Creating a Blue Ocean Strategy for an e-trading start-up

by

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ABSTRACT

The study set out to discover a blue ocean strategy for HitchPin, an e-commerce solution for agricultural commodities. The study reviewed the evolution of e-commerce and its relevance to agriculture. The review indicated that the increase in automation of selling and buying activities on the internet has opened opportunities for a wide variety of market stakeholders to transact with people they would otherwise never have encountered. The review showed that more than 80% of U.S. cattle farms were small, having less than 100 head of cattle. This observation provides a window for HitchPin to look beyond the current boundary defined by the industry, i.e., large cattle ranchers. We estimated that having access to less than 1% of this market, where they sell only 50 head could be profitable with the appropriate value innovation.

The overall objective of the research was to develop a value innovation strategy for HitchPin. The study successfully develops a value innovation strategy, which calls for the company to move into a blue ocean space by focusing attention on small producers with less than 100 head of cattle per year. This focus will reduce servicing costs significantly, especially since our analysis showed that the company does not need more than 300 farmers to post a positive net present value.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGMENTS

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CHAPTER I: INTRODUCTION

1.1 Background

HitchPin is an online marketplace that allows an individual to buy or sell agricultural products and services securely, quickly, and on their own terms. While HitchPin is not the first player in the e-commerce space to offer the agricultural and agribusiness stakeholders the opportunity to reduce operational cost and speed up their transaction completion rates, it is novel in a number of ways, especially in the level of transparency it brings to the market. The company also sees its added services and instant invoicing program as key differentiators in a market that is becoming increasingly crowded and attracting the attention of major technology companies, such as Google and Microsoft. The increasing competition in the space demands an innovative approach that is grounded in industry knowledge to create a blue ocean strategy that differentiates HitchPin from market participants' perspective and enables it to significantly reduce its operating costs in a market with extremely thin margins.

Started by Trevor McKeeman, a 2019 graduate of Kansas State University, and an MBA from MIT, HitchPin is headquartered in Manhattan, Kansas. Unlike other business-to-business (B2B) digital marketing sites, HitchPin provides a full-service digital platform dedicated to helping farmers and ranchers do business better. Many marketplaces have limitations on the types of products that can be sold or marketed. HitchPin breaks this limitation by connecting buyers and sellers of any agricultural commodity or service, and it does this with assurances of safety and transactional security. Its electronic completion of sale with instant payment at time of sale (TOS) prevents risks of default. Working across the agri-food sector has allowed HitchPin to grow quickly over the past several years. Yet,

the historical growth presents opportunities for revamping strategy to accelerate future growth.

Some of HitchPin's local competitors are Big Iron Auctions and Purple Wave Auctions. Big Iron Auction (https://www.bigiron.com/), with its headquarters in St. Edward, NE, provides auction services beyond agriculture, serving construction, transportations and residential and commercial real estate. It provides financing, appraisals, inspections, shipping and private auction services, describing themselves as more than "just an online auction platform—we're your trusted partner for comprehensive solutions that simplify buying, selling, and managing your assets" (https://www.bigiron.com/services). Purple Wave Auctions (https://www.purplewave.com/), a Manhattan, KS-based company describes itself as "trusted no-reserve equipment auction marketplace." It reports having experienced year-on-year growth in excess of 20% over the past two decades. Like Big Iron, Purple Wave offers services beyond agricultural commodities, selling construction equipment, trucks and trailers, and passenger vehicles. While Purple Wave indicates a cross-country footprint, Big Iron lists products from far and wide but does not claim to have service providers on the ground across the U.S. Big Iron seems to be focused on rural agricultural market for its auction activities, proudly announcing its rural connections are a strength that allows it to offer superior services to its customers.

In addition to these local competitors are the global B2B agricultural platforms, including Farms.com (https://www.farms.com/), with its headquarters in Guelph, Ontario, Canada, Tradewheel (https://www.tradewheel.com/), with its headquarters in Wilmington, DE but indicating operations as far away as southeast Asia, and Agri Marketplace (https://agrimp.com/), a Portuguese-based global company focused on fair trade in the food

and commodity space. Thus, unlike the local companies, Agri Marketplace focuses on connecting food producers with buyers on the principle of fair trade.

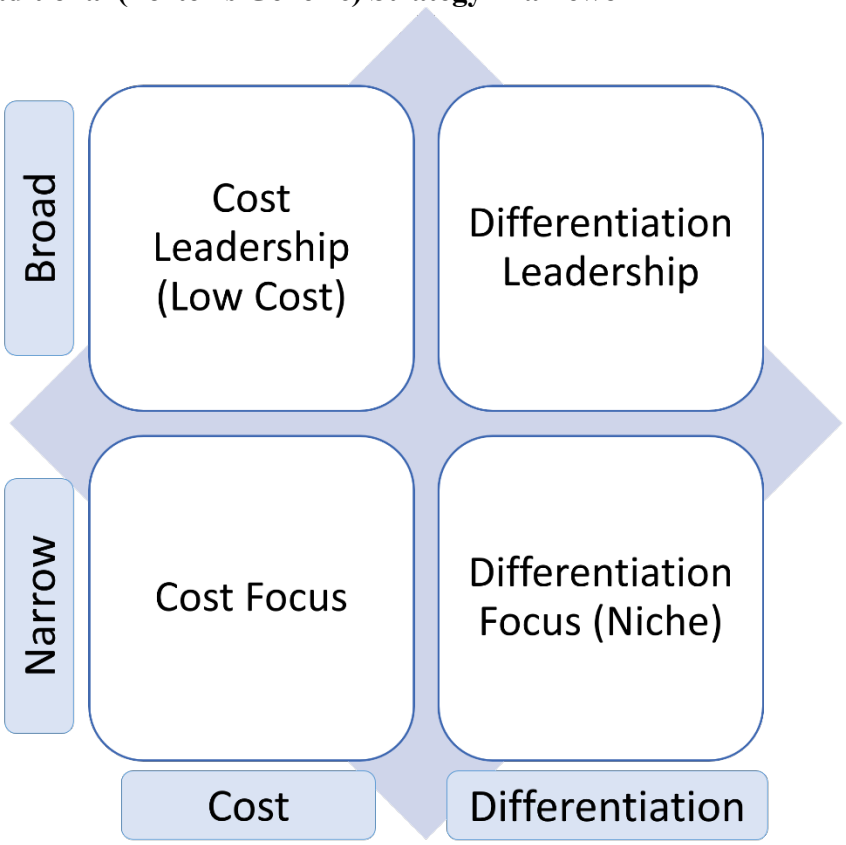
The commodity auction businesses focusing on B2B products sourced as inputs seem to differ in their business models from those involved in B2B operations selling products that are going into the direct production of consumption goods. HitchPin is positioning itself more in the space of the former group of auction companies selling production and manufacturing inputs. It is within this framework that we define the research problem that we envisage for HitchPin, a problem that the company's CEO sees as a real issue the company needs to address to sustain its relevance in an increasingly crowded marketplace.

1.2 Problem Definition

HitchPin's problem is one of effective differentiation with low cost. This flouts the traditional differentiation or low-cost strategic alternatives presented in textbooks. This traditional approach, originally presented by Michael Porter as Porter's Generic Strategies (Figure 1.1) presents a company's strategic alternatives along two axes – source of competitive advantage and markets. Within this framework, the boundaries of the market are set, and rules of engagement are established with clear critical success factors. Companies can enhance their performance by pursuing one of the four alternatives at any one time. They can be cost-focused and operate in a narrow marketplace or be a cost leader and broaden their market. Alternatively, they might pursue a differential focus strategy that forces them to be a niche player, serving a narrow market or a small set of customers, or be a differentiation leader and broaden the market. Since entry into the B2B market has few barriers – and those barriers are not difficult to overcome with enough money – the rapidity with which successful differentiation offerings become commoditized has been

accelerating over time. That is to say, the traditional mindset does not offer a pathway to sustainable performance in the e-commerce marketplace, explaining why scale has become the principal competitive strategy pursued by many companies in that space – from the technology giants such as Amazon, Meta, and Google to small operators renting platform space from these giant market platforms to gain scale.

Figure 1.1: Traditional (Porter's Generic) Strategy Framework



Within these generic strategy's framework, HitchPin might see its problem as a scale issue, i.e., reaching the largest market – producers and users of agricultural commodities – with the least cost. Therefore, it started off asking how it could minimize its sales force and gain market share. However, conceiving of HitchPin's situation within the blue ocean framework suggests a different problem: How does the company present a

superior value proposition to the various markets in ways that make its current and future competitors irrelevant to its success. This is the problem that this research has chosen to address in the hope of contributing to HitchPin's ability to produce sustained profitability in a rapidly changing marketplace.

1.3 Research Question

Blue Ocean strategies (Kim and Mauborgne 2004) are defined within a mindset that markers boundaries are porous, and opportunities exist for those who seek to create radically superior value to customers who are not getting what they need from current suppliers. Against this backboard, the research question, this research seeks to answer is this: What value innovation strategy may HitchPin pursue to produce a performance outcome that is superior to any that could be achieved using the traditional strategies described in Figure 1.1. Although HitchPin provides opportunities for any agricultural commodity to be traded on its platform, this research focused on cattle trading to illustrate an effective value proposition to answer the question. This illustration, it is believed, will provide a roadmap for addressing the value innovation for the other commodities the company trades in.

1.4 Research Objectives

The overall objective of this research was to develop a value innovation strategy for HitchPin. The specific objectives are as follows:

1. Describe the emerging online agricultural commodities trading market;
2. Since we are using cattle as the test commodity, analyze the characteristics of cattle ranchers and their buyers in the emerging online agricultural commodities' market platforms; and

3. Evaluate the value innovation opportunities in B2B marketplace that could be seized by HitchPin and assess the attractiveness of the potential value that could be created.

1.5 Outline of the Thesis

This chapter has briefly discussed the principal activities of a B2B marketplace using a few of the current players as examples. It used this to frame HitchPin's problem developing a sustainable strategy that allows it to continue its growth using a blue ocean strategy. It presented the research question and the research objectives. The remainder of the thesis is organized into four chapters. The next chapter presents the literature review covering the e-commerce B2B marketplace in its current search for superior value as the space becomes more crowded. It will also review the blue ocean strategy and how various companies have applied it to "make their competition irrelevant". The challenges of developing and implementing blue ocean strategies are presented and evaluated as well as solutions to these challenges. Finally, the attractiveness of blue ocean strategies in a market that is so commodity oriented is presented.

Chapter 3 described the U.S. cattle industry in very broad terms as an overview of the space in which the case company is operating. Chapter 4 describes the strategy canvas and value curves for HitchPin as it evolves its strategy to blue ocean. It also presents a simulated estimate of the value the company could create under the proposed strategy under alternative assumptions. The process allows for the identification of a business model that could help HitchPin pursue a blue ocean strategy. The final chapter presents the summary of the study and the conclusions emanating therefrom. It also identifies gaps in the study and defines opportunities for future research.

CHAPTER II: LITERATURE REVIEW

This chapter accomplishes two things. First, it presents an overview of the B2B e-commerce marketplace and the extent to which agriculture has adopted it. Next, it presents an overview of the blue ocean strategy principles, tools, and expected outcomes. It connects the principles and tools to provide a path forward for addressing the research problem.

2.1 Overview of the Agricultural B2B E-Commerce Market

We begin our overview of the agricultural B2B e-commerce market with a background of e-commerce in general. Electronic commerce provided an expansive opportunity for both businesses and their customers to have options in service providers, products, and services. It allowed a consumer to escape the shopping process trap – select a store, go to the store, go to the aisle with the product, select the product, walk to the checkout, and pay for it, and then go home or to the place where the product just purchased can be used or consumed. With e-commerce, any buyer could sit at their desk or in their comfortable chair and browse the internet and order a product at the best price possible and have it shipped to them.

Prachi and Nigam (2023) present a very succinct overview of the evolution of e-commerce. They argue that e-commerce started with the formation of CompuServe in 1969. This Columbus, OH company sent data over phone lines to businesses to provide computer-sharing services, which they referred to as Electronic Data Interchange (EDI). However, the first true e-commerce transaction can be attributed to a 21-year-old economics student at Swarthmore College, Dan Kohn who sold a Compact Disc for $12.48 to a friend 300 miles away by encrypting his friend's credit card information via a crude website. Kohn was the co-founder of NetMarket, which was the company that sold that CD, Sting’s Ten Summoner’s Tales in1994 (Lewis 1994). However, earlier attempts have

been made by Atalla Technovation and Bunker Ramo Company in 1976 to facilitate secure transactions for financial institutions. The first hearing before the California State Assembly in 1983 was e-commerce and testimonies were collected from the leading companies at the time: CPUC, MCI Mail, Prodigy, CompuServe, Volcano Telephone, and Pacific Telesis. The first regulation targeting e-commerce resulted from these hearings a year later - The Electronic Commerce Act of California. The regulation provided guidelines for conducting “the acquisition of goods and services via a telecommunications network" (Prachi and Nigam 2023). That same year, CompuServe launched its Electronic Mall, providing customers with the opportunity to buy from about 100 vendors.

The World Wide Web (W3) was launched in 1990 and with it came real opportunities for e-commerce. Its original purpose was to provide a universal link for information systems (History.com Editors 2020). About four years after the launch of the W3, Netscape 1.0 is launched and it uses the Secure Socket Layer (SSL) protocol to encrypt both sending and receiving sides of transactions, presenting a solution to safe payment systems. And the internet market is born with offspring such as Amazon and eBay emerging in 1995 and PayPal launching in 1998. In less than a year, the world will spend about $150 billion online. Things slowed down tremendously after the Dot.com melt down in 2000. Thousands of online companies, characterized by their dot com names, filed for bankruptcy, including the first food delivery company, Webvan. Online shopping will start taking off again five years later with companies, such as Amazon, introducing unique services such as Prime with free two-day delivery promise. There are more than 180 million adult Prime members in the U.S., who represent more than 75% of U.S. Amazon shoppers (Coppola 2024). In 2006, Shopify https://www.shopify.com/) was launched to

give businesses the opportunity to launch their online solutions. U.S. business-to-consumer (B2C) e-commerce sales reached about $2.3 trillion in 2024 and is projected to reach $5.9 trillion by 2029. Amazon leads the US market with a market cap of more than $2.2 trillion. Its competitor, Alibaba, is a Chinese company with a market cap of $146 billion. Incidentally, Amazon is the only U.S. company in the top 10 B2C e-commerce companies globally.

Although critical, B2C transactions encompassed small payments, making secure payments important but seemingly easily addressed. Secure payment became the principal hindrance for the rapid evolution of the B2B e-commerce market. Regulatory barriers across international borders presented challenges to international e-commerce, and the sheer size of some of these transactions made those regulatory barriers more challenging. To this end, Prachi and Nigam (2023) suggest that there are three prerequisites for e-commerce to exist: personalization; omnichannel; and safe payment. Safe payment is critical for all online transactions. It was pioneered by companies such as PayPal, but it has now been adopted and expanded by numerous financial institutions, credit card companies, and companies that hitherto provided payment guarantees for transacting counterparties. Blockchain is becoming an option for safe payment for e-commerce transactions (Shaikh 2024). Speed and safety are both important and provide confidence for both sellers and buyers to expand their use of these solutions.

Personalization encompasses the tailoring of products, services, and experiences in ways that are uniquely structured for satisfying specific individuals. Personalization requires an appreciation of an individual's needs and an appreciation of their preferences. By matching product development to needs and preferences, it is possible to increase

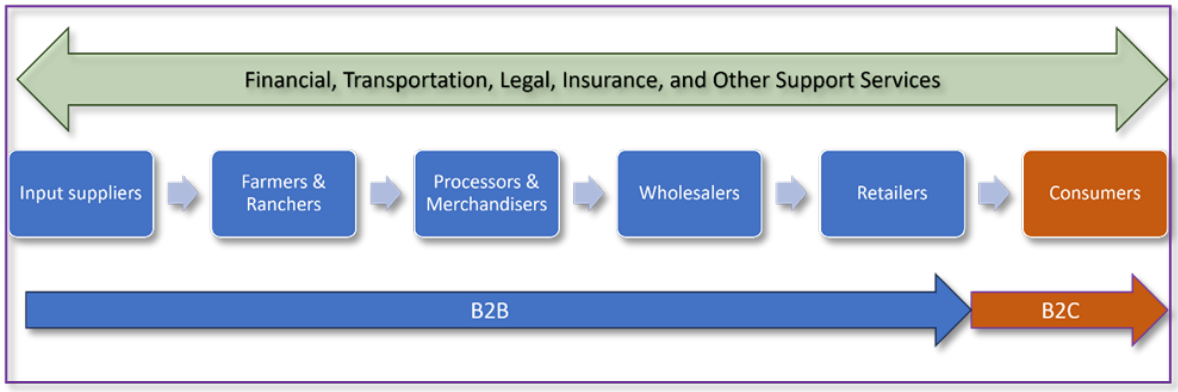
customer engagement and enhance customer loyalty. It also increases conversion rates, i.e., creates higher sales per encounter. Internet technology has facilitated opportunities to gather significant personal data that enables companies to personalize their offers to both consumers and other businesses. Omnichannel is a business strategy that provides a seamless and consistent customer experience across all channels – brick and mortar or physical stores locations, online stores, mobile apps, as well as social media. Being customer centric, omnichannel strategies integrate all channels to leverage the value of the brand in a customer's experiential engagement. Like personalization, omni channel's feasibility and success are based on the opportunities offered by information technologies to gather and organize significant volume of information about individuals and companies and serve them solutions across all the different channels through which they consume products and services (Baird 2015).

E-Harvest was formed in 1999 in Guelph, Ontario as probably the first online agricultural commodity exchange, focusing initially on hogs. Its unique characteristic that differentiated it from most of the other dot.com companies at the time was that it actually had hogs it could sell to people. In other words, it was an e-commerce company with bricks-and-mortar backing. E-Harvest morphed into Farms.com (https://www.farms.com/) during the dot.com meltdown in 2000 and since then has become a primary international B2B e-commerce company. Its portfolio includes farm equipment, farm auctions, and energy. But unlike most agri-food e-commerce businesses, Farms is a lead publisher of numerous farm media, targeting farmers and agricultural interests. Its publications include Better Farming, Better Pork, European Seed, and Spudsmart. It also provides significant

information to the industry, from market information and analyses to industry leaders' insights into emerging issues affecting the agricultural sector.

Today, most agri-food companies are part of supply chains that conduct most of their business transactions online. Software for managing these transactions and relationships has contributed to significant efficiencies in businesses. Agricultural B2B e-commerce today encompasses platforms and services connecting input suppliers to farmers, farmers to processors and merchandisers, and on to wholesalers and retailers, who then sell to consumers. In addition to product and information flowing along the supply chain, agri-food B2B e-commerce operations occurring in these supply chains increasingly integrate financial services, transportation services, insurance services, and the numerous players who provide guarantees and peace of mind that transactions will go as imagined. This is illustrated in Figure 2.1.

Figure 2.1: Generic Agri-Food Supply Chain Illustrating the Boundaries of B2B and B2C



As noted above, the internet's emergence expanded the options for market players to interact and relate to their counterparties. They we no longer, like consumers, limited to dealing only with people within their locale. They could now engage in transactions with anyone anywhere as long as they have access to the internet. The availability of access to

secure and fast payments systems improved confidence in the platforms and with that confidence came expanded use of the available solutions. The expanded use of innovative internet solutions contributed to a rapid growth in investments and the multiplication of services and also actors. Therefore, there was a positive or reinforcing feedback loop for the impact of the relationships in the supply chains on participants' performance as they leveraged the technologies unleashed by the e-commerce enablers to run their businesses.

Emerging technologies in the artificial intelligence (AI) fields promise significant improvement in efficiencies in transactions (Al-Surmi, Bashiri and Koliousis 2022). This also means it is critically more important for firms in the B2B e-commerce space to know who their customers are so they can personalize products and services beyond their expectations, provide solutions wherever and in whatever form they want them, and take away all headaches about payments. Firms seeking to be competitive and choice partners must make these issues non-issues for their customers. There is a need for a change in mindsets, from red oceans to blue oceans.

2.2 Blue Ocean Strategy Explained

Porter's generic competitive strategy presented a worldview that suggested something like this: To be competitive, you have to be a low-cost leader OR operate in a niche market. Kim and Mauborgne (2004) argue that this is not a given or a fact, that it is essentially a state of perception. They present an alternative approach to sustainable competitiveness in which they argue that it is possible to simultaneously pursue differentiation and present lower costs that open new market opportunities to expand sales. They called this Blue Ocean Strategy (BOS). They argued that BOS is about creating and capturing uncontested markets or customers whose needs have been overlooked. In doing

this, they argued that the competition becomes irrelevant because they are absent in the new markets that have been created.

The components of BOS and how it differs from the characteristics of red oceans (the traditional markets in which most organizations operate) are summarized in Figure 2.2. Participants in red oceans define the market as an arena in which they compete in a zero-sum game and their primary purpose is to beat the competition. To achieve this objective, they exploit existing demand and trade value for cost. For blue ocean players, they see the market as unsatisfied customers whose needs are real and demand to be filled. Because no one is serving customers the needs they identify, the competition does not exist for blue ocean players. They either break or ignore that zero-sum relationship between cost and value and align their activities in pursuit of creating what Kim and Mauborgne called value innovation. Value innovation is the production of cost-effective value, where value improves customer performance and satisfaction as well as supplier performance.

Figure 2.2: Primary Characteristics of Blue and Red Oceans

2.3 Principles of Blue Ocean Strategy

There are six primary principles of Blue Ocean Strategy. They are:

1. Reconstruction of market boundaries
2. Focusing on the big picture and not numbers
3. Reaching beyond demand
4. Getting the strategic sequence right
5. Overcoming organizational hurdles
6. Building execution into strategy

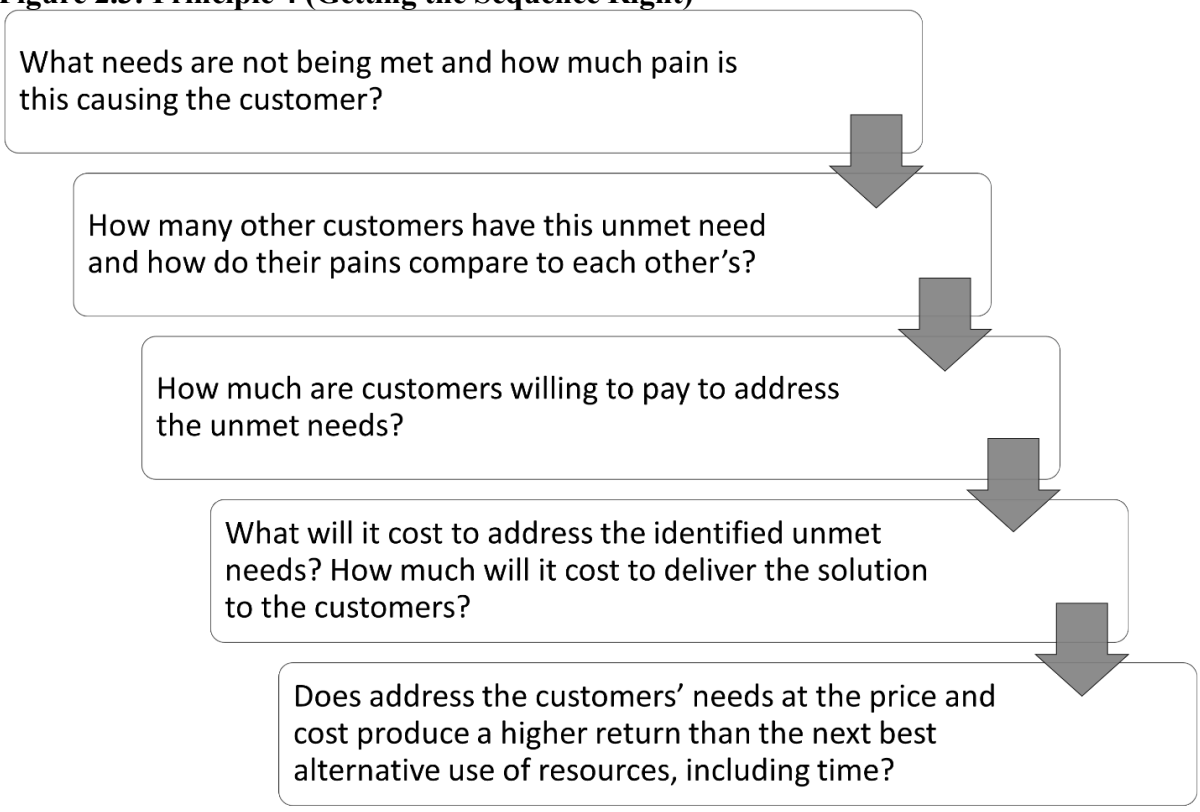
The first principal rests on the traditional view that there are boundaries of competition which markets are given and firms either participate in or do not. However, BOS argues that markets are not static, and their boundaries are not given. BOS operators may look across the boundaries of industries and alternative industries and across strategic groups to find new markets waiting to be served. They may explore existing buyer groups,

across complementary product and service offerings, across the functional-emotional orientation of an industry, and even across time to discover unserved or underserved customers who are crying for some value innovation.

Focusing on the big picture and not numbers mean prioritizing strategic understanding of actions that need to be implemented over the details of metrics. It is a disciplined approach to management that says if you develop the right strategic understanding of the environment, you will implement the right strategies that will produce the desired results. Prior to those results emerging, it is mere conjecture. Reaching beyond demand is not taking the current demand as the boundary of the market. Explore deeper and ask who is not being served and why. Ask who is being served but is not valuing the service and why. Reaching beyond demand changes perspectives about who the potential customers could be and what their needs are and, therefore, what products and services could be developed to delight them.

There is a sequence, and order, in getting people to respond. This is very important in BOS. Understanding customer needs and their preferences provides insight into how much they are willing to address the pain associated with their unmet needs. Their willingness to pay informs us of the limit on prices that could be charged and, hence, the cost of production that must be incurred. Getting the sequence right, therefore, begins with the customer and not the product or service and ends with the determination of value innovation. Value innovation determines whether a market is credible enough to be pursued.

Figure 2.3: Principle 4 (Getting the Sequence Right)



The status quo exists because it is beneficial to some people. BOS requires a change in mindsets. Therefore, those who believe the mindset change will adversely affect them will resist the change. It is for this reason that BOS's fifth principle recognizes the potential hurdles and moves to address them. There are numerous approaches to overcoming organizational hurdles in organizational psychology literature (Parris, et al. 2016). However, from an economics perspective, the most effective approach to overcoming organizational hurdles is to determine and estimate the costs and disutility's those resisting the change perceive. Carefully engaging these people in conversations that help them alleviate their fears paves the way for moving to implementation without the unnecessary resistance costs.

Finally, like all strategies, it is imperative that execution is baked into the strategy development process from the beginning. Understanding the resource situation once the decision to serve the needs of the identified market is made is critical to minimizing the pain of those who want the opportunity and those who see it as a burden. Leaders of BOS, therefore, must have answers to the following question: Who is doing what with what when for whom to produce what performance outcome?

2.4 Blue Ocean Strategy Tools and Frameworks

There are three tools and frameworks that facilitate the successful adoption of BOS approach: strategy canvas, value curve, and the four-action framework (which encompasses ERIC – eliminate, reduce, increase, and create). A value curve is the graphic depiction of the organization's relative performance across its industry's factors of competition or critical success factors. In commodity markets, commodity prices are critical success factors in addition to product quality, logistics and supply chain efficiency, risk management, and access to financing. Others are branding and marketing effectiveness, strategic alliances or partnerships, and regulatory compliance systems. The value curve shows how an organization is faring compared to its principal competitors on these factors.

The strategy canvas is an extension of the value curve. It depicts how the organization plans to make the competition irrelevant by diverging from them while focusing on the things that are critical to success. In other words, the strategy canvas addresses the organization's weaknesses exposed through the value curve analysis and extends its dominance through offerings that the competition is incapable of delivering.

ERIC brings the BOS together to facilitate execution. It focuses the organization on the things its needs to eliminate from its activities because they provide no value to customers and shift resources to things that have value. By eliminating these things that

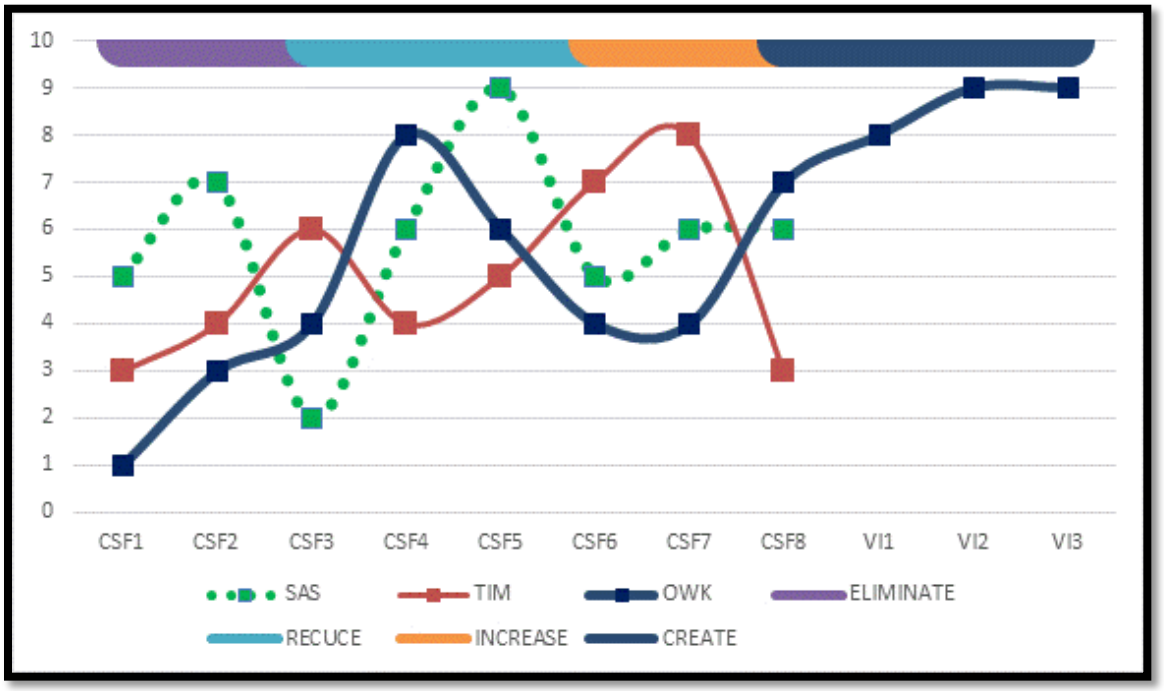
customers do not value, the savings go straight to the bottom line. It focuses the organization on looking at its offerings and those of others that customers seem to like but are not paying enough for them. These are products and services that are being offered at levels exceeding customers' value for them. The framework helps the organization to identify these offerings and measure their value contribution to customer satisfaction and then reduce the offer level to the point where it matches the value the customer places on it. The value curve analysis also reveals offerings that are desired, but the organization is not offering enough of it to customers. Just as it was for those that were being over supplied, the organization now measures the gap between its offering and customers desires and develops protocols to increase its supply to close the measured gap.

The final step in the ERIC framework is creating offerings that customers desire but no one is offering them. This is where true value innovation occurs because sometimes, the customer does not even know they need the offering until they have tasted it. One can imagine the significant value the internet and online shopping have offered consumers and businesses since their deployment, value that could not be imagined possibly only months before the offering of these technologies. To minimize the risk of not reading customer aspirations right, it is imperative to know customers and develop very close relationships that allow the organization to develop deep insights into their unspoken aspirations, pains, and hurdles.

The foregoing discussion of BOS tools and framework is summarized in Figure 2.4. The figure shows that the value curve suggests the organization must eliminate CSF1 and CSF2 because the customer does not value them even though the competition and the organization have been offering them. Eliminating these is relatively easy in the example

below because the organization is not competitive in them against the competition, anyway. For CF4 and CF5, the organization is over-delivering but they do not offer significant value to the customer. The strategic imperative here is to reduce these offerings to match what the competition is doing. The value curve analysis shows that CSF6 and CSF7 are important to customers, but the organization is not offering enough of them. Therefore, to sustain competitiveness, the organization must increase these offerings.

Figure 2.4: Blue Ocean Strategy Tools and Framework



The strategic analysis within the BOS framework reveals that CSF8, CSF9, and CSF10 are offerings that customers would want to receive. Unfortunately, no one is currently offering them. To make the competition irrelevant, the organization may develop a value proposition that offers customers these offerings. To sustain the offer advantage, then, the organization delivers these offers in ways that are difficult for competitors to copy. This could be by way of proprietary technology and/or strategic relationships. The

organization may also structure the delivery of these offerings in ways that are difficult for competitors to understand the contribution to customer value. Causal ambiguity offers a greater opportunity in the e-commerce environment than technology since the obsolescence rate of technologies has been accelerating over time (Coopersmith 2003, Mahoney and Pandian 1992).

2.5 Conclusion

HitchPin has defined its problem as a red ocean problem. That is, it seeks to expand its markets and grow using the traditional approaches of cost minimizing. In thinking this way, the company is considering reducing its sales staff or deploying a small number of salespeople. The real question is how the company knows that such a move would create value for its customers and engender loyalty. The literature review assessed the role of technological advances in the creation of e-commerce and the B2B marketplace. It showed that technological sources of competitive advantage are fleeting because they can easily be copied. Indeed, patents and trademarks regulations have not prevented copying, and for all intents and purposes, companies without the resources to defend their patents might as well not have them. For example, Viacom filed a claim in 2007 that YouTube infringed upon its copyright because it hosted more than 150,000 clips from its TV shows, seeking damages in excess of $1 billion. A technical blunder led to Viacom's loss (Cabanes and Livingston 2012). Recently, Nvidia and Microsoft were accused of AI patent theft by Xockets, Inc. in a complaint filed in the US District Court for the Western District of Texas (Xockets Inc. v. NVIDIA Corp. et al. 2024). These examples point to the importance of looking for alternative low-cost options to exclusive technological advantages in e-commerce marketplaces. The next chapter provides a description of the methods and data used to help HitchPin craft a BOS solution to its operations.

CHAPTER III: DATA AND ANALYTICAL METHODS

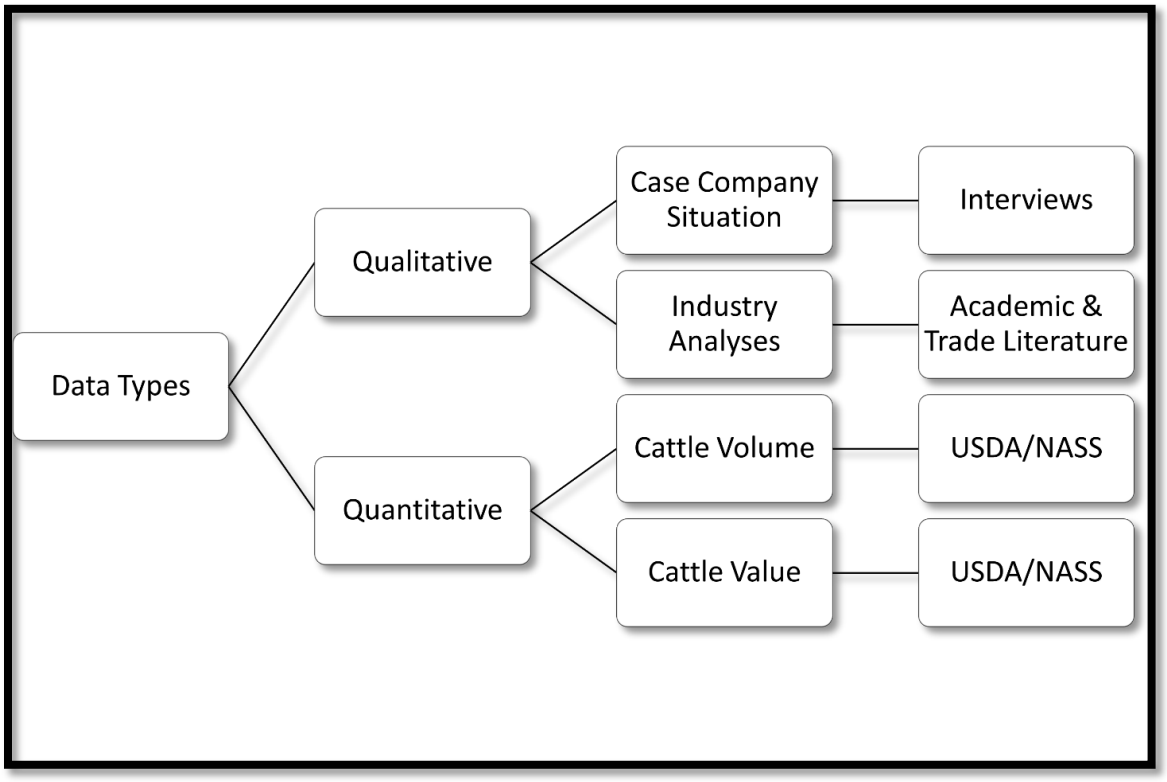
The data and methods relevant to the objectives of this study are discussed in this chapter. The chapter is organized into two broad sections: (1) Data types and data sources; and (2) Methods.

3.1 Data Types

The study used both qualitative and quantitative data from both primary and secondary sources. The primary qualitative data were collected through interviews with HitchPin executives. The secondary quantitative data were collected from the National Agricultural Statistics Service of USDA. The interviews with HitchPin CEO Trevor McKeeman collectively were over several hours. They encompassed understanding the company's history, vision, current challenges, strategic imperatives, and operational plan. They also included understanding the mindset of the company about its competitors and the critical success factors in the cattle business.

Recall that although HitchPin is structured to offer trading solutions to all agricultural commodities, this research focused its activities on only the cattle market. Therefore, cattle production, industry structure, and performance over the last 24 years (2000 through 2023) in the four major cattle states were collected from USDA/NASS. The top four cattle producing states are Nebraska, Kansas, Oklahoma, and Texas. Specifically, the data collected encompassed cattle numbers in both number of head and meat output, distribution of farms by size of operations, and cattle prices. The data types and sources are summarized in Figure 3.1.

Figure 3.1: Data Types and Sources



3.2 Methods

The cattle production data were analyzed using Microsoft Excel. We estimate the summary statistics for the data set for each state and explore their trends. We also estimate the growth rates in the different states and compare them. Additionally, we assess the distribution of farms by size of operations and the number of ranchers in each size category. This analysis is a proxy of the kind of market boundary analysis that an organization has to do to discover opportunities outside the boundaries of traditional markets.

The qualitative data were used to develop the strategy canvas, value curves, and the ERIC discussion for the BOS opportunity discovered for HitchPin. We combined this qualitative analysis with a quantitative analysis to estimate the value of the value innovation associated with HitchPin undertaking the BOS. We ran a number of scenarios

on cattle prices, revenue models for HitchPin, and cattle numbers. The idea was to explore the extent to which these variables affected the profitability of the company.

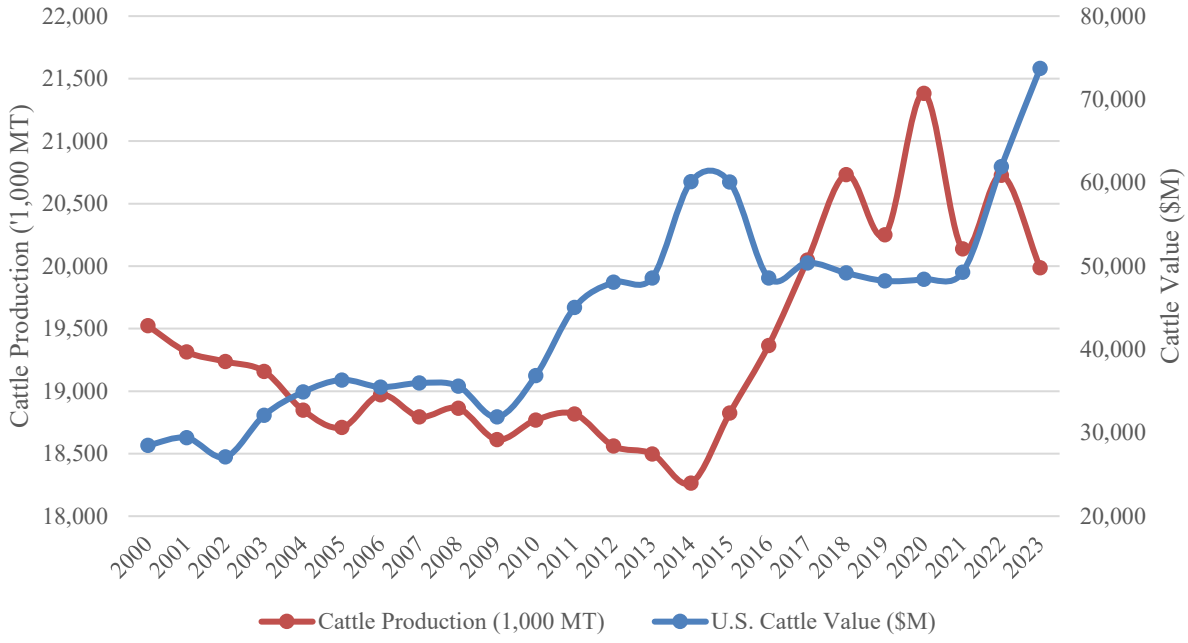
CHAPTER IV: RESULTS AND DISCUSSION

This chapter presents the results of the study and discusses them to provide a context for strategy execution. Recall, the purpose of the study was to identify a value innovation strategy that could position HitchPin in a blue ocean, a marketspace that has no relevant competitors. However, the study's first objective was to describe the emerging and unfolding online agricultural trading platforms. We accomplished this objective in Chapter 2 discussing the literature review. In this chapter, we present the results associated with Objective 2 and use those results as a framework for exploring the opportunity to develop a blue ocean strategy for HitchPin.

4.1 The Dynamics of the U.S. Cattle Market

Recall that although HitchPin was built to trade any type of agricultural commodity, this study intentionally limited the analyses to cattle only. Figure 0 shows the trend in the value and volume of total U.S. cattle production (including calves) from 2000 through 2023. The graph shows that U.S. cattle production was on the decline in the first part of the 21st Century and took off sharply from 2014 onwards. As expected, the value increased as volume decreased but remained flat between 2017 and 2022 even as volume reached new highs. However, the correlation between value and volume was positive (0.33) but not statistically significant. Overall, value increased at an annual rate of about 3.4% while volume's trend was essentially flat over the period, with an average annual growth rate of approximately 0.3%. However, between 2014 and 2023, the growth rate for production volume was about quadrupled to 1.2% per annum.

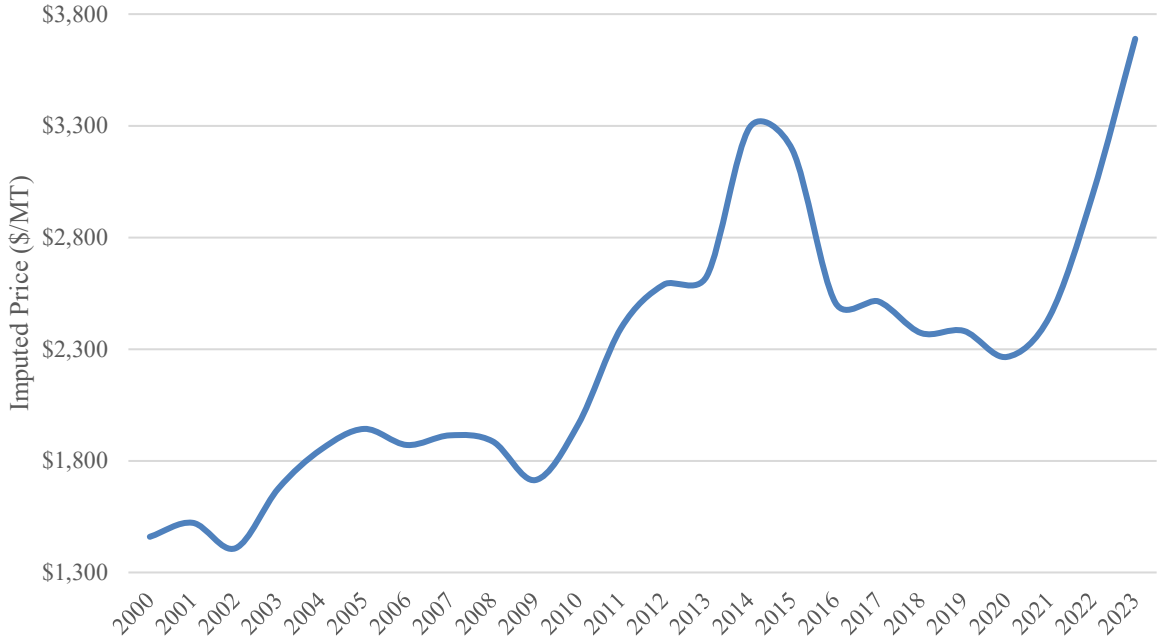
Figure 4.1: Value and Volume of Total U.S. Cattle Production (2000-2023)



Source: USDA/NASS.

Imputed price for cattle was calculated from the value and volume of cattle procured from the USDA/NASS database. The imputed price of the period under analysis ranged from less than $1,409/MT to about $3,689/MT. It trended upwards at an average rate of 3.1% per year. Assuming inflation rate of 2%, this would mean that the real growth rate of the imputed price of cattle in the U.S. grew at an average rate of about 1.1% per annum. Connecting price to its estimation components, it was discovered that there was a strong positive correlation between price and volume (0.985; $p < 0.01$) over the period of the analysis. However, the correlation between price and value was not only weak and also not statistically significant.

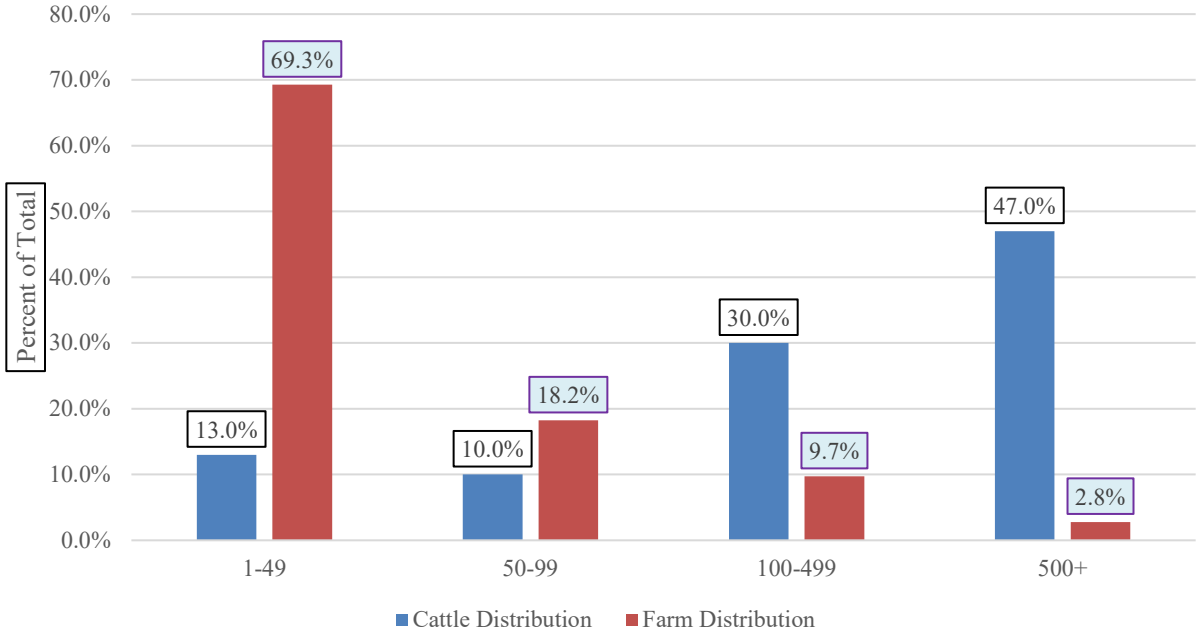
Figure 4.2: Imputed US Cattle Price (2000-2023)



Source: USDA/NASS.

Cattle farms in the U.S. are very heterogenous. USDA/NASS data shows that while 69.3% of farms with cattle had less than 50 head, 2.8% of them had 500 or more head. Farms with 50 or more head but less than 100 head of cattle accounted for 18.2% of all farms and 10.0% of the number of cattle. Farms with between 100 and 499 head of cattle accounted for 9.7% of farms and 30.0% of cattle. The foregoing shows that the distribution of cattle on these farms varies significantly, as illustrated in Figure . The foregoing information is important for HitchPin because it offers an opportunity to examine the market boundary for users of the online cattle market. Less than 3.0% of farms with 500 or more head of cattle would have the scale to achieve some of the scale economies the e-commerce market is proposing to the industry.

Figure 4.3: Distribution of Farms with Cattle by Farm Size and Herd Size



Source: USDA/NASS.

4.2 HitchPin's Target Customer

The larger producers, whether a cow-calf operation or a feedyard, usually have established methods of cattle procurement. A feedyard could be purchasing cattle directly from larger ranches or consolidating cattle from many different ranchers at pre-conditioning yards or backgrounding yards. They could also contract a cattle buyer to fill orders for them with the numbers and types of cattle they need. On the sell side, with the number of head they are selling at any one-time, large cow calf producers can market directly to feedyards, backgrounders, and cattle buyers of processing facilities.

The mid-sized producers also have access to many of the same marketing methods as the larger producer. This is true especially for backgrounding yards and cattle buyers. It is the smaller producers from the mid-size group and the smaller producers with under 100 head that have the greatest problem marketing their cattle. An April 2012 APHIS Info Sheet (Characteristics of Small-Scale US livestock Producers) indicated that 88.3% of

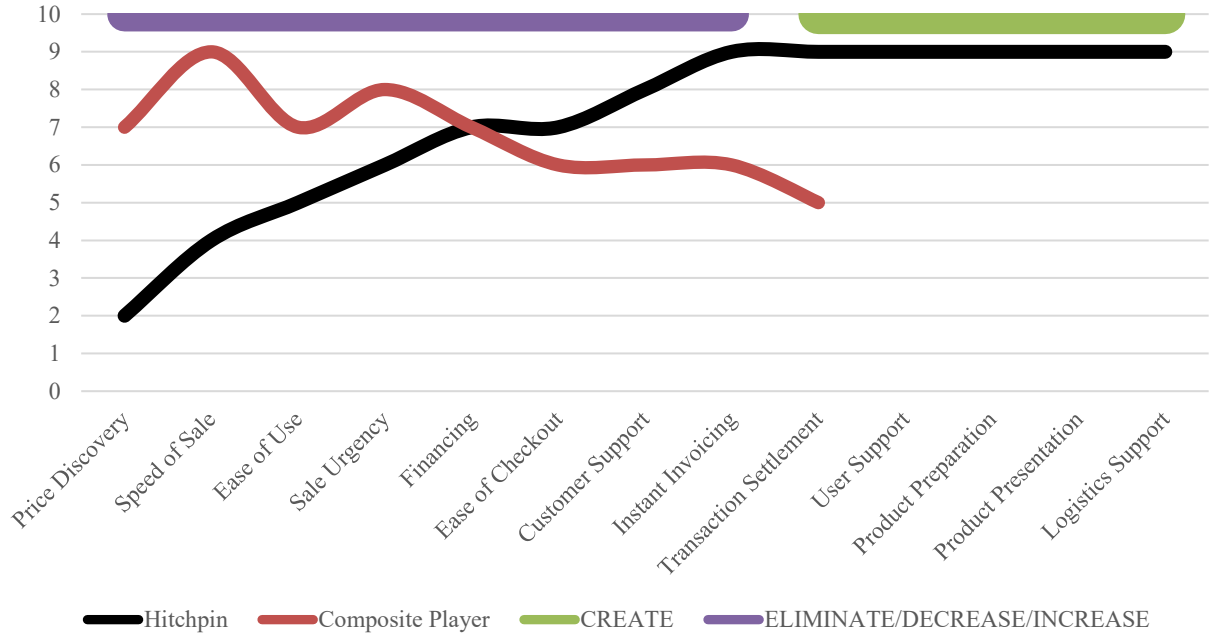
small-scale producers use local auction barns as their principal market channel, which offers them no advantage because they are unable to aggregate to fill a truckload. This group, generally classified as price takers because of their size limitation that negates their ability to influence cattle prices, has the most potential for HitchPin's services. The platform, with its size agnosticism, empowers smaller ranchers to sell the volume they want to sell, when they want to sell, and at what price they are willing to take without the structural limitations often imposed by auction houses.

Another potential target customer for HitchPin is the seed stock or purebred producer. Normally, these individuals fall into the less than 100 cattle group. They usually conduct annual sales at events such as the Kansas based Gold Bullion Group sale. However, selling by private treaty is slow and can be a cumbersome activity. HitchPin's platform could be specifically designed to offer seed stock producers a unique advantage to sell single or small groups of cattle quickly. It is well within the scope of the platform to post numerous photos or video of animals as well as post the EPD's (estimated progeny differences) so interested parties will have a clear idea of the quality of the animal they are viewing. This completely prevents the time commitment of showing animals on the ranch or dealing with late or no shows to view an animal. These on farm visits can easily consume the better part of a day, thus the time savings can be significant. HitchPin provides locations for photos of the animal and the seller can leave the bid open so individuals can make an offer, or they can have a list price, and the buyer can make an offer or just pay the list price. And like all HitchPin sales the money transfers at the completion of the sale into the HitchPin wallet and it is available to you. Transportation is available to be set up as well or the support staff of HitchPin can help you to arrange transportation.

The 2022 Census of Agriculture indicated that the average age of U.S. farmers was 58.1 years and those 64 years old or younger account for about 62% of the farmer population. For the producers in this group, it is estimated that about 62% work off-farm at least part time. HitchPin can provide an incredible advantage to these groups. First, since it is easy to use and intuitive, those who may not be as comfortable with the technology will not be intimidated. With small herds and off-farm employment, these farmers will be the most time-constrained, and therefore, are more likely to benefit from the platform.

Based on the foregoing and the interviews with HitchPin executives, 10 critical success factors were classified as candidates for elimination, decreasing, or increasing because they are accepted critical success factors in the industry. They are: (1) Price Discovery; (2) Speed of Sale; (3) Ease of Use; (5) Sale Urgency; (6) Financing; (7) Ease of Checkout; (8) Customer Support; (9) Instant Invoicing; and (10) Transaction Settlement. Price discovery is a standard offering by all platforms. It involves buyers and sellers interacting with each other about a particular product and deciding on the product's price. Auctions achieve price discovery through the bidding process while exchanges discover price by buyers' willingness to pay prices posted by sellers. Buyers may sign on to an exchange to assess prices for a particular commodity offered by different sellers across the country. The price difference may mean that buyers may not purchase the product closest to their location but a product that offers the best total acquisition cost. The interviews suggested that the competitor firms are doing a better job than HitchPin. This is primarily a result of HitchPin's age, a situation that will improve by default as the company builds its offerings and its technologies.

Figure 4.4: Comparative Value Curve and Strategy Canvas



Speed of sale is a function of high platform traffic. As a relatively new company, HitchPin does not have the traffic that could provide it with the speed of completing sales comparable to its competitors. However, increasing traffic is a matter of time. Once the traffic on the platform increases, the speed of sales increases along with it. Urgency of sale encourages or motivates buyers and sellers to reach settlements quickly in fear of losing out on the "best price offer." The auction platform is able to create this urgency of sale more effectively than an exchange. The question in a market helping its stakeholders make the best decision is whether this tactic is useful. Therefore, even though HitchPin is rated below its competitors in this critical success factor, there is still value in considering reducing or eliminating it from its operational model. However, HitchPin must increase the ease of use of its platform to increase user comfort, loyalty, and commitment.

Financing trades is a service most auctions and e-commerce sites are offering to their users. The platform works with financial institutions as partners who pay sellers while

buyers' funds are being cleared. This service keeps sellers happy because they get their money quickly and the company is able to get a small fee which is shared with the financial institutional partners. HitchPin needs to increase this service and make it superior to what its competitors are offering. The effectiveness of the financing is supported by the automation of invoicing. Therefore, as soon as a sale closes, an invoice is generated for the buyer and the seller gets paid as the buyer's funds are being cleared through the system. The completion of the sale and settlement finalizes the transaction. The more efficacious these are, the greater the likelihood of buyers and sellers becoming frequent users and loyal customers. And from the look of things, these nine critical success factors are "entry requirements" to effectively play in this e-ecommerce space.

Given the suggestion that HitchPin focuses on the farmers with less than 100 head of cattle, who also account for nearly 88% of all cattle farms in the country, there is an opportunity for the company to produce value innovation that its competitors focusing on the traditional large producers are unable to do. These activities define the strategy canvas for HitchPin. They include unmatched customer support on all aspects of the exchange. It includes facilitating their registration as a user of the site and training them in using the site effectively. Online video training may be used to achieve this outcome so that the user can train at their own pace.

HitchPin could also help these small farmers prepare their products for proper presentation online. A visit to eBay or Facebook shows people trying to sell things with very poor presentations. Pictures are poorly taken and often too amateurish. Size and lack of knowledge do not only affect the seller who does not prepare and present their product well. They have adverse effects on the brand of the platform. Therefore, it is imperative

that HitchPin explore technologies that allow their often older and smaller farmers to prepare and present products professionally. It could begin considering the possibility of adapting apps that the eyeglasses and some online clothing companies have been deploying to help their customers get the right measurements. Not only would the deployment of such technology improve the information value about products on the platform, but it will improve the professionalism of the offerings. Furthermore, the apps could provide some degree of entry barrier for competitors. However, for this to happen, HitchPin must pursue intellectual property protections that ensure the innovative content of their apps used in preparing and presenting products are effectively protected.

Finally, HitchPin can separate itself from its competitors by providing the deal completion service. It is not suggested that HitchPin takes on the logistics services. Rather, it arranges with delivery service companies across the country, the same way it has done with bankers, who would provide these services. It could explore the effectiveness of Amazon's Prime services and see if cattle (and related products) can be delivered at the same speed.

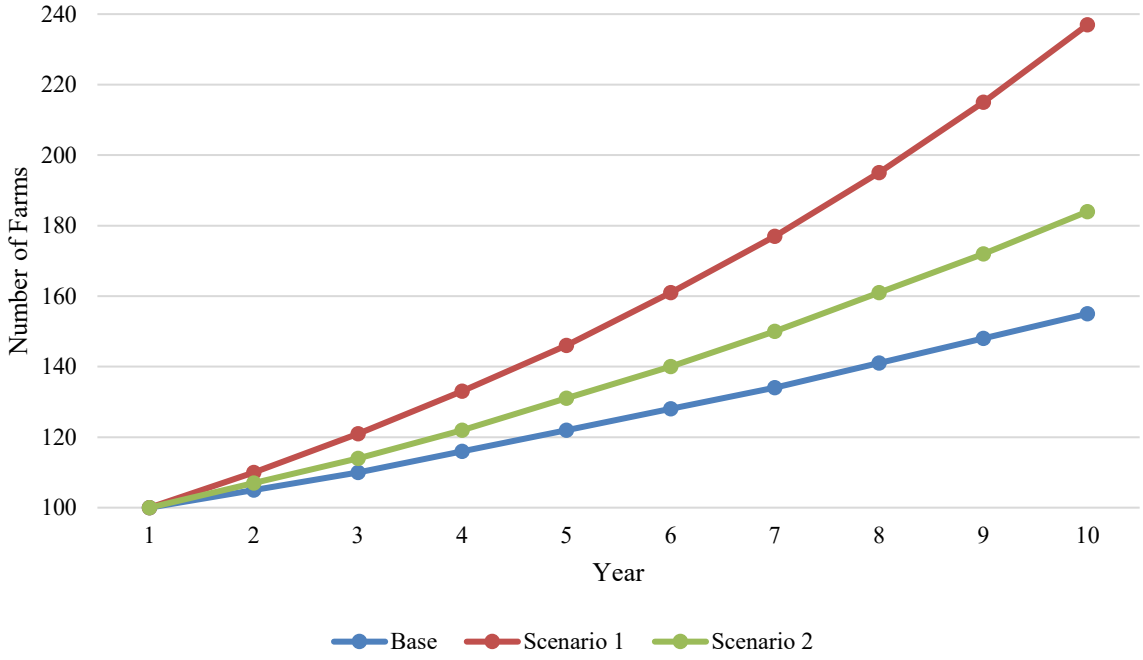
In the end, HitchPin's blue ocean strategy separates it from the market because it chooses to focus on customers with the most need and time constraints. It empowers these customers to access the market and perform at similar or better levels as the large ranchers. Furthermore, since the platform expands the market reach of these customers, HitchPin might be able to offer these small ranchers it has determined as its focus customers significant value that they cannot get anywhere else. The presentation of these services that elevate the customer is HitchPin's value innovation.

Let us illustrate the potential impact of pursuing the blue ocean strategy presented. Assume a base year condition in which the company has only 100 small producers selling 50 head of cattle per year, that will be equivalent to 5,000 head of cattle per year. This is equivalent to 0.01% of the farms with less than 100 head of cattle, and the number of cattle sold will be equivalent to 0.07%. Let us assume that poor preparation and presentation of cattle for sale (poor picture, inadequate stories, etc.) causes the price to be $2,000/head and selling cost (exchange fees, arrangement of logistics, etc.) to be 10% of the price. Assume the number of farmers joining the service increases at a modest 5% per year over 10 years. In addition, consider two scenarios with different growth rates, higher prices because of superior presentations and preparations, and a lower cost of sales. The assumptions for the scenarios are presented in Table 4.1. The trend in the number of cattle farmer customers for HitchPin is presented in Figure . It shows that at growth rates of 5%, 10%, and 7%, farmer numbers starting at 100 farmers reach 155, 237, and 184, respectively, over 10 years.

Table 4.1: Alternative Scenarios and Associated Assumptions and the Summary Statistics of Net Profit

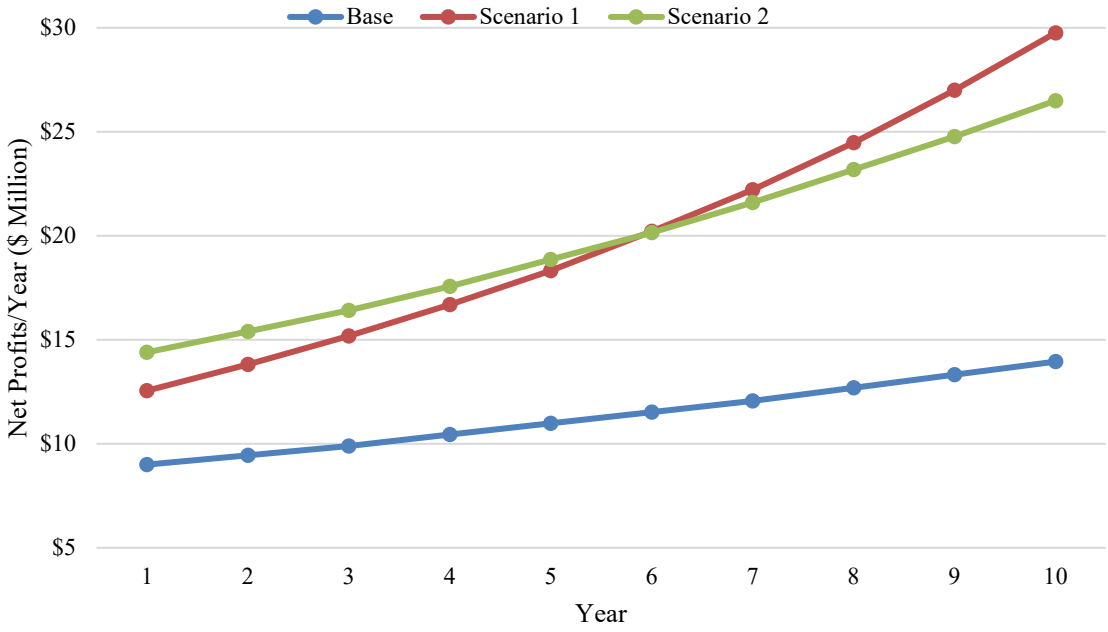
Changing Variables	**Base Scenario**	**Scenario 1**	**Scenario 2**
Farmer customer growth rate	5%	10%	7%
Cattle Price/head	$2,000	$2,700	$3,000
Cost of Sale	10%	7%	4%
NPV Summary Statistics			
Mean	$11,331,000	$20,025,225	$19,886,400
Standard Deviation	$1,672,187	$5,770,522	$4,082,794
Minimum	$9,000,000	$12,555,000	$14,400,000
Maximum	$13,950,000	$29,755,350	$26,496,000

Figure 4.5: Trend in Number of HitchPin's Cattle Farmer Customers by Scenarios



The net profit associated with each of the three scenarios is presented in Figure 4.5. The results show that net profit under the Base Scenario grows at an average rate of 4.9% per annum, from $9 million to $13.95 million. Under Scenario 1, the net profits increase from about $12.6 million to $29.8 million, growing at an average annual rate of 9.5% while Scenario 2 presents an annual growth rate of net profit of 6.8%, increasing from $14.4 million to about $26.5 million over 10 years. The net present value, assuming the software and services development and delivery cost is $1 million and a discount rate of 7.5%, were estimated $74,549,286, $128,865,890, and $130,093,445 for the Base, Scenario 1, and Scenario 2, respectively. The results are presented in Table 4.1. While the mean NPV of both Scenarios 1 and 2 differed from that of the Base Scenario ($t = |4.58|$; $p < 0.0002$), the difference between the NPVs for Scenario 1 and Scenario 2 were not statistically significant.

Figure 4.6: Trend in Net Profits Under Alternative Scenarios



The results of the foregoing simulations indicate that undertaking investments in the Blue Ocean Strategy produces superior results to operating in the read ocean. It will, therefore, be profitable for HitchPin to work towards developing value proposition that separates it from the competition.

CHAPTER V: SUMMARY AND CONCLUSIONS

This chapter provides the summary and conclusions emanating from the research. It also identifies some of the study's weaknesses and provides ameliorative suggestions for future work in this area.

5.1 Summary

The study set out to discover a blue ocean strategy for HitchPin, an e-commerce solution for agricultural commodities. The study reviewed the evolution of e-commerce and its relevance to agriculture. The review indicated that the increase in automation of selling and buying activities on the internet has opened up opportunities for a wide variety of market stakeholders to transact with people they would otherwise never have encountered. The review showed that more than 80% of U.S. cattle farms were small, having less than 100 head of cattle. This observation provides a window for HitchPin to look beyond the current boundary defined by the industry, i.e., large cattle ranchers. We estimated that having access to less than 1% of this market, where they sell only 50 heads could be profitable with the appropriate value innovation.

We simulated the net profit under three scenario – Base, Scenario 1, and Scenario 2 – each exhibiting a different growth rate in market size and service cost after value innovation has been implemented. The results showed that the NPV were respectively $75.5 million, $128.9 million, and $130.1 million. The results showed that the two scenarios with value innovation under blue ocean strategy differed statistically from the base scenario when there was no value innovation. The results support HitchPin making the appropriate investments in carefully selecting a group of farmers who will understand the value proposition it is making and will be willing to reward the company with loyalty and consistent sales and use of the company's services.

5.2 Conclusion

The overall objective of the research was to develop a value innovation strategy for HitchPin. The study successfully develops a value innovation strategy for HitchPin, which calls for it to move into a blue ocean space by focusing attention on small producers with less than 100 head of cattle per year. This focus will reduce servicing costs significantly, especially since our analysis showed that the company does not need more than 300 farmers to post a positive net present value.

5.3 Limitations of the Study and Future Research Suggestions

This study suffered a number of limitations. The most critical thing was that it did not have traffic information on which to base the simulations of the blue ocean strategy. It is suggested that the company undertakes a careful analysis of its current traffic of customers and develop a clear appreciation of their characteristics. This will confirm the focus on small farmers as the target customer group for the blue ocean strategy. Next, the study did not recognize the ancillary benefits from implementation of a blue ocean strategy. In other words, the actual representative trades and prices may be used instead of the assumptions we used in this study.

WORK CITED

Al-Surmi, A, M. Bashiri, and I. Koliousis. 2022. "AI based decision making: combining strategies to improve operational performance." *International Journal of Production Research* 4464-4486. doi: https://doi.org/10.1080/00207543.2021.1966540.

Baird, Nikki. 2015. "Best Buy and the birth of customer centricity." *Essential Retail.*

Coopersmith, J. 2003. "Technological Obsolescence." *NAE Perspectives* (National Academies of Engineering).

Coppola, D. 2024. *Number of Amazon Prime members in the United States from 1st quarter 2016 to 1st quarter 2024.* 10 14. Accessed 3 21, 2025. https://www.statista.com/statistics/1223385/amazon-prime-subscribers-in-the-united-states/.

History.com Editors. 2020. *World Wide Web (WWW) launches in the public domain.* 3 30. Accessed 3 21, 2025. https://www.history.com/this-day-in-history/April-30/world-wide-web-launches-in-public-domain.

Kim, W.C., and R. Mauborgne. 2004. *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant.* Cambridge, MA: Harvard Business Review Press.

Lewis, P.H. 1994. "Attention Shoppers: Internet is Open." *New York Times*, August 12.

Mahoney, J.T., and J.R. Pandian. 1992. "The Resource-Based View Within the Conversation of Strategic Management." *Strategic Management Journal* 15 (5): 363-380.

Parris, D.L., A. Bouchet, J.J. Peachey, and D. Arnold. 2016. "Change is hard: overcoming barriers to service innovation." *Journal of Services Marketing.*

Prachi, K., and V.K. Nigam. 2023. "Evolution of E-Commerce Industry; A Brief History of Evolution of E-Commerce." *Journal of emerging Technologies and Innovative Research* 10 (4): 1660-1667.

Shaikh, A.A. 2024. *Blockchain, Metaverse, and Digital Payments: A Global Digital Consumer Perspective.* London, UK: Routledge.

Viacom International Inc. v. YouTube, Inc. 2012. 676 F.3d 19 (2nd Cir., 2012) (United States Court of Appeals for the Second Circuit, 4 5).

Xockets Inc. v. NVIDIA Corp. et al. 2024. 6:24-cv-453 (W.D. Tex, 9 5).