was to explore optimal strategies that leaders of U.S. laboratory testing organizations can implement to maximize customer satisfaction. Five southeast U.S. laboratories were selected based on current ISO 17025 certification, the location, and having positive customer satisfaction reviews. Data were collected from three sources for each participant for a total of 15 different collection sources. Pattern matching and triangulation methods were used to analyze the data. My evaluation of the data identified two main strategies that leaders of U.S. testing laboratory organizations could use to maximize customer satisfaction. The strategies were building customer relationships and providing quality services. Additionally, the evaluation of data provided implications for social change and concepts for future research. This section presents the findings, application for professional practice, implications for social change, recommendations for action, recommendations for further research, reflections, and a conclusion.

**Presentation of the Findings**

The overarching research question for this study was "What strategies do leaders of U.S. laboratory testing organizations use to maximize customer satisfaction?" To answer the research question, I gathered data from the selected organizational websites, online customer reviews, and I completed semistructured interviews with five participants from five southeast U.S. laboratory testing organizations. The collected information represented a total of 15 data sources (three sources from each of the 5 case

studies). To maintain confidentiality, no identifying descriptions are included within the findings as the organizations are referenced as CS1, CS2, CS3, CS4, and CS5. The data were analyzed by the number of data sources that referenced concepts, and themes for maximizing customer satisfaction. Data saturation was obtained because the final two case studies did not reveal any additional new themes for maximizing customer satisfaction.

Findings from this study identified two prominent themes for improving customer satisfaction and four alternate themes that warrant further research. The two prominent themes are improving relationship quality and service quality. Figure 1 presents the two themes and the number of source types that referenced each theme.

**Figure 1**

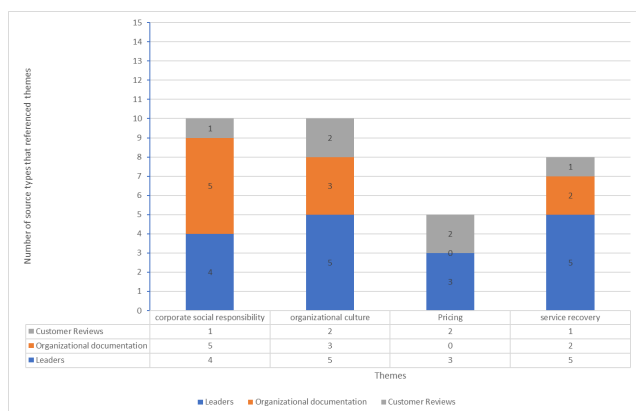*Sources Referencing Customer Prominent Satisfaction Themes*
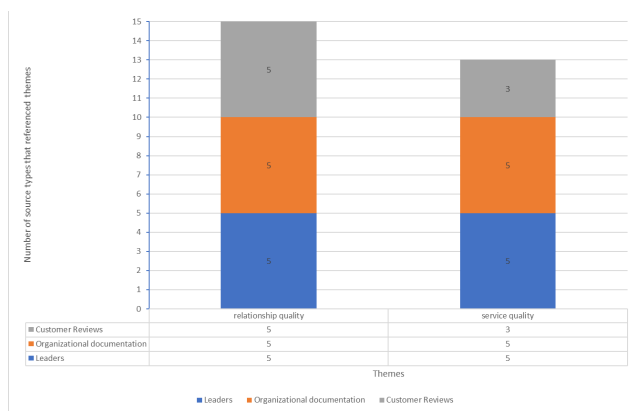


The four alternate themes for further research are corporate social responsibility, organizational culture, pricing, and service recovery. Figure 2 presents themes that were not selected as primary strategies. Alternate themes of corporate social responsibility,

organizational culture, pricing, and service recovery were identified within the sources, but were not triangulated with other data sources to confirm the impact on satisfaction.

**Figure 2**

*Sources Referencing Alternate Customer Satisfaction Themes*



| | corporate social responsibility | organizational culture | Pricing | service recovery |
|---|---|---|---|---|
| Customer Reviews | 1 | 2 | 2 | 1 |
| Organizational documentation | 5 | 3 | 0 | 2 |
| Leaders | 4 | 5 | 3 | 5 |

I used pattern matching data analysis to identify strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction. Data triangulation and pattern matching strengthened the identification of the two prominent themes of maximizing customer satisfaction by improving relationship quality and service quality. Themes not triangulated with other data sources are presented as recommendations for further research.

**Theme 1: Developing Customer Relationships**

Developing relationships with customers was an important theme throughout all case studies. Researchers have identified that the relationship between customers and organization is a critical function in the success of completing the service (Casidy & Nyadzayo, 2019). Building customer relationships was a strategic part of the participants' success and is seen as a competitive advantage within the industry. The leader of CS2

stated, "developing a culture of collaboration internally and externally with our accounts has been the key to our success."

All five participants described practices for developing customer relationships. There could be a variety of different ways an organization could improve relationship quality (Casidy & Nyadzayo, 2019), the important take away is that laboratories build relationships with their customers. A practice all participants used to improve relationship quality was to have one-on-one connections with the customers. The leader of CS5 shared, "I like to form a personal relationship with them [customers]." When describing practices to build relationships, the leader of CS2 stated that,

> Our clients know my face, know me personally. That way, if there is a concern
> that they do not feel is being met or addressed at the site level, they understand
> our internal hierarchy and how they can escalate a concern or a positive review.

The leader of CS4 said that "if clients have questions, we always tell them to call us and we can help explain it [data results]." The leader of CS1 emphasized, "answering the phone when it rings", with "three people available", and having a "24 hour live answering service." The leader of CS3 shared that, "if someone calls us or emails us with a question, we get back [to them the] same day." The leader of CS2 shared the importance of, "[building] a culture of collaboration" with customers that extend beyond the analytical testing results.

The participants also indicated the importance of fast responses. The leader of CS3 emphasized, "the most important thing is just being responsive." Customer inquiries by email or phone calls are responded to quickly by all organizations studied. The leader

of CS4 said, "It's all about relationship building and I think what a lot of labs don't focus on those relationships as much [sic]." In all cases, the responses are fast and contain the knowledge to answer customer inquiries. An effective business practice for developing relationships with customers is to establish professionally personal and responsive communication.

Another component participants shared to building customer relationships was establishing internal protocols and expectations for customer interactions. When asked about organizational policies to support customer satisfaction, the leader of CS4 mentioned, "Organizational policies are to be as transparent as possible." The leader of CS4 elaborated, "For the most part organizational policies would be how quick we do things, and the communication about those policies … and trying to set expectations with the clients. would be how quick we do things." The leader of CS5 described setting expectations for new clients through an onboarding policy. The leader of CS5 shared,

> We have internal keys [policies] that we follow once the customer comes on
>
> board, they work through our process map. So we set up the customer
>
> [information], and then we set [the] test package, and set up distribution [of
>
> results] … [We] make sure the billing is set up correctly and then it kind of filters
>
> through with making sure that the reports are sent in a timely fashion."

The leader of CS3 expressed that they set expectations with employees on how to interact with customers so that, "[we] make sure that we always put our best foot forward." When asked about policies to support customer satisfaction, the leader of CS2 shared, "we have a separate polices that build a synergistic relationship with one another … we

do have a specific policy on how we document client feedback." Setting internal policies and protocols helped the participants communicate the expectations for interacting with customers. When elaborating on strategies for enhancing customer satisfaction, CS2 replied,

> If client satisfaction is something that you are going to ground your organization in, it needs to be a core part of your operations. You have to operationalize what that looks like and how you're going to do it every day. It needs to be part of your organizational vernacular. It needs to be communicated at every level of your organization.

Organizational data sources of all participants provided information on building customer relationships. A statement posted on the website of CS5 stated, "We vow to deliver these services through our family of employees and representatives who are dedicated to maintaining valuable personal relationships with each and every company we serve." The website for CS1 contained the comments, "we are delighted to help, day or night, 365 days a year. We're the group you can depend on!" A welcome statement for CS4 stated, "At [CS4] we are not just a testing lab; we are your partner in achieving success." The about statement for CS2 indicated, "Our core principles revolve around…nurturing genuine relationships with [our customers]." Participants provided organizational data available to the public that emphasizes their commitment to developing relationships with customers.

The effectiveness of building relationships was observed within the online customer reviews. General feedback from CS1 customers indicated that CS1 employees

were caring with personal responses. A customer of CS1 wrote, "the staff is so informative and genuinely concerned!" When posting about the potential for switching to a competing lab with lower prices, a CS1 customer wrote, "our relationship with [CS1] is far worth more to us [sic]." CS3, CS4 and CS5 customers described the employees as friendly and professional. A customer of CS3 posted, "Professional and friendly staff, highly recommend for any… testing". A CS4 customer wrote, "The people are so generous with their time and experience!" A customer of CS1 posted, "They [CS1] have gone beyond to meet our needs and are always available." A customer of CS5 shared, "[The] staff are friendly and helpful." The data review from online customer feedback indicated that the relationship with the participants was an important contributing factor to their satisfaction.

Building quality relationships with customers was a primary theme for maximizing customer satisfaction. Establishing quality relationships with customers could develop into a competitive advantage (Casidy & Nyadzayo, 2019). The following sections describe how this strategy is found within the literature review and how the strategy connects with the SET.

*Literature Review and Developing Relationships*

Both the literature review and case studies identified that relationship quality between organizations and customers could increase customer satisfaction. Relationship quality is defined as the overall strength of the relationship between a customer and organization (Teseng, 2021). All participants expressed the importance of developing quality relationships with their customers. The leader of CS1 shared the process of

working with customers to develop relationships and answer any questions they may have. Researchers have ascertained that customers tend to have improved satisfaction when they have a strong relationship with a company (Ahn & Kwon, 2021). Quality relationships could lead to positive responses from customers. A strong relationship with a company has been found to increase the repurchase intentions of customers (Youssef et al., 2018). A satisfied customer for CS4 indicated, "We will be using them for all our testing needs going forward." The literature review identified that customers having quality relationships with a company could be reflected through expressions of positive customer satisfaction.

The participants asserted that developing quality relationships with customers is important. Similarly, Fleming et al. (2021) ascertained that quality relationships are formed between the customers and individuals representing the company. The practice of developing quality relationships between a customer and organization is an important research topic. The literature showed that a customer's relationship quality is influenced by the direct experience with the organization (Chang et al., 2023). The leader of CS2 expressed that customers can personally get to know the leadership team. The leader of CS2 stated that, "we really lean into our core values … and investing in our clients that want their laboratory to operate from that place." All participants emphasized the importance of building quality relationships with customers. Recent research indicated that customer satisfaction is directly influenced by relationships developed with organizations (Chang et al., 2023). Researchers have identified the importance of

relationships between customers and organizations for improving satisfaction. Findings

from the case studies have confirmed the importance of relationships through practice.

### *SET and Developing Customer Relationships*

Developing customer relationships is a component in the conceptual framework

of this study. The value of relationship quality can be explained by SET. Social

relationships include non-monetary interactions consisting of extrinsic and intrinsic

motivating factors (Blau, 1964). The analytical testing results are the monetary portion of

the interaction, the collaborations and additional time spent with customers are non-

monetary interactions. Quality relationships are defined by SET as both parties receiving

positive benefits between the social exchanges (Van Nieuw Amerongen et al., 2022).

Several of the participants expressed a sense of satisfaction and pride in the relationships

they have developed with customers. The leader of CS5 shared, "I like to know a little bit

about them [customers], about their family. It's not just a customer [number] or company

name." The leader of CS1 explained that any questions customers may have is "a chance

to connect [with the customers]." The following section will expand upon the connection

relationship quality has with the SET.

Intrinsic factors can be influenced by quality relationships. Feelings of trust,

obligation, and emotions are constructs of intrinsic factors that develop enhance social

exchanges (Bakhsh & Rivits-Arkonsuo, 2021). The leader of CS2 explained

"organizations that are seeking increased perceived trust, operate from a place of being

transparent first, and willingness to receive feedback, see better outcomes overall."

Feelings of trust for another party minimizes concerns of one-party taking advantage of

another party (Casidy & Nyadzayo, 2019). Developing trust and obligation between both customers and the organization can be an important aspect in enhancing relationship quality. All participants shared their sense of obligation to ensure that customers understood the analytical testing results. The leader of CS2 mentioned, "the other half [of our job] is making sure that our work integrates into and is understood by our clients." The leader of CS3 explained the importance of, "making sure that they [customers] understand what they're getting [test results] and how to interpret the results and guiding them with the recommendations." Taking the time to explain the data results could lead to improving customer trust. A customer for CS1 posted online feedback that stated, "I trust their findings to be accurate." Researchers have ascertained that customers' emotions of trust are influenced by their interactions and relationships with an organization (Ahn & Kwon, 2021). Within the intrinsic factors of SET, the participants felt obligated to inform customers about the significance of the testing results, and in return customers developed trust in the company.

The methods of how social interactions are conducted can be described by the SET. The context of the relationship and role of interpersonal feelings is important in social exchanges (Mitchell et al., 2012). Intangible aspects of time and friendly interactions are constructs of SET (Blau, 1964). Establishing relationships that are based on personal connections and genuine concern for customers was an important component expressed by the participants. The leader of CS5 stated that, "I like to form a personal relationship with them [customers]."

Extrinsic actions in the forms of repurchase intent could be described by the SET.

Within the constructs of SET, repeated positive interactions could increase the chances of future reciprocity and continuance of the relationship (Chernyak-Hai & Rabenu, 2018). Customers of the laboratories posted comments that they will recommend the services and will use the laboratories again in the future. A CS4 customer posted positive feedback that said, "We will be using them for all our testing needs going forward." Actions of reciprocity are part of the social exchange construct (Afiuc et al., 2020). Improving relationship quality could influence customer repurchase intentions. The conceptual framework of SET is ideal for describing the quality of relationships between customers and organizations.

**Theme 2: Providing Quality Services**

Providing quality services was a main theme throughout the case studies. All participants highlighted the importance of the quality of their services. When asked how service quality standards impact customer satisfaction, the leader of CS2 said, "having strong quality and providing exceptional service are the pillars of everything we do here." When asked the same question, the leader of CS4 shared that,

As long as we deliver quality data, you can limit how much negative interaction you have with the client overall because you're way more likely to be giving out accurate and precise results…If you have a good product, then you don't really have as much trouble with client complaints.

The quality of the provided service could improve customer satisfaction by meeting the customers' expectations. Researchers describe service quality as the ability for the service provided by an organization to meet the expectations of the customer (Lee

et al., 2020). All participants expressed that poor quality services can have negative impacts on customers. The leader of CS5 stated that "if a customer is not happy with the service, they will move [their work] elsewhere." The importance of service quality was iterated when the leader of CS4 said,

> [If] the quality of the testing decreases and then you have more disgruntled clients. In a lot of ways [you] have one shot to keep clients happy…Once you make a mistake or there's a problem and you lose that client, very rarely do you get another chance to do work for that client again in the future.

> The leaders commented on practices for establishing quality services. One of the practices was to establish a quality system for testing procedures. On the importance of establishing a quality system, the leader of CS4 shared that,

> A quality system is there not just to check a box, the quality system is there because it makes everything so much easier with regard to training your employees, with ensuring that your test results are consistent and reliable.

The leader of CS4 further emphasized, "the quality system is there to basically build trust [with the customer]." When describing the importance of the quality system, the leader of CS3 stated, "it's paramount that they're [employees] very diligent in following our standard operating procedures, making sure that our quality assurance program is followed [sic]." The leader of CS2 shared, "our procedures, our training manuals, working instructions, everything comes from a place of technical excellence." Establishing a quality system was expressed as an important practice in delivering quality services.

Two business practices that the participants mentioned using to enhance service quality were to improve the accuracy and timeliness of their testing results. Islam et al. (2019) ascertained that service quality components include accuracy and efficient completion of services. When asked how service quality standards impact customer satisfaction, CS3 stated, "there's an expectation that if they [customers] send us a sample, that the results are going to be accurate." When asked what practices are used to enhance service quality, the leader of CS3 stated,

> Training on following protocols so that tests are performed appropriately [and] accurately. And if there's ways that we can improve turnaround time, we discussed that. It's primarily through meetings between the administration and the general staff.

The leader of CS4 emphasized that, "if you're [data results are] accurate then, you have high quality testing." The leader of CS4 further added, "if you're selling a good product [quality testing results], basically the product sells itself and keeps people [customers] happy." Meeting the expectations of customers with quality services includes providing accurate and timely results of their samples being tested.

Organizational data review of the participants indicated the importance of providing quality services. Comments posted on the website for CS1 emphasized their commitment to "ensure accuracy of results and a timely report of our findings." A welcome statement on the website for CS4 indicated, "our commitment to superb science, service, and speed is what sets us apart in the industry." When describing who they are, a comment posted on the website of CS5 stated, "we support our clients with quick,

accurate, and concisely reported interpretations of data." Business practices for providing

quality services of accuracy and timely reports was found posted on the participants'

websites.

Quality services can have positive influences on feelings a customer has with an

organization. Customer feedback indicated positive effects the quality of service had on

their feelings towards the laboratories. A customer of CS1 wrote, "they are very reliable

and trustworthy. I highly recommend them." A customer for CS5 left a five out of five

rating and posted, "[CS5 provided] very quick turn around." A CS1 customer posted a

positive review stating, "Quick and accurate. I'm always confident in quick turnaround

when I send samples to their lab." Customers of the participants confirmed the impact of

quality services through their online reviews.

Providing quality services was an important theme the participants expressed as

needing to maximize customer satisfaction. The findings from this study indicate that

effective business practice to improve quality services is to establish a quality system,

enhance accuracy in reported data, and improve timeliness of the services. The following

sections describe how the theme of providing quality services was found within the

literature review and connected with the SET.

### *Literature Review and Providing Quality Services*

Both the literature review and case studies identified service quality as a theme

for increasing customer satisfaction. Researchers define customer satisfaction as the

customers' overall assessment of an organization's ability to meet the expectations of the

proposed services (Teseng, 2021). Within the laboratory testing industry, standard

expectations of customers include timeliness of reports, and accuracy of the provided results.

Customers receiving quality services could have improved satisfaction. Leclercq-Machado et al. (2022) ascertained that customer satisfaction is influenced by the quality of provided services. A customer of CS1 posted a positive review that said, "their services and reports are top notch." Providing testing results that are reliable and accurate are aspects in developing quality services.

The level or lack of service quality could impact customer satisfaction. Customers could become dissatisfied with an organization based on the lack of quality received from the services. A recently published paper supported the literature review and case study findings. Lin et al. (2023) found that improving service quality enhances customer satisfaction and will result in increased repurchase intention. A customer of CS1 posted that, "I would definitely use and refer others to use the services." Researchers have found that service quality is associated with customer retention (Afiuc et al., 2020). The quality of services provided by an organization could impact customer retention and satisfaction. Lin et al. (2023) ascertained that customers are satisfied when the quality of services meets their needs and expectations. Findings from the literature review support the theme of providing quality services to maximize customer satisfaction.

### SET and Providing Quality Services

The impact quality services could have on customer satisfaction is a component of SET. The leader of CS4 said, "the quality system is there to basically build trust." The concept of trust is a component of SET (Blau, 1964). Researchers have identified

building trust as a factor in improving customer satisfaction (Youssef et al., 2018). The leader of CS2 elaborated on the importance of trust by saying,

> When you look at organizations that are seeking increased perceived trust, operate from a place of being transparent first, and willingness to receive feedback, you see better outcomes overall…because we understand, the science is the science and it would be a strategic and competitive advantage to build something better on top of technical excellence.

The quality systems of an organization could influence the trust customers have in the services. The feeling of trust is an intangible aspect within the constructs of the SET (Blau, 1964). Not building trust with customers could negatively impact organizations. Researchers have found that a lack of trust could result in lower repurchase intentions (Wang & Olsen, 2018). An important aspect of social exchanges is to build trust by providing quality systems. Trust is built on previous interactions and experiences the customer has with the organization (Wang & Olsen, 2018). Feelings of trust could be indicators of providing recommendations and repurchase intention. Quality services can influence emotions within customers that are attributed to SET.

## Applications to Professional Practice

The findings for this study are relevant because implementing strategies to maximize customer satisfaction is critical for organizational success. Researchers have found that customers satisfied with services can reciprocate through actions including recommendations, feedback, or repurchases (Farhana, 2021). The act of leaving online reviews is a voluntary and reciprocal action that is an indication of a satisfied customer.

Obtaining positive online reviews is potentially important for perspective clients. It is important for leaders of U.S. laboratory testing organizations to maximize customer satisfaction because of the voluntary actions satisfied customers could provide the organization.

Findings from this study have identified practices leaders of laboratories should implement to improve relationship quality. First, leaders should implement policies and protocols that set expectations for employees on how they interact with and respond to customers. Policies and protocols can guide employees on requirements for interacting with customers and for providing fast responses to customer contacts. Both responsiveness to customer contacts and personal connections with customers were factors in customer satisfaction.

Findings from this study have identified practices leaders of laboratories should implement to improve the quality of services. An effective quality system was found to be instrumental in providing quality services. The quality system could establish requirements for the laboratory personnel to follow. Adhering to a quality system may improve the accuracy of testing results and timeliness of reporting to customers. Both accuracy and timeliness of results were found to be practices leaders of laboratories implemented to improve the quality of services.

The findings from this study have identified that developing customer relationships and providing quality services can improve customer satisfaction. Researchers have found that building positive relationships with customers could develop customer loyalty and a competitive advantage for the organization (Casidy & Nyadzayo,

2019). Afiuc et al. (2020) ascertained that service quality influences customer retention. To maximize customer satisfaction, leaders of U.S. laboratory testing organizations should build customer relationships and provide quality services.

## Implications for Social Change

Practices that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction could influence people's lives. Wang (2020) ascertained that a component of corporate social responsibility (CSR) is for organizations to participate in services for the betterment of society. Leaders that are committed to maximizing customer satisfaction could develop a sense of obligation to inform customers of the impact of their testing results. Helping customers by providing in-depth knowledge of the offered services could improve customer satisfaction. Findings from this study show that improving customer satisfaction by providing quality relationships and improving the quality of services could enhance the trust customers have in the testing results. Trusting the testing results could help customers make better informed decisions on projects that impact the health and wellbeing of the environment, communities, or people.

## Recommendations for Action

Findings from this qualitative multiple case study identified strategies that leaders of U.S. laboratory testing organizations could implement to maximize customer satisfaction. The strategies are to implement building customer relationships and providing quality services. Leaders of U.S. laboratory testing organizations would benefit from these findings. Leaders set the direction of organizations by establishing a vision, communicating common goals, and inspiring employees to accomplish the goals

(Northouse, 2019). Northouse (2019) ascertained that leaders influence others to create change. Leaders of U.S. laboratory testing organizations that want to maximize customer satisfaction would need set common goals to improve relationship quality and enhance the quality of services provided to customers.

The goal of maximizing customer satisfaction should be communicated at every level of the organization. Leaders can disseminate the strategies through company wide meetings, social media outlets, and policy implementation. Communication should include company policies, standard operating procedures (SOPs), and strategic planning statements. The strategic planning statements could include mission, vision, and core value statements. The importance of customer satisfaction should be communicated throughout the organization.

Strategies that leaders of U.S. laboratory testing organizations use to maximize customer satisfaction are developing customer relationships and improving the quality of their services. Recommended actions to implement strategies to build customer relationships are broadcasting organizational messaging on the importance of customer satisfaction and establishing SOPs on ways to communicate with customers. Recommended actions to improve service quality include creating a quality system that guides employees to provide timely and accurate services. Satisfying customers should be a top priority for leaders of organizations. Leaders of U.S. laboratory testing organizations could maximize customer satisfaction by developing customer relationships and providing quality services.

**Recommendations for Further Research**

Findings from this qualitative multiple case study have provided strategies for leaders of U.S. testing laboratory organizations to maximize customer satisfaction. A review of the data collection and limitations for the study has identified recommendations for future research. Further research could expand upon the impact and correlation that different practices of improving the themes of relationship quality and quality of services could have on customer satisfaction.

The limitations of this study can provide guidance for future research. One limitation was that this study focused on non-medical laboratory testing organizations. Researchers could study the impact the relationship quality and quality of services could have on maximizing customer satisfaction within other industries. Another limitation was limiting the study to a geographic location contained within the southeast region of the U.S. Strategies for maximizing customer satisfaction may be different in other cultures of the world, or even different regions of the U.S. Future researchers could conduct a similar qualitative multiple case study to determine strategies for maximizing customer satisfaction in other regions.

The data analysis of the case studies has identified four recommendations for further research. First, researchers could explore the role organizational culture could play in maximizing customer satisfaction. The second recommendation for further research derived from the data review is exploring how service recovery efforts impact customer satisfaction. The third recommendation for further research is exploring how pricing impacts customer satisfaction. The fourth recommendation derived from the

findings of this study is to explore the impact corporate social responsibility efforts have on customer satisfaction. Further research could expand the knowledge on strategies that leaders use to maximize customer satisfaction.

## Reflections

During my pursuit of a DBA, I have grown academically, personally, and professionally. Personally, my family has expanded from one child to four children. I have developed a deeper appreciation of the sacrifices my family has made during my pursuit. Most importantly, I recognize the sacrifices of my time they have given up while I have been immersed in my studies. During the last part of my journey, I have learned to set and adhere to time commitments for my academic studies. Communicating and staying within schedules has enabled me to create a better academic, life, and work balance.

During my academic pursuit, I have grown professionally. At the beginning of the journey, I was a client service manager for a laboratory with a department of five employees. I am now a laboratory director and a leader of 150 employees. Since becoming a leader of a laboratory, I have gained a deeper appreciation and understanding for the overarching problem and findings of my study.

Both professionally and personally, I have developed my emotional intelligence. I have become acutely aware of my own self, beliefs, and biases. When interacting with the participants of my study, I approached each interview question, and each data review with an open mind and desire to learn more about their experiences. During the interviews, I recognized that my own familiarity with common terms and laboratory

practices could have affected the participants. Reviewing the transcripts of the interviews, the impact of my familiarity appeared limited as I restricted my comments and followed the interview protocol. I appreciate the time all participants gave during the study. I enjoyed the conversations and wish everyone the best of luck in their own journeys.

## Conclusion

Maximizing customer satisfaction is an important aspect in the success of an organization. Customers that are satisfied with the services of an organization are more likely to repurchase from an organization and recommend the services to potential customers (Zhang & Ahmad, 2022). Findings from this qualitative multiple case study have identified two strategies that leaders of U.S. laboratory testing organizations could use to maximize customer satisfaction.

The first strategy is to develop relationships with customers. Developing relationships with customers is influenced by professionally personal and responsive communication. Company polices and SOPs can be established to guide employees on protocols and expectations for communicating with customers. Communication with customers should be professionally personal and responsive.

The second strategy is to provide quality services. The quality of the service is influenced by providing testing that is accurate with timely turnaround times. Leaders of U.S. testing laboratory organizations could focus on training and motivating employees to provide accurate and timely turnaround times. The services provided to customers should be accurate with timely turnaround times.

Customer satisfaction is a complex interaction between social exchanges.

Customers can feel satisfied with an organization when the services provided by the

organization exceed the customer's expectations (Dam & Dam, 2021). Customers that are

satisfied are more likely to repurchase from the organization (Wang, 2020). To maintain

success in a competitive industry, it is imperative for leaders of organizations to

implement strategies to satisfy customers. Overall, strategies for leaders of U.S. testing

laboratory organizations to maximize customer satisfaction are to build relationships with

customers and provide quality services.

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Appendix A: Email Invitation

Email Invitation

**Subject line:**
Interviewing laboratory leaders (1 hr) on strategies for maximizing customer satisfaction ($20 thank-you gift)

**Email message:**
There is a new study about the strategies used to maximize customer satisfaction that could help leaders like laboratory directors better understand and help their organizations succeed in a competitive industry. For this study, you are invited to describe your strategies for maximizing customer satisfaction.

**About the study:**
- One 30–60-minute phone interview that will be audio recorded (no videorecording)
- You would receive a $20 Visa gift card as a thank you.
- To protect your privacy, the published study will not share any names or details that identify you.

**Volunteers must meet these requirements:**

- 18 years old or older
- A leader of a U.S. laboratory testing organization.
- U.S. laboratory is ISO 17025 certified.
- U.S. laboratory has positive online customer feedback reviews.

This interview is part of the doctoral study for Kurt Clarkson, a DBA student at Walden University. Interviews will take place during the fall of 2023.

Please email ███████████████████████ to let the researcher know of your interest. You are welcome to forward it to others who might be interested.

Appendix B: Interview Protocol

I. Prior to scheduling an interview, participants will have received the consent form.

II. I will schedule interviews based on the availability of the participants.

III. Interviews conducted using my cell phone and recorded by an app called TapeACall.

IV. I will begin each interview with an introduction of myself, my study, and an outline of the interview protocol.

V. I will describe the measures I am taking to ensure confidentiality for the participants and review the informed consent form.

VI. At the conclusion of the introduction, I will ask if I have permission to record the interview.

    a. If the participant declines to record the interview, I will not start recording. I will proceed with the interview.

    b. If the participant approves recording the interview, I will begin the recording. I will proceed with the interview.

VII. Each interview will follow the same set of interview questions:

    a. What strategies do you use to maximize customer satisfaction?

    b. How, if at all, do you measure customer satisfaction?

    c. What types of strategies do you use to motivate employees to engage in customer satisfaction?

    d. What strategies do you use to address customer service issues?

    e. What types of organizational policies do you use to support customer

satisfaction?

 f. What employee training strategies do you use to enhance customer satisfaction?

 g. In what ways do your firm's service quality standards impact customer satisfaction?

 h. What strategies do you use to build positive relationships with customers?

 i. What else can you tell me about your strategies to enhance customer satisfaction that I did not ask?

VIII. At the end of the interview, I will describe my next actions for the study. My next actions could include an opportunity and request for the participant to review and provide feedback on my findings and interpretations of their case. I will conclude the interview by thanking the participants for their time and consideration in the study.