

A Discussion Of Goods-Dominant Logic And Service Dominant Logic: A Synthesis And Application For Service Marketers

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ABSTRACT

Service-Dominant (S-D) Logic is a mindset for a unified understanding of the purpose and nature of organizations, markets, and society. The fundamental principle of S-D logic is that organizations, markets, and society are primarily concerned with exchange of service—the applications of competencies (knowledge and skills) for the benefit of a consumer(s). Thus, service is exchanged for service; all firms that transact daily in numerous micro-industries are service based. Consequently, marketing thought and practice should be grounded in service logic, principles, and theories. S-D logic embraces concepts of value-in-use and co-creation of value rather than the value-in-exchange and embedded-value concepts of Goods-Dominant (G-D Logic). This study challenges several of the fundamental premises (FP) asserted by Vargo and Lusch by analyzing how customers are brought into the marketing relationship and play a central role in the development and success of tangible goods and as active participants in defining the need for service. A series of personal interviews with upper to middle management, along with an MS excel House of Quality (HoQ) assessment instrument was used to gather data for this study. The QFD, HoQ assessment instrument is used to expose correlations between the 10 premises advanced by V and L and the functional quality characteristics most sought by service practitioners today. This research study analyzed the existence of conceptual SD-Logic and its recognition among four different service businesses along with their various marketing strategies.

Keywords: Goods-Dominant Logic; Service Dominant Logic; services; House Of Quality; Customer Retention; Brand Loyalty; Relationship Building

INTRODUCTION

*B*y definition a synthesis is combining two entities that together form something new. This article will discuss both Goods-Dominant Logic and Service-Dominant Logic and attempt to synthesis these two concepts into something new and beneficial for marketing in a practical manner. The origins of Service Dominant Logic can only be traced back to 2004. The catalyst for the redefinition of traditional marketing thought was first raised in the seminal article written by Stephen Vargo and Robert Lusch in a 2004 edition of *Journal of Marketing* titled “Evolving to a New Dominant Logic for Marketing”. This was followed in the same year by an article from the same authors in the *Journal of Service Research* (Vargo, 2008). Therefore, in 2004, The American Marketing Association (AMA) issued its new definition of marketing: "Marketing is an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders" (Keefe, 2004, p. 17). In review of the evolution of marketing found in figure 1 it can be seen that marketing has changed tremendously, and perhaps a redefinition is appropriate.

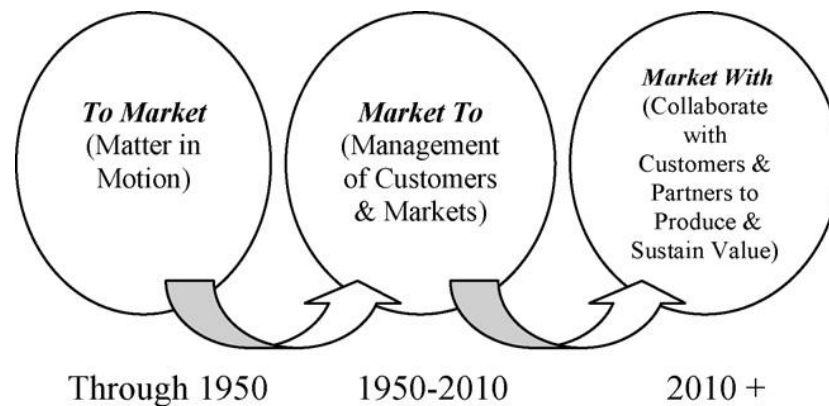


Figure 1 Source: Vargo and Lusch, 2004

“Service marketing concepts and strategies have been developed in response to the tremendous growth of service industries and their importance to the U.S. and world economies” (Schneider & White, p. 14). The most recent U.S. census projections have indicated that over 80% of the gross domestic product (GDP) is service-based, representing 70% of the total U.S. economy (U.S. Bureau of the Census, 2010). This study will attempt to authenticate the tremendous growth of the service sector and how the new paradigms are changing the service environment.

RESEARCH QUESTIONS

To address the theories advanced by Vargo and Lusch (2004), we investigate five research hypotheses:

- H₁.** A positive relationship exists between the SD – Logic fundamental premise #1 and the quality characteristics in the four subject companies studied?
- H₂.** Knowledge and skills, fundamental premise #4 are positively correlated among subject companies studied?
- H₃.** A goods-dominant-firm is more likely to adhere to the 10 fundamental premises advanced than a service-oriented firm?
- H₄.** Co-creation, fundamental premise #6, is of high importance among all of subject companies studied?
- H₅.** A goods-dominant-firm is more likely to build stronger service relationships than a service-oriented firm?

By answering these research questions we make several contributions to service marketing knowledge that can be used by practitioners within their service ecologies and a potential redefinition of the service offered.

A BRIEF EXPLANATION OF SD-LOGIC

The idea behind SD - Logic is built upon how value is (or benefits) uniquely experienced by each customer when they use a service – not in how creatively we 'package' it or persuasively 'sell it.' The S-D logic proposes that, “marketing has moved from a goods-dominant view, in which tangible output and discrete transactions were central, to a service-dominant view, in which intangibility, exchange processes, and *relationships* are central” (Vargo & Lusch 2004, p. 2).

To understand the S-D Logic view of the customer, it is best to contrast it with the G-D Logic view. In the goods-dominant approach to marketing, customers are acted on (marketers segment them, distribute to them, promote to them, satisfy them). From a perspective of value, the value of a good is contained in the good itself, and the key focus is on the exchange, i.e., value for value: the good in exchange for money (assuming a monetary and not a barter economy). At the point of exchange, the good is handed off to the

customer who then consumes it, thus consuming or destroying the value inherent in the good (Gruen & Hofstetter , 2010).

This study provides a simple example of “co-creation” a part of SD-Logic premise #6, advanced by Vargo and Lusch, for better understanding of the concept; a can of soup provides the service of food storage and sustenance to the customer. The can of soup is not viewed as being a good, but instead as being the appliance to which the user of the can of soup co-creates value with the provider of the soup. A further discussion of co-creation is found later in this article. A review of figure 2 provides the theoretical framework for Service-Dominant Logic advanced by Vargo and Lusch.

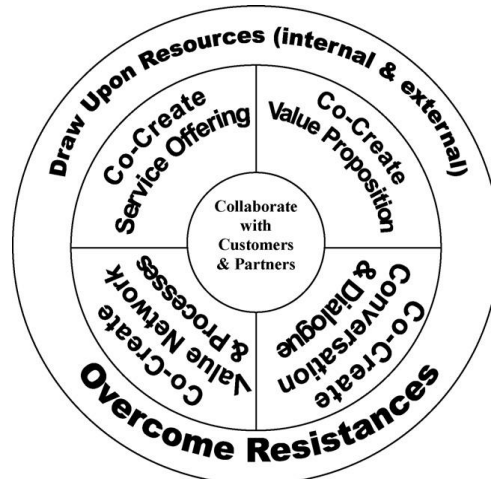


Figure 2 Source: Vargo and Lusch, 2004

Table 1: The 10 Foundational Premises Of Service Dominant Logic

Premises	Author’s Explanation - Fundamental Premises
1. Service is the fundamental basis of exchange.	Knowledge and skills, “service” is the basis for all exchange, (e.g. Bank teller, baggage handler, electronics engineer).
2. Indirect exchange masks the fundamental basis of exchange.	As service providers we tend to internalize are special skills and knowledge.
3. Goods are a distribution mechanism for service provision.	We can only determine value by using the product, this then determines the degree of service, e.g. Night’s stay at a hotel.
4. Knowledge and skills (Operant resources) are the fundamental source of competitive advantage.	The more knowledge and skills we acquire the greater the competitive advantage, e.g. Baggage handler learning newest tracking system. Insurance agents know all new product offerings.
5. All economies are service economies.	Service (singular) is a process—distinct from “services”—particular types of goods, e.g. In-bound customer service, outsourced to a foreign country, India.
6. The customer is always a co-creator of value.	Implied value creation is interactional. Firms do not create value, customers do., e.g. Dell computers offer special customization of components to their customers,
7. The enterprise cannot deliver value, but only offer value propositions.	The firm can only offer its resources collaboratively, it is the customer who must be active in the process for value to occur, e.g. A travel website is only effective when customer accepts its value and transacts. Insurance quotes.
8. A service-centered view is inherently customer oriented and relational.	The customer determines whether the service is valuable not the firm.
9. All social and economic actors are resource integrators.	This relates to the value chain, each member works in network with another constantly collaborating and integrating to produce the most effective product or service, e.g. insurance agents and their brokers.
10. Value is always uniquely and phenomenologically determined by the beneficiary (Vargo & Lusch, 2008).	Value is idiosyncratic, which means a structural or behavioral characteristic peculiar to an individual or group are different, e.g. The value of air travel derived for one person may not be the same for another.

A REVIEW OF GD- LOGIC

The 10 foundational premises present a paradigm shift in thought for both economists and marketers and have been challenged by many experts on its abstract constructs. In reviewing Adam Smith's theories of economic thought aid in the understanding of the theory of Goods-Dominant logic. Smith's views of efficiency, production and labor are the accepted rules for most "goods based economies" and have remained so for many years (Smith 1776/1904). Smith's theories posit that the marketing of goods (tangibles) are essential to business growth and profit and *service* as secondary or as he described it as *immaterial products*.

In FP #1, Vargo and Lusch (2009) stated that service is the fundamental basis of exchange, rather than goods. This fundamental premise is a complete paradigm shift from traditional marketing philosophy and requires further explanation. Perhaps Vargo and Lusch's far-flung assertion was intended to address the virtues of quality service that trail a goods transaction, and that quality service should be marketed as aggressively as a good.

According to Kotler and Achrol (1999), "The philosophy of marketing is likely to retain its core values and beliefs-those that espouse the view that customer welfare is the ultimate goal of all marketing activities. "To further demystify FP #1; let's first review Vargos' explanation and justification: Vargo stated "the application of operant resources (knowledge and skills), "service," is the basis for all exchange. Service is exchanged for service (Vargo, 2009). Goods, as defined by most marketing educators and practitioners are tangibles such as car ownership, homes, electronics, or clothes. Marketing transactions start with a tangible (pure good) not an intangible (pure service). It is true, most firms possess operant resources (knowledge and skills) superior to its competitors but Vargo confuses this concept as resources that act upon other resources to create utility (benefits). Academia experts believe that Vargo and Lusch's theory lacks an explanation and purpose of the marketing supply chain and only assumes marketing transactions as primarily afterward transactional activities (service). As purported by Gruen and Hofstetter, the service that is rendered is seen as a collection of resources available to the customer who then adds and blends the resources provided by the seller, which in combination provides a benefit or a service to the customer and the seller (2010). It is further advanced by Vargo, "The service-centered view of marketing perceives marketing as a continuous learning process that involves...cultivating relationships that involve the customers in developing customized, competitively compelling value propositions to meet specific needs" (p. 5). Vargo (2009, p. 375).

This author believes that the customer is not only involved in the customization process but they seek value opportunities. There are volumes of marketing literature that address customer-centric strategies, and the voice of the customer (VOC). For example, many websites rely on the customer for content, and utilizes (CGC) consumer-generated content (e.g. public Wikis, blogs). Product-based companies utilizes many different techniques, such as: mass customization, consumer panels, and even Kansei engineering, all in an attempt to involve the customer in the development of the product. The Japanese use sophisticated quality systems such as Kansei engineering (KE) and quality function deployment (QFD), which are increasingly popular and offer an alternative way to incorporate the customer's voice in the development and improvement of the product (Gonzalez, p. 230).

Companies such as Apple and Gateway involve the customer in the development and transformation of the customized products, but not the service. These companies espouse to proactive marketing techniques using a customer-centric model, however, the same cannot be said for their service strategies. Perhaps strategic initiatives need to be established by marketing practitioners to actively involve the customer in service quality and the delivery of service. A deeper discovery about service quality and delivery of service in review of the case study firms chosen for this study.

A DISCUSSION OF THE FOUNDATIONAL PREMISES OF SD-LOGIC

In FP#2, Vargo and Lusch assert, "Indirect exchange masks the fundamental basis of exchange" (Vargo, 2009). A further explanation for this FP states, goods, money, and institutions mask the service-for-service nature of the exchange. There is no hidden agenda for service. Customers who purchase goods almost always request quality service. Assuming that Vargo and Lusch are advancing their "*service-for-service*" references as the members of the supply chain, these members are typically transparent and accessible. In FP#3, Vargo and Lusch assert, "Goods are distribution mechanisms for service provision". They further justify that "goods (both durable and non-durable)

derive their value through use – the service they provide.” The author agrees, experience and use of tangible products is a good predictor of value-in-use. Value-in-creation as purported by Vargo and Lusch can only occur after the initial transaction and experience. “In the SD view, value is customer determined and this is consistent with the dominant view of value being defined as a calculation by the customer of benefits proportional relative to costs” (Kotler, 2003). Simply stated, a customer must realize the potential benefits derived to calculate value. For instance a night’s stay in an expensive hotel requires the customer to do some calculations in their head before they commit to the transaction. Chris Denove and J.D. Power IV (2007), collaborated on a book that sent a clear message regarding service quality – customer satisfaction equates to profits. The following quote exemplifies the theme of this book: “Without a quantifiable link to profits, the push for customer satisfaction is based on nothing more than the moralistic view that it’s nice to be nice” (Denove & Power, 2007, p. 35).

For FD #4 Vargo and Lusch asserted, “Knowledge and skills are the fundamental source of competitive advantage” (Vargo, 2009). This justification states the comparative ability to cause derived change drives competition (Vargo, 2009). The principle of comparative advantage attributed by David Ricardo, states, “that it is not necessary to have an absolute advantage to gain from trade, only a comparative advantage” (Ricardo, 1817). It is believed that most companies attempt to protect patents, copyrights, and intellectual property in an effort to maintain a comparative ability and change their products through innovative change and uses. Perhaps this advantage is available and more visible for the marketer of (tangible) goods but not so, for pure service marketers. The appropriate level of knowledge, skills, inventiveness, and experience for effecting specific benefits for service consumers, service providers participate in an economy without the restrictions of carrying stock (inventory) or the need to concern themselves with bulky raw materials. In accordance with Vargo and Lusch’s assertion the competitive advantage must nurture such service factors as delivery, reliability and consistency.

CO-CREATION OR CO-DESTRUCTION?

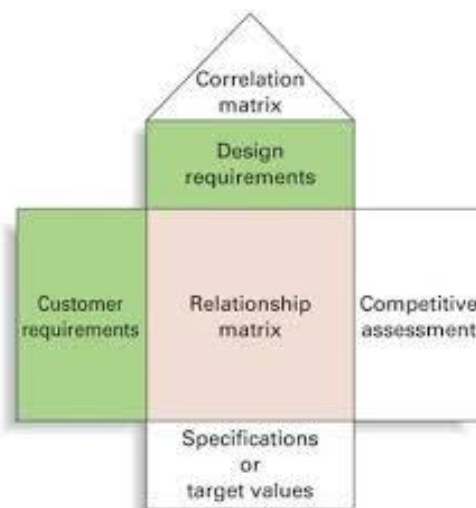
Vargo and Lusch’s fundamental premise #6 purports that the customer is always the co-creator of value. According to Vargo and Lusch, “the key premise of S-D logic is that value-in-use is generated by a “collaborative process of co-creation between parties” (Vargo and Lusch, 2008 p. 256). The notion advanced in recent literature challenges this assertion and says; that if parties can co-create it seems logically possible that value might be co-destroyed through such interactions (Plé, 2010). For example, customers who buy cars but do not maintain them destroy value for themselves. Moreover, they also destroy value for the firm that sold it if they blame the firm for the problems they experience with the car and damage the image of the firm by communicating their adverse opinion of the firm’s value proposition to other people through negative word of mouth. Such customers therefore trigger a value co-destruction process for both parties by misusing the firm’s value proposition (Plé, 2010). Deliberate misuse of a service system to increase another system’s well-being is counter-intuitive. Most retail businesses and financial institutions employ front-line employees who interact with customers. These front-line employees’ possess knowledge and skills, and are privy to the resources of the firms in which they are employed. These front-line employees can engage in sabotage behaviors by intentionally criticizing their employer in the presence of their customers, therefore, negatively affecting the service. “In so doing, they effectively improve their well-being (i.e. co-create value) by enhancing their personal self-esteem, perceived status, and job satisfaction, while decreasing the well-being of the other systems (i.e. co-destroy value) by adversely impacting on the firm’s performance and the quality of service delivered to customers”(Harris and Ogbonna, 2006). Although Vargo and Lusch’s contention for co-creation value is first-class, it must be carefully articulated within the service philosophies of modern-day firms to prevent misfires and sabotage. It is the author’s belief that value must be sustainable, and extend the service offering to truly adhere to the company’s value proposition. In other words, the service offerings that are co-created can never be temporary but instead must be continuously active with the service provider in which customer can rely upon. The author will take an in-depth look at co-creation, and the associated service systems utilized, to prevent co-destruction of the case study firms; the central participates in this study.

QUALITY FUNCTIONAL DEPLOYMENT

The concept of quality functional deployment also known as QFD is a qualitative method used in this research. There are many different definitions of QFD, however, what is consistent within all of these definitions is as follows: “QFD is a system with the aim of translating and planning the “voice of the customer” into the quality

characteristics of products, processes and services in order to reach customer, satisfaction” (Bernal, Byrnes, Dornberger, Suvelza &, 2009). QFD is used as a quality tool and is used in both product development and planning. The QFD method has recently been used for service businesses and has provided more desirable services with short “time to market”, high quality at a low cost more competitive. The QFD method is based on the clients’ requirement which are normally pressed in qualitative terms, such as “easy to use”, “safe”, “comfortable” or “luxurious” (Bernal, et. Al, 2009). This research utilizes the QFD, house of quality qualitative tool to reveal correlations between the 10 fundamental premises forwarded by Vargo and Lusch. The subject companies were chosen and asked to participate in completing the house of quality template. The traditional house of quality template was selected for this research for its reliability and creditability. The “house of quality,” the basic design tool of the management approach known as quality function deployment (QFD), originated in 1972 at Mitsubishi’s Kobe shipyard site (Hauser & Clausing, Harvard Business Review, 1988). HoQ is a process with both input and output data.

The input data are:



1. Important customer requirements along with their weight (fundamental premises)
2. Important performance measures (horizontal axis)
3. Benchmarking data (benchmarks)

The output data are:

1. The weight and correlation values of performance measures
2. Key performance measures (with high-weight and high-correlation)
3. Target level for each key performance measure (Chaplin et al., 2000)

Typically, a 5 point asymmetrical scale is used to measure the strength of relationship between the vertical and horizontal performance measures. The rating scale 9, 3, 0, -1, and -3, represents a strong positive relationship, a positive relationship, the lack of any relationship, a negative relationship, and a strong negative relationship, respectively. For this study the rating scale is a 4 point asymmetrical scale.

CASE STUDIES INVESTIGATING SERVICE-DOMINANT LOGIC THEORY

Methodology

In an effort to extend Vargo and Lush’s theory beyond academia this study investigates S-D Logic and its applications for three service-oriented businesses. “Paradoxically, managers, though motivated to perform and

aware of the links among service, competitive advantage, and firm performance, often fail to execute on that knowledge” (Bharadwaj et al. 1993). “Additionally, academics, though aware of these links, have not sufficiently informed normative theory to adequately assist in that execution” (Lusch, Vargo & O’Brien 2007).

The three companies that were selected are Georgia-based and were chosen for their close proximity to the author’s residence, as well as, permissions given to interview management professionals aware of customer service and its implications. These businesses are quite different in nature but were chosen due to the environment in which they compete and the variation in the service they provide. A combination of interviews with upper to middle management, as well as the QFD, house of quality tool was used to gather data and reveal correlations for this study. A regression correlation between the four subject companies was also used to either accept or reject the hypotheses. To provide the reader with further insight into these companies, much of the factual background information was obtained from the companies Web sites, and/or marketing literature.

Subject Company 1: Absolut *e*.com

Absolut-*e* Data Com Inc. (Absolut-*e*) was founded by Srinu Centhala in 1999 with the vision to revolutionize the services industry. Currently, Absolut-*e* is owned by a team of high caliber IT professionals with diverse skill sets. With such a high concentration of talent at one place, there is nothing but success in Absolut-*e*’s future! Their goal is to create entertaining, innovative, and artistically stunning applications. Absolut-*e* helps customers throughout the world to solve business problems using state-of-art technology. Invent to secure electronic environment (e-environment) that helps mankind for a better life. Absolut-*e*’s product portfolio includes Pairworks, a simple agile project management tool for an agile practitioner, iPractice: a dashboard for engineering and medical school entrance exams, and One Stop Project management, a guide to manage projects and develop individual project management skills. The mission of Absolut-*e* is to be the world class best in everything they do. Absolut-*e* is consistently exceeding customer expectations, maximizing assets, lowering operating costs, and improving efficiency.

Philosophy

- Continually educate ourselves in the evolving world of technology.
- Provide value added technologies to our clients.
- Provide outstanding service to our clients at a competitive price.
- Being the best in what we do distinctively.

This interview was the last in the series and was conducted with Dr. Archie Addo, IT manager and co-owner for Absolut-*e*.com. The working paper was reviewed with Dr. Addo for accuracy of company information. The first part of the interview was a review of the concept behind of SD-Logic and whether Dr. Addo was agreeable to the 10 fundamental premises. He acknowledged and commented on the usefulness of the study. Many interesting discoveries were found using the House of Quality assessment tool. The quality characteristics ranking the highest were convenience (860), ease of use (860), prompt service delivery (860), and relationship building (860), with relative weight importance of 8.5. Next were new product introduction (804) and a relative weight of 8.0 and rounding out the bottom in ranking were price competitiveness (780.0), reduced down-time (705.3), relative weight of 7.0, process design at (780), service design (785.3), and unresolved issues at (425.3).

Subject Company 2: Regions Bank

Regions Financial Corporation was formed in 1971 as First Alabama Bancshares Inc., Alabama’s first multibank holding company. With the combination of three well-respected banks, the holding company began operations with a total of \$543 million in assets and 40 banking locations in Birmingham, Huntsville and Montgomery (Regions website, 2012).

Regions conducts its banking operations through Regions Bank, an Alabama chartered commercial bank that is a member of the Federal Reserve System. As of December 31, 2010, Regions operated approximately 2,100 ATMs and 1,772 banking offices in Alabama, Arkansas, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky,

Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas and Virginia (Regions Financial Corp. 10K Report, 2010). Regions biggest competitor in this area includes SouthTrust and Bank of America.

Regions Bank is committed to building customer relationships through excellent quality service. We successfully enhance these relationships by supporting strong business partnerships with a diverse range of suppliers and service providers. Drivers to successful supply partner relationships are dependent on cost, quality, customer service, support and innovation. Our supply partners foster strong customer relationships through:

- industry leadership
- innovative business practices
- commitment and stringent adherence to regulatory guidelines for privacy, confidentiality and information security
- world-class support and service
- measurable performance quality
- risk reduction through appropriate insurance coverage(s)
- leading-edge technology
- measurable cost control processes
- commitment to supplier diversity (Regions website, 2012).

A personal interview was conducted with the Regions Bank president, Joe Dunham, to determine the relationships between the 10 fundamental premises and discuss how they link to their own service ecology. The interview lasted for the duration of one hour and the QFD, house of quality assessment was administered. Due to the subjective nature of the QFD variables the initial desire was to educate the subject company's representative on the purpose of the study and on the process to formulate responses. Based on the predetermined importance weights, strong correlations were found for "relationship building" at a perfect score of 900.0 with a 10.3 relative weight. Next were "unresolved issues" with a score of 804.0, and a relative weight of 9.2. Of less importance but still skewed toward higher scoring were "atmosphere" at 8.7, "after sales support" at 716.0, and a relative weight of 8.2, along with "complaints/retentions at a 716.00 score and a relative weight of 8.2. The quality characteristics scoring in the middle of the relative weighted categories were "service design" at 7.6, "process design" at 7.9, "new product innovations" at 7.7. Still lower on the relationship matrix were, "prompt service delivery" at a relative weight of 6.5, "empathy" at 6.1. Rounding out the bottom were; "reduced downtime" at 4.3, "ease of use" at 5.5, price competitiveness at 4.4, convenience at 3.4, and "supplier network: at 2.1 relative weight.

Subject Company 3: State Farm Insurance

State Farm®, well known for being a "good neighbor" by "being there" for their customers, was founded in 1922 by retired farmer and insurance salesman George Jacob "G.J." Mecherle. They now insure more cars and homes than any other insurer in the U.S., and are one of the leading insurers in Canada. A mutual company owned by its policyholders, State Farm is currently ranked number 34 on the Fortune 500 list of largest companies. Mecherle's original vision for State Farm was simple: operate fairly and do the right thing for their customers. While his vision still guides employees today, their continued mission is to be the first and best choice in the products and services we provide.

Originally a single line auto insurance company, State Farm now offers nearly 100 products and services, in five different lines of business, to help customers manage today and prepare for tomorrow. State Farm's shows their commitment to policyholders by handling nearly 35,000 claims per day. State Farm's employees are well trained in their products and offer the supreme after sales support.

Known as a public leader in auto safety efforts, State Farm helped pass a number of seat belt laws and continues to fight for seat belt and teen driver safety. State Farm® is a mutual company owned by their policyholders. There are more than 65,000 employees and more than 18,000 agents' service 81 million policies and accounts throughout the U.S. and Canada. State Farm's leadership team is committed to building on our shared

values of quality service and relationships, mutual trust, integrity, and financial strength (Statefarm.com/aboutus, n.d.).

The interview with State Farm insurance was held in Newnan, GA. with two company representatives, Stephanie Fagerstrom, and regional sales director Dr. Stephan Bridges. The researcher explained the purpose of the study and provided a PowerPoint presentation for the background information about GD-Logic and SD-Logic. The HoQ quality assessment was the instrument used to guide the interview through the fundamental premises and 15 quality characteristics. The respondents were prompted to answer questions in an “at the moment” view of their current operations and not to project too much future goals as to preserve the validity of the data derived from the HoQ assessment tool. The results were coded to an MS excel spreadsheet.

Subject Company 4: Yokogawa Corporation of America

Headquartered just 20 miles southwest of downtown Houston, Texas, Yokogawa Corporation of America has sales offices across the United States. YCA’s commitment to their customers is their number one priority, and they back it up with a network of representatives and distributors that reflect this commitment. YCA’s second sales office is located in Newnan, GA.

Yokogawa Electric Corporation, the parent company of YCA, is dedicated to developing the most advanced control and instrumentation products and systems in the world. Today, Yokogawa has a firm hold on its position as a leading manufacturer in the fields of measurement, control, and information. As a major global player, the company anticipates the needs of the times, continually tackling new challenges and exploring new markets in order to provide the best solutions in the world. Yokogawa’s commitment to innovation is reflected in their extraordinary investments in R&D, which ensure development of the most advanced products and services. Yokogawa has consistently made above-average investments in research and development. In fact, over the past decade they have set an industry standard by committing a 9% of sales revenue each year to R&D. The interview was held at a mutually convenient location with two marketing executives from Yokogawa Corporation of America. As in the previous interviews the interview began with a lengthy discussion of the background of GD-Logic, SD-Logic and the definition of the fundamental premises advanced by Vargo and Lusch. The HoQ assessment tool was used and the researcher worked diligently with the two interviews in explaining each fundamental premise and the 15 quality characteristics that were the dependent variables chosen for this study.

IMPLICATIONS OF SD-LOGIC

The qualitative data collected from these case study companies reveal the application of SD- Logic theory and customer satisfaction in a conceptual manner. Table 2 illustrates their similarities and differences in their current service marketing practices and the implementation of SD-Logic for their current service ecologies. The personal interviews conducted with the three subject company commenced with the purpose of determining agreement on the Vargo and Lusch’s 10 fundamental premises and if these premises were either not-adopted, partially adopted, or fully-adopted. The information from this table was also used to determine the weighted values of “demanded quality” requirements found on the QFD, house of quality spreadsheet. The greater the consensus toward full-adoption of the fundamental premise(s) earns a higher importance weight. The importance weights were established based on a 10 point scale. The researcher crafted questions for each FP for better understanding for the interviewee. For example, FP#1 was asked as follows: If service is the fundamental basis of exchange for your company is there a relationship of this premise to complaints, price competitiveness, convenience, ease of use, etc. Thus, each interviewee would rank each FP as either partially-adopt, fully-adopt, or not-adopt this premise.

Table 2: Comparative Summary Of SD - Logic Adoption Based On The Fundamental Premises Among The Three Subject Companies

	Absolut e.com	Regions Bank	State Farm	Yokogawa
FP #1- Service is the fundamental basis of exchange	Fully-Adopted	Fully-Adopted	Fully-Adopted	Fully-Adopted
FP#2 - Indirect exchange masks the fundamental basis of exchange	Fully-Adopted	Full-Adopted	Not-Adopted	Partially- Adopted
FP#3 - Goods are a distribution mechanism for service provision	Fully-Adopted	Fully-Adopted	Partially-Adopted	Fully-Adopted
FP#4- Knowledge and skills are the fundamental source of competitive advantage	Partially-Adopted	Fully-Adopted	Fully-Adopted	Fully-Adopted
FP#5 - All economies are service economies	Fully-Adopted	Fully-Adopted	Fully-Adopted	Fully-Adopted
FP#6- The customer is always a co-creator of value	Partially-Adopted	Partially adopted	Partially-Adopted	Partially- Adopted
FP#7- The enterprise cannot deliver value, but only offer value propositions	Partially-Adopted	Partially-adopted	Partially-Adopted	Partially- Adopted
FP#8- A service-centered view is inherently customer oriented and relational	Fully-Adopted	Fully-Adopted	Fully-Adopted	Fully-Adopted
FP#9- All social and economic actors are resource integrators	Partially-Adopted	Partially-Adopted	Partially-Adopted	Fully-Adopted
FP#10- Value is always uniquely and phenomenological determined by the beneficiary	Fully-Adopted	Fully-Adopted	Fully-Adopted	Fully-Adopted

Descriptive Statistics

Measures of dispersion were computed to understand the variability of scores for the 15 variables/data among the four subject companies participating in this research study. The following are the results of this analysis; $N = 40$ $M = 5.7116667$, $SD = 3.8253$, $SE = 0.1562$. The data was first checked for normal distribution of the variables. Using the Kolomogorov-Smirnov test for normal distribution of the data set the following results were revealed.

Table 3: Klomogoroy-Smirnov test for normal distribution

Data Set Variable	D (distance)	p-value
Retention	0.371617364	3.18393E-05
Price Competitiveness	0.293277533	0.002054362
Convenience	0.400202919	5.45028E-06
Ease of Use	0.317253148	0.000636951
Empathy	0.307861439	0.001018783
Prompt Service	0.355486505	8.13699E-05
Relationship Building	0.408809667	3.12249E-06
Supplier Network	0.268586852	0.006232582
New Products	0.461014627	8.25706E-08
Downtime	0.267881709	0.006424081
Atmosphere	0.340593508	0.000186483
Unresolved Issues	0.487041316	1.14693E-08
Service Design	0.423613933	1.16504E-06
Design	0.436713559	4.72914E-07
After Sales Support	0.43840713	4.20039E-07

Note. D is the maximum distance measured between the normal curve and the actual distribution. P value is the probability that the given D-value could arise by random fluctuation in a sample taken from a normally distributed population.

Using one of the variables “retention” revealed the following graphical representation of the best-fit normal distribution resulting from KS test.

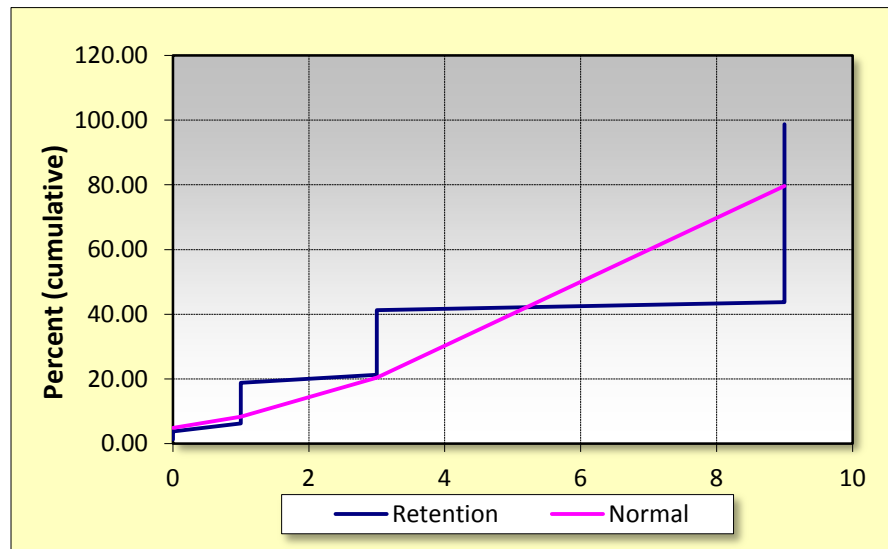


Figure 3: Best-fit normal distribution of one variable from the data set.

A Pearson correlation was tested for the $N=40$ sample set to determine relationships between the 10 fundamental premises and the 15 quality characteristics of the study. A cronbach's alpha of 0.76098049 was achieved. Experts agree that a Cronbach's alpha above .70 is significant.

Hypothesis Testing

There were five hypotheses tested in this research study. The data set was derived from the HoQ assessment and the sample set was $N= 40$. Each subject company was asked the same questions from the assessment to maintain consistency and validity. Discrete numbers transferred from the HoQ assessment tool created the data set allowed for further statistical testing. No nominal data was used. The researcher(s) created a contingency table using MS excel and arranged the columns (quality characteristics) and rows (demanded quality). In total there were 15 columns and 10 rows for a total of 150 potential variables gathered from each subject company's assessment. The numbers were scored according to the respondent's choice for each cell within the spreadsheet, e.g. FP1 (row1), Complaints/Retention (column 1). Within this cell the respondent could choose, between a strong relationship (9), a moderate relationship (3), a weak relationship (1), or no relationship (0). Throughout the interview the researcher guided each respondent on the definition and meaning of each fundamental premise and how it related or did not relate to their company. Care was given not to deliberately influence or alter any choices made by the respondent. Once the data was properly arranged in the MS Excel spreadsheet the researcher then downloaded into PHStat2 software which was used for hypothesis testing and factor analysis.

The chi square statistic (χ^2) was used, with a predetermined alpha level of significance (0.05), and t -tests to accept or reject the null hypotheses of the 5 research questions for this study. In review of the hypotheses which used the the chi-square test.

H1. A strong relationship exists between SD – Logic fundamental premise #1 and the quality characteristics of the four subject companies studied.

The following results were discovered using the PhStat software output of the 4 subject companies using a chi-square test. $H_0 = FP1$ (null hypothesis) was rejected in favor of the alternative hypothesis $H_1 \neq FP1$. $\chi^2 (42, N = 403) = 75.7, p < .05$.

H2. A strong relationship exists between SD-Logic fundamental premise #4, and the quality characteristics of the four subject companies studied.

The following results were discovered in testing the four subject companies using a Chi-square test. $H_0 = FP4$ (null hypothesis) was rejected in favor of the alternative hypothesis $H_2 \neq FP4$. $\chi^2 (42, N = 376)$, t -stat 116.612, $p < .05$.

H3. A goods-dominant-firm is more likely to adhere to the 10 fundamental premises advanced in the study than a service-oriented firm.

Table 4: Paired t-Test Comparing Goods-Dominant Company Versus Service-Dominant Company – All 10 Premises.

	Paired Differences						t	df	Sig. (2-tailed)
	Hypothesized Mean Diff.	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
H ₃ Goods-dominant firm- service-dominant firm (adhere to premises)	0	6.3471	1.6963	-2.1604	2.1604	-0.0842	13	0.05	

P value = 0.9342

Based on the *t*-test used for this research question the statistical inference indicated that there is a strong relationship between the fundamental premise #1 and the 15 quality characteristics that were part of the assessment, therefore the researcher does not reject the null hypothesis.

H4. Co-creation, fundamental premise #6, is of high importance among all of subject companies studied?

The following results were discovered in testing the four subject using a Chi-square test. $H_0 = FP6$ (null hypothesis) was rejected in favor of the alternative hypothesis $H_a \neq FP6$. $\chi^2 (39, N = 341)$, t -stat 6852.96, $p < .05$. Thus, null hypotheses was rejected for research question four.

H5. A goods-dominant-firm is more likely to build stronger service relationships than a service-oriented firm.

The test this hypothesis the researcher used the mostly goods-dominant company and tested against a service-oriented company. The results of the paired *t*- test revealed the following:

Table 5: Paired t-test comparing Goods-dominant Company versus service-dominant company – building relationships.

	Paired Differences						t	df	Sig. (2-tailed)
	Hypothesized Mean Diff.	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
H ₅ Goods-dominant firm vs. service-dominant firm (build relationships)	0	4.150	1.1094	-2.1604	2.1604	-0.9014	13	0.05	

P value = 0.3838

FACTOR ANALYSIS

With the numerous variables that exists in this study the researcher utilized factor analysis for further analysis. This technique extracts maximum common variance from all variables and puts them into a common score. As an index of all variables, we can use this score for further analysis. Factor analysis is part of general linear model and this method also assumes several assumptions: there is linear relationship, there is no multicollinearity, it includes relevant variables into analysis, and there is true correlation between variables and factors. Several methods are available, but principle component analysis is used most commonly. From the dataset

the all 15 quality characteristics variables were used in the first Varimax rotation. The extractions produced 4 extensions and 2 factors remained. 46% of the variance was explained by these two factors which the researcher grouped as “GD-Logic” and “SD-Logic.”

Several well-recognized criteria for the factorability of a correlation were used. The Kaiser-Meyer-Olkin measure of sampling adequacy was .73, above the recommended value of .6, and Bartlett’s test of sphericity was significant ($\chi^2(153) = 840.26, p < .05$). The diagonals of the anti-image correlation matrix were all over .5, supporting the inclusion of each item in the factor analysis. Finally, the majority of communalities were all above .3, further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was conducted with all 15 items.

The initial eigen values showed that the first factor explained 26.8% of the variance, the second factor 15.9% of the variance, and a third factor 5.2% of the variance. The fourth, fifth and sixth factors had eigen values of 2% or over, each factor explaining 6%. Three, four, five and six factor solutions were examined, using both varimax and oblimin rotations of the factor loading matrix. The three factor solution, which explained 43% of the variance, was preferred because of its previous theoretical support, the ‘leveling off’ of eigen values on the scree plot after three factors, and the insufficient number of primary loadings and difficulty of interpreting the fourth factor and subsequent factors. There was little difference between the varimax and quartamax solutions, thus both solutions were examined in the subsequent analyses before deciding on an oblimin rotation for the final solution.

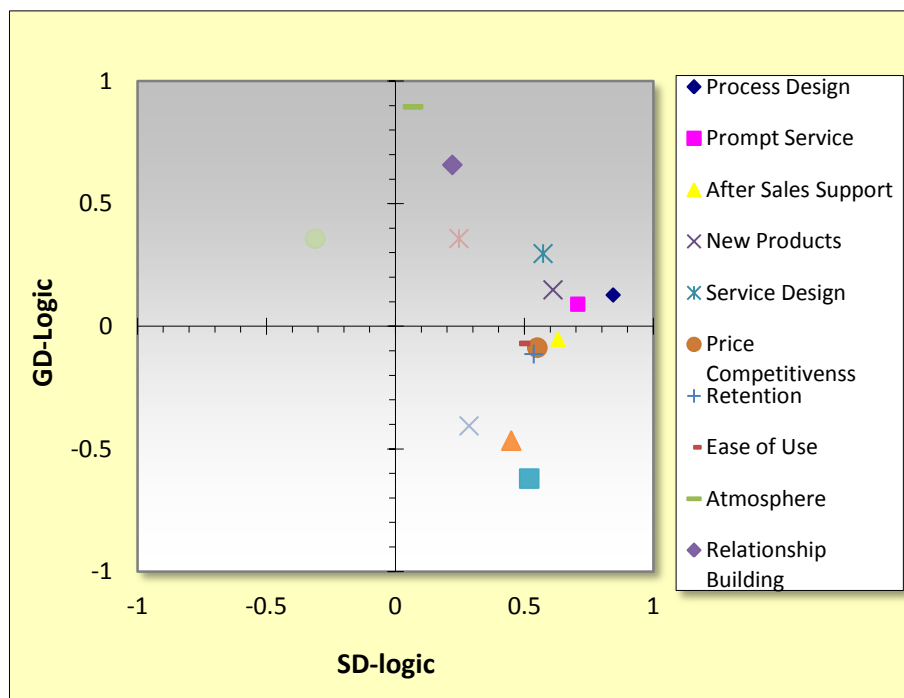


Figure 4: Varimax Rotation Of The HoQ Assessment Between The Subject Companies

CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to test the conceptual premises advanced by Vargo and Lusch to determine its application to real world businesses. It is generally accepted that service is the substructure that provides personal consumption and is the phenomenon of consumerism. However, SD-Logic should be treated as an aspect of the consumer society, not its underpinning or main platform. The statistical analysis of this study provided some insight into the meaningful application of SD-logic across 4 different industries. What was discovered in the hypothesis testing was no significant transformation in the opinions of the service providers that participated in this study as they relate to V and L’s 10 premises. Vargo and Lusch’s attempt to redefine and repurpose marketing is simply an

attempt to augment the meaning of a word so that it becomes not just a label but, in a sense, the label - the rhetorical and conceptual foundation to the entire future of the marketing discipline (O'Shaughnessy, J., & Nicholas, J. O., 2011). The 10 quality characteristics used to test the V and L theory aligned with real world service marketing interactions and was adequately proportioned in the assessment instrument. The researcher has confirmed in this study that the conceptualization of service marketing has not been significantly advanced by Vargo and Lusch. Based on the qualitative research established in this study the new academic thought and a shift of the paradigm is not fully reflective on their defense and it is the feeling of the researcher that no significant evidence was found to revise such a judgment.

RECOMMENDATIONS

SD-Logic is not an omnipotent fix for the future of marketing. As is true in any new theory advanced in marketing the practical application of such theories requires adaptation. According to Finney, Spake and Finney (2011), "as is true of differentiation, there will be many ways to succeed at an SD-Logic strategy - as many different ways as there are target markets. However, firms that adopt the SD-Logic will have to do everything possible to provide value to their chosen segment. It is predicted that there will be measurable differences between SD-Logic firms and low cost firms; these differences should include tactics such as promotions, distribution, service level, pricing, etc," (para 4). It is recommended that further research to test the real world application of the 10 fundamental premises be conducted using a longitudinal framework. This would provide a more accurate test of the V and L theory as the dynamics of marketing change so rapidly. A more robust study that involved an equal proportion of both goods and service based industries is also recommended using a sequential exploratory strategy which is better suited to explaining and interpreting relationships.

MANAGERIAL IMPLICATIONS

This study offers many opportunities and applications for the modern day manager. To start, a good manager should communicate to his/her employees that all employees are a service (singular) and they contribute to the bundle of services offered by the company. It is thus imperative that employees remain attentive to the customer needs but manage these needs skillfully. Testing fundamental premise #6 revealed the relationship of co-creation indexed against the 15 quality characteristics that were a part of the HoQ assessment tool. Based on this finding, the manager should empower both employees and staff to discover new tactics that will increase more co-creation. Because there is a propensity toward moving away from G-D Logic to SD-Logic, all marketing plans and strategies should include the preeminent service and product design that is available to deploy using company resources. Training to handle unresolved issues with between front-line employees and customers should be ongoing and updated where appropriate. The manager should instill in his/her employees the VOC (voice of the customer) and continue to utilize methods that will encourage quality functional deployment. The manager needs to impart to his/her employees that the service culture is dynamic and the service interaction between customers must be handled in a unique and efficient manner.

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