

**Price information channel preferences: A case  
study of composite feed companies**

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B.S., Iowa State University, 2015

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A THESIS

Submitted in partial fulfillment of the requirements

for the degree

**MASTER OF AGRIBUSINESS**

Department of Agricultural Economics

College of Agriculture

**KANSAS STATE UNIVERSITY**

Manhattan, Kansas

2023

Approved by:

Major Professor  
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## ABSTRACT

This research focused on composite feed companies' price communication preferences. It sought to determine the extent to which the timeliness, accessibility, and relevancy of the channel influenced preferences. Also, it sought to assess if the type of business operated by feed companies also influenced their channel preference.

The study used primary data collected from feed companies across the United States using an electronic survey instrument served on Qualtrics®. Of the 978 who were invited to anonymously participate, 646 or 66% opened the email and 156 clicked on the survey link. Of those who clicked on the survey link, 71.4% completed the survey. These 140 respondents were used in the analysis using STATA 17 S.E. A major contribution of the study was its definition of channel preference in a multichannel system. Channel preference was estimated as the product of the importance of a channel to companies and their current satisfaction with the channel. Two channels emerged as the most preferred among the 10 that were evaluated: the printed catalog and the digital catalog. Their average preference scores were, respectively, 23.82% (S.D. = 38.02%) and 22.81% (38.40%). The interquartile range (25th to 75th percentile) was 30.0 and 31.3 percent, respectively.

The feed companies fell into the following categories: regional feed mill, local feed mill, feed store/retailer, manufacturer, and a combination of these. A channel's timeliness was defined as the product of the importance of timeliness to the firm (scale 1 = unimportant to 5 = extremely important) and their assessment of how timely the price information was delivered information to them ( -1 = below average; 0 = average; and 1 = above average). Accessibility was characterized as a binary: accessible (1) or not accessible

(0). Finally, relevance was a categorical variable that took on a value of zero (not relevant), 1 (relevant), and 3 (extremely relevant).

The regression results show that a percentage point increase in timeliness increases preference for the printed catalog by about 0.24 percentage points ( $t = 2.11$ ;  $p < 0.037$ ). Choosing relevant and extremely relevant instead of not relevant increased preference for the printed catalog by 65.73 percentage points ( $t = 11.41$ ;  $p < 0.000$ ) and 56.15 percentage points ( $t = 9.35$ ;  $p < 0.000$ ). The effect of accessibility on the preference for the printed catalog was not statistically significant. For the digital version, the results show that the effect of timeliness on preferences was not statistically significant. This may be because its delivery was already considered timely. However, accessibility reduced preference for the digital catalog by about 12.32 percentage points compared to not accessible ( $p < 0.041$ ). This might be attributed to the effect of those who receive both digital and print because when this group is excluded and only those who receive digital are analyzed, accessibility is not statistically significant. In both cases, business type did not influence preferences.

Although printed and digital catalogs were the top two preferred available channels, responses were favorable for a new web-based platform over their current channel mix. About 84.21% of respondents indicated they would slightly prefer or much prefer a web-based delivery of their price information. A lower proportion of respondents (65.14%) indicated they would slightly prefer or much prefer an app-based delivery of their price information.

It is obvious from the foregoing that feed companies are content with their current communication channels and prefer multiple channels almost equally. This is confirmed by

the difference between the average preference score for printed and digital being about 1.26 percent, and it was not statistically significant. That means we are unable to reject the null hypothesis that the top two channels are equally preferred by those who prefer them. This is true for those receiving both forms of communication. Based on the results, it is recommended that a web-based channel be added to the options available. Given the proportion of companies who indicated a preference for it, it is projected that the multifunctionality of the web-based channel could reduce the preference for the print channel, and in so doing increase timeliness and accessibility without sacrificing company preferences. After a few years of presenting multichannel information delivery to the feed companies, this hypothesis may be tested.

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## ACKNOWLEDGMENTS

I am grateful for the opportunity to have gone through the MAB program, all the people that I have met along the way, and those that have made this a wonderful journey. I would especially like to thank Dr. Vincent Amanor-Boadu for challenging, guiding, and mentoring me through the thesis process. His patience and coaching are beyond appreciated. To Dr. Logan Britton and Dr. Aleksan Shanoyan, thank you for participating on my committee.

Thank you to my employer for the opportunity to not only pursue my Masters in Agricultural Business but to conduct research in an area that is mutually beneficial. With that said, I'm thankful for the survey respondents that took time out of their busy day to provide feedback. This data was essential to my thesis and provided valuable insight. To my MAB classmates, it's been wonderful getting to know you and going through courses together. I consider the experiences we've shared throughout the program a major part of what makes the Kansas State MAB so valuable.

Most of all, thank you to my family and my husband for the encouragement, and understanding. The MAB program has certainly been a major time investment, in which it would have been even more challenging to complete without their support.

## **CHAPTER I: INTRODUCTION**

### **1.1 Feed Ingredient Distribution**

Feed suppliers distribute feed ingredients, pet food, and related livestock or farm related products to feed mills and stores across the United States. These organizations serve as a link between manufacturers and feed organizations, providing value by being specialists in warehousing and logistics. Beyond removing the risk of warehousing products, feed distributors allow feed mills, and retailers the flexibility of buying smaller quantities of certain products, mixing/matching products to complete a load and overall, gives them access to a wide array of products and brands. Table 1.1 illustrates the diverse product categories frequently offered by feed ingredient distributors.

With shifting technology, industry consolidation, and overall, buying habits, suppliers want to ensure their customers continue to find them easy to do business with.

A case study approach was deemed appropriate to answer the research question and achieve the objectives. Given the specificity of this research, primary cross-sectional data were gathered surveying feed companies and analyzed using STATA. The analyses involved estimating the regression of the identified channels' preference scores as the dependent variable and the business types, relevance, accessibility, and timeliness as independent variables.

**Table 1.1: Product Categories**

Ingredients	Vitamins & Amino Acids	Trace Minerals
Wormers	Feed Medications	Feed Quality
Fats	Animal Health	Milk Replacer
Salt	Ice Melter	Minerals & Supplements
Bird Seed	Livestock Feed	Organic Feed
Show Feed & Supplements	Show Supplies	Bedding & Fresheners
Pet Food & Supplies	Rodent Control	Insect Control
Forage	Pond	Turf & Lawn
Home & Farm	Warehouse	Livestock Equipment

## CHAPTER II: LITERATURE REVIEW

### 2.1 Preferences

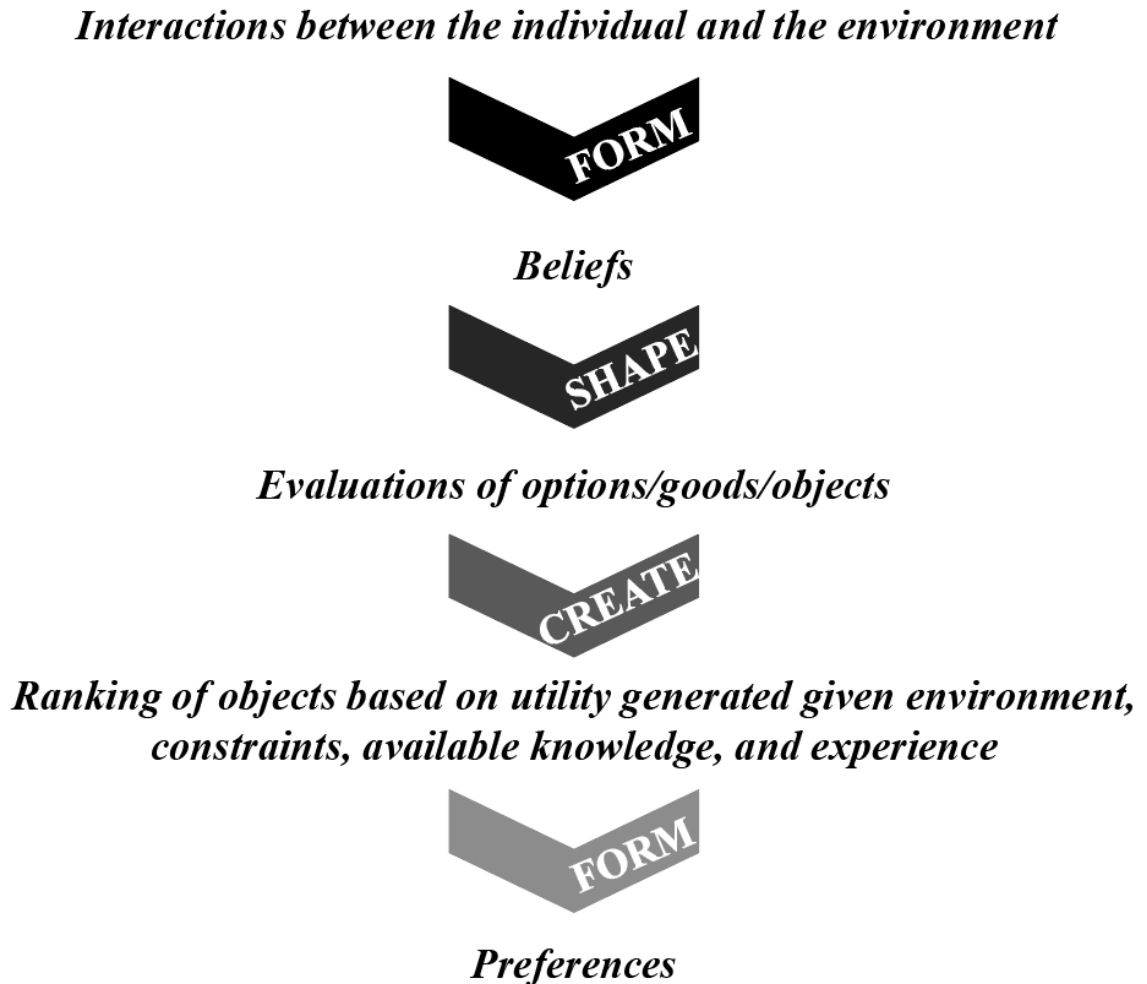
Since the research is focused on uncovering composite feed companies' communication preferences, it is key to understand what preferences are and how they are constructed. At the foundational level, Merriam-Webster defines preference as: "the act of preferring, the power or the opportunity of choosing and the act, fact or principle of giving advantages to some over others" (Merriam-Webster 2022). Druckman and Lupia provide a simplified version of preferences: "a comparative evaluation of (i.e., a ranking over) a set of objects (2000, 2). It is also useful to point out that in many cases of preference research and discussion there are a handful of terms that are substituted, for example: tastes and values (Druckman and Lupia 2000, 2).

Frequently cited in economic preference research is Stigler and Becker's metaphor from *De Gustibus Non Est Disputandum*: "...one does not argue over tastes for the same reason that one does not argue over the Rocky Mountains – both are there, will be there next year, too, and are the same to all men." (1977, 76). What does this mean? Preferences are stable and maximize an individual's utility but do not necessarily explain behavior: it is more the economic variables, like price, that influence changes (1977, 76, 89).

Further explanations of the foregoing can be found in rational choice theory. Not only are individuals going to make decisions that are in their best interest (and to the best of their ability) given the environment and known set of alternatives, but these preferences are deemed to be complete and transitive (Green 2002, 5). Rational choice theory indicates that preference selection can be described by a mathematical utility function in which consumption of the various options in question explains the total amount of good or utility received:  $U = U(x,y)$  (Green 2002, 6). For some where the mathematical approach may not

be as clear, Druckman and Lupia inspire a more visual way to interpret preference formation, see Figure 2.1.

**Figure 2.1: Visual Representation of Preference Formation**



Source: Author created based on (Druckman and Lupia 2000, 7)

While many economists position agents as stable in their preference formation, Dietrich and List argue preference making is more complex in that it is more about the agent weighing certain (not all) properties of each option based on their motivational state and if the motivational state changes based on the context, so can the preferences (2013, 616, 622). In their model, stability is more relevant to how the individual assesses alternatives but not necessarily the preferences themselves. Once again, the environment or as they

refer, context, shapes the individual's motivational state and in turn, preference formation (Dietrich and List 2013). Although they admit a model cannot necessarily identify how an individual chooses which properties to focus on in forming their preference, they agree with theories that suggest characteristics like "salience to attention, qualitative understanding, emotive response and awareness" impact differences in preferences across a population (Dietrich and List 2013, 617). Given the business-to-business context of the study, Dietrich and Lists model seems to be a more realistic fit. For example, a purchaser may prefer confirming pricing over the phone as he/she has done for years. However, he/she has taken on additional responsibilities that require working over non-traditional business hours. This environment (or context) may make characteristics of a more accessible version of pricing (catalog, e-mail or perhaps a new digital platform) more appealing in which the purchaser may shift preferences. The contextual view that Dietrich and List outlines combined with Druckman and Lupia's view that preference formation result from "a brain, body and world equilibrium" (2000, 7), provides support for considering a customized, omni-channel approach when it comes to customer communication.

## **2.2 Omnichannel Approach**

Technological advancements and global events, such as the COVID-19 pandemic, have shifted consumer's way of doing business. Alonso, Barriopedro and Pablo-Marti, recognized that if consumer preferences on doing business are changing, that these preferences would likely apply to buyers in professional settings as well (2021, 1). More generally speaking, an omnichannel approach can be defined as "a strategy that seeks to provide a seamless and improved experience regardless of the purchase phase and the channel the customer is using or customer journey" (Alonso, Pablo-Marti and Nunez 2021,

1). Despite larger volume transactions in business-to-business (B2B) industries, most omnichannel research has been focused on business to end-user firms (B2C); “Omnichannel Management in B2B Context: Concept, Research Agenda and Bibliometric Review” looks at the current literature on this topic and calls for more research on the B2B front when it comes to the omnichannel approach (Alonso, Pablo-Marti and Nunez 2021). Just as the objectives of this research aim to identify the most preferred price communication channels and to segment firms based on those preferences, Alonso et al, specifically identify the need for exploration into the concept of “purchase experience or Procurement Officer Experience” (2021, 8). This “Procurement Officer Experience” or as they also proposed, PX (Procurement eXperience), is to B2B as customer journey is to B2C; essentially, research into the concept of characterizing the buyers in the business setting with the focus on providing a tailored experience would help build and select appropriate tools and processes (Alonso, Pablo-Marti and Nunez 2021, 8). The notion of tailoring the way of doing business to purchasers’ preferences provides the foundation for the research of uncovering companies’ communication preferences. Furthermore, the diversity of business types and even the diversity of roles the buyers at the individual level play, support this approach as well.

Pawlowski and Pastuszak (2016) evaluated B2B buyer behavior through literature review to not only understand their preferences but to draw on similarities they share with retail consumers. They note the generational shift of both purchasers and managers are impacting buying procedures, and more specifically, how the business environment is perceived; millennials are taking on more positions 34% versus 29% of baby boomers (Pawlowski and Pastuszak 2016, 22). The notion that the millennial generation prefers to

transact business like they would when they are wearing their consumer hat (Pawlowski and Pastuszak 2016, 21-22, 32), once again points to the importance of an omnichannel approach. As cited within “B2B Customers Buying Behavior”, Rukowski and Gorazda define omnichannel as “a solution related to technology and strategy, which involved the synergy of online and traditional sales” (Pawlowski and Pastuszak 2016, 26). In essence, regardless of how the buyer prefers to do business they can achieve the same customer experience. Pawlowski and Pastuszak go on to cite a 2015 E-Commerce Poland report on the perception of B2B e-commerce; this research shows online tools have changed communication methods with customers and indicated e-commerce was a key channel for business purposes (2016, 29). This research also uncovered those shifting preferences of digital tools in the B2B landscape, does not negate traditional channels and supports the need for the mixed, omnichannel approach: response time, professional service and personal relationships were still named as the most important factors in post-sale experience (Pawlowski and Pastuszak 2016).

### **2.3 Generational Impact**

Often, when there is a change in society, the differences or shift is chalked up to a new generation’s perspective or approach. Stigler and Becker (1977) provide a bit of insight into this. When change occurs, young people are more adaptable than older generations, even if they share the same preferences and motivation; primarily because they are not caught up in all of the time and knowledge that older people have accumulated that they have to let go in order to adapt (1977, 83). However, Druckman and Lupia do point out there is no such thing as a “new” preference but more so, any changes are deviations or modifications of earlier preferences (2000, 7). As mentioned in the previous section, Pawlowski and Pastuszak note Millennial's preferences differ in how they do businesses



versus the previous generation and that the generational make-up in today's workforce is driving change (Pawlowski and Pastuszek 2016). From a communication perspective, Wen et al. studied the preferred methods between Generation X and Generation Y (Selecting Communication Media in a Multi-generational Workplace 2010). Although the focus of Wen et al. is framed more from a manager's perspective on dealing with various employees, the aim of this research is to make it easy for feed companies to receive pricing information, regardless of the generation making the purchasing decisions. To uncover communication channel preferences for Generation X and Generation Y within the workplace, Wen, et al deployed an online questionnaire that covered three main areas: awareness in selection of media, perceived usefulness, and ease of use (Wen, et al. 2010). Overall, there were few differences in communication preferences between the two generations. However, the conclusion that communication tools and systems should be easy to operate and be perceived as useful still applies across all types of channels, and environments (Wen, et al. 2010). This finding combined with the fact Wen et al's research is on the individual level, begs the following question: does the B2B and firm environment that this research is evaluating eclipse any suspected generational bias?

Despite some communication-based preferences tied to generations, given the nature of the feed companies, generational influence is not a useful variable or characteristic to build a model around. We can understand that different generations prefer to receive information through different channels, but the age of the purchaser at a firm may not be constant. This does not discount that the relationship with the person is of the utmost importance, but in trying to identify the firm's characteristics and its preferences would provide more stability in the segmentation. Beyond this, the products and services

feed companies offer have no generational bias or influence. This variable has no impact on the feed products purchased; regardless of the age of the buyer, the firm will need ingredients to produce a complete livestock feed or to provide products demanded by the end user. Lastly, the need for information, especially pricing, does not change based on who is in the procurement seat.

#### **2.4 A General Model for Understanding Organizational Buying Behavior**

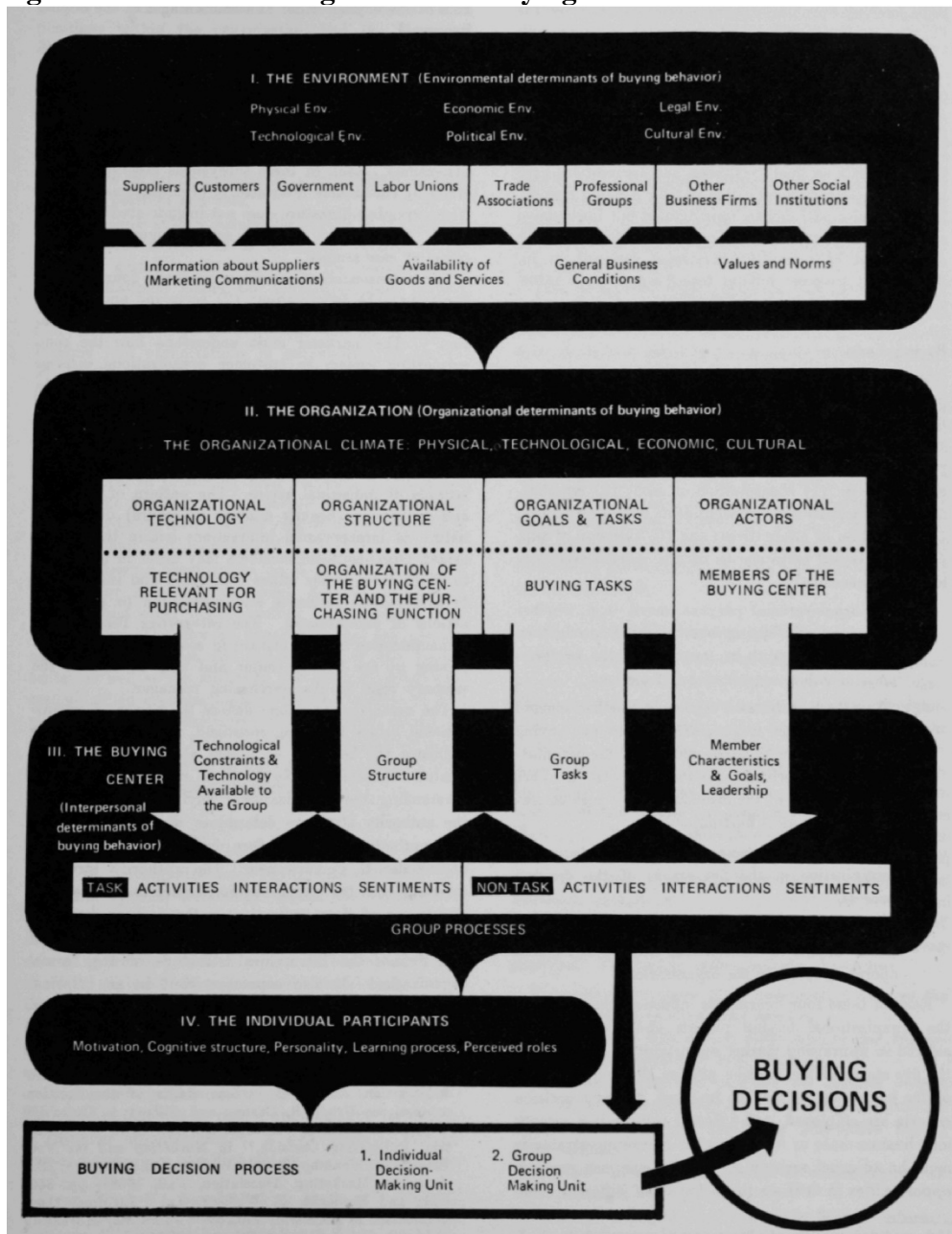
Even if the generation of a buyer has influence in how they conduct business and how they prefer to receive information, as many researchers previously cited (Druckman and Lupia, Stigler and Becker, Dietrich and List) have attested, there are significantly more variables that impact preference formation. Webster and Wind's framework sheds light on this from the B2B lens. In "A General Model for Understanding Organizational Buying Behavior", Webster and Wind acknowledge that buyers in the B2B context behave differently than traditional consumers, particularly, since more people are often involved, and organizational factors come into play (12). As such, they established a generic framework to comprehend buyer behavior in a business setting to acknowledge the unique challenges this environment presents. Webster and Wind's model is a blend of traditional theories like the materials management model where the objective is to get the lowest price and non-task models that focus on the individuals' own motivations (1972, 13). To address the complexity that revolves around buying in a business context, the authors identified four types of variables (individual, social, organizational, and environmental) that influence buyer behavior and two categories within each type (task and non-task) (Webster and Wind 1972, 13). Task-based motives point directly to the problem the buying solves whereas non-task variables can be broken into achievement and risk-reduction motives (Webster and Wind 1972, 13). As illustrated in figure 2.2, environmental factors flow into

organizational elements of behavior, then into the social arena-also known as the buying center, which funnels to the individual level where personal elements are factored in and lastly, decision making on both the individual and group unit level occur to activate the buying decision (Webster and Wind 1972, 15).

This model is helpful in visualizing the complexities and variables that influence a purchaser, and ultimately a buying decision in a business context. As such, this provides a good framework for evaluating the potential variables that could not only impact feed companies' communication preferences but ultimately their purchasing decision. The overarching objective of this research is to understand how various company types want to receive their pricing communication, which falls in the environment stage (first, upper most tier). Stage two (organizational influence) says elements of the firm impact how a purchaser acts versus how they would perform as an individual (Webster and Wind, 14). The dimensions of communication being studied (accessibility, relevance, and timeliness) span across this organizational level as well as the buying center (three) and at the individual level (four). Although this model illustrates all of the variables that can influence a corporate buyer, their own intrinsic factors and preferences still come into play. Once again, this element not only supports a segmented communication strategy but also reinforces the need for an omnichannel approach.

In essence, the proposed research model follows the Webster-Wind model in the manner of capturing the relationship between the organizational stage two and three with individuals' preferences in stage four all to create more impactful communication channels that will feed back into the environmental, stage one.

**Figure 2.2: Model for Organizational Buying Behavior**



Source: (Webster and Wind 1972)

## CHAPTER III: METHODS AND MODELS

This chapter presents the methods and the model used to assess the data collected for addressing the research objectives. The chapter is organized into three sections covering the methods, hypotheses, and the analytical model.

### 3.1 Methods

Given the specificity of the problem, that is, understanding feed companies' preferences for current communication channels used to receive price information, a case study approach was deemed appropriate for the study. Intrinsic case studies, also referred to as naturalistic methods, are used to deeply understand unique and complex occurrences in their natural environment (Crowe, et al. 2011, 1). As such, gathering primary, cross-sectional data from feed companies across the United States is the focus of data collection. These firms can be categorized into four primary categories: multi-location, regional feed mills, local feed mills, feed store/retailer, and manufacturer.

Frequently used in preference research, an adaptive conjoint analysis approach was used in building the survey instrument. Conjoint analysis is used to understand how people value different traits/features/attributes of a good or service (Stobierski 2020). Just as the name implies, the respondents are shown different questions depending on how they answer certain questions; this is particularly helpful in simplifying the survey instrument and extracting the most value (Stobierski 2020). Although adaptive survey instruments can be seamlessly constructed digitally in programs like Qualtrics, this methodology is more challenging to execute from the traditional printed questionnaire perspective. That is, a printed version would display all question variations regardless of the respondent's answers making for a clunky, and cumbersome experience, not to mention costly to deploy via mail. This realization led to a deep dive of the feed company database.

Initially, of the 1,297 firms receiving some form of communication, 64% had emails on file. Being mindful of and wanting to eliminate as much channel bias as possible, a discussion was held with sales staff to uncover why some companies did not have emails on file. As a result, the following assumptions are being held:

1. Most firms without email addresses on file are the result of an administrative issue. That is, it's a matter of emails not being collected and documented appropriately. In discussions with the sales staff, additional emails were uncovered, supporting the assumption firm data isn't always documented correctly and/or in a centralized location. These discussions led to more emails being collected, increasing companies with email addresses from 64% to 75%.
2. It has been identified that there are some feed companies, like Amish-owned firms, that don't have emails, or access to digital technology at all.

Although most firms have emails documented, to eliminate any potential for channel bias while maintaining an adaptive conjoint analysis approach, a QR code that linked to the survey was included in the February 2023 printed catalog. There is acknowledgement that this gives firms the chance to fill out the survey more than one time, however, given the approximate fifteen-minute completion time, this is not considered to be very likely, thus, not a high risk.

To achieve the research objectives, the survey was broken out into three different sections: company characteristics (Questions 1 through 17), channel selection and communication dimensions (Questions 18 through 39) and appetite for a new, enhanced digital platform (Questions 40 through 42). With the adaptive nature of the questionnaire, the number of questions ranged from 32 to 38 with types ranging from binary selection to

quantitative and qualitative Likert scales. Throughout the instrument, companies are given the option to provide their own answers as well, providing additional insight into options and opportunities not identified. The online survey, built using the Qualtrics platform, was piloted to 43 feed companies, and the results were used to improve the questionnaire. The final survey instrument was then distributed to 978 feed companies via email; this survey was left open for two weeks. For the accounts that did not open the initial email, a reminder email was sent six days later. Overall, the email campaign had a 66% open rate with 156 people clicking the survey link. Of those who clicked the survey link, 71.4% completed the survey for a total of 140 responses.

Once the survey closed, the data was downloaded to Excel and then imported into STATA to start the analysis. Given many questions had open-ended components to them (i.e., giving the respondent a chance to type their own answer if they weren't satisfied with the options listed), these instances were thoroughly evaluated to identify any commonalities with the structured options presented. For example, when asking what type of business the firm represented, some respondents selected "other", and opted to describe their business. Most of these self-descriptions fell under the established business type classifications, and the data set was adjusted to reflect that.

### **3.2 Hypotheses**

Once again, to segment companies based on their communication objectives (Objective 3) and to develop an appropriate communication strategy (Objective 4), the first two objectives need to be addressed: (1) identify feed companies' preferred communication channel, and (2) understand how three dimensions of information affect channel preference. Discussing the hypotheses related to objectives one and two, requires a consideration of the four business types, i.e., regional multi-location feed mill, local feed

mill, feed store/retailer, and manufacturer. Companies with multiple business types were allowed to indicate this, leading to the creation of combinations of the four business types to match the options selected. For example, a respondent may select local feed mill and retail store and manufacturer. It was hypothesized that preferences did not differ across business types. In other words, the type of business operated by the firm was independent of their channel preference.

Price information for feed companies were defined across three dimensions. *Accessibility* was defined as the ease of finding information. *Relevancy* was the usefulness of information in making decisions. Lastly, *timeliness* was defined as having the information when it was needed. The timeliness dimension was developed from two questions. (1) How important timeliness of information was to a respondent. For example, ingredient buyers may value timeliness more than equipment buyers because of the different frequency and the planning horizon required to make both decisions. Because ingredient buyers purchase frequently, their window of deliberation is small, making timeliness very important. Importance of timeliness was coded on a scale of 1 (not important) to 5 (very important). (2) How they rated the performance on their supplier getting information to them in a timely manner. They could score their supplier on the following scale: below average performance (-1), average (0), and above average (1). A timeliness index was developed as a product of the two questions' results and indexed to 100.

Channel preference was defined by firms' rating of their satisfaction and importance of each of their selected channels. It was estimated as the product of the importance of a channel to companies and their current satisfaction with the channel. If



they receive their information through a single channel, then they are excluded from the preference scoring. Thus, only firms receiving information through more than one channel received preference scores. It was hypothesized that price communication channel preference is a function of company characteristics and information dimensions.

### 3.3 Model

The variables of importance in this research are the different channels used for distributing information to customers. They are summarized in Table 3.1. They show print and digital catalogs, in and outbound telephone calls, email and text messages. The final is traditional salespeople visits to clients. Respondents were asked to select all options that applied to them.

**Table 3.1: Alternative Channels Currently Used for Price Information**

	Channels
1	Printed catalog
2	Digital catalog
3	Phone call to supplier
4	Phone call from supplier
5	Email from supplier
6	Text message from supplier
7	Text message to supplier
8	Email to supplier
9	Visit from supplier staff
10	Other

The extent to which the dimensions of the channels explain people's preferences for those channels is explored using a linear regression model executed with Stata 17. The model is specified as follows:

$$y_{ik} = a_0 + a_1 t_i + a_2 r_i + a_3 q_i + \sum_{j=1}^4 a_j b_{ij} + a_5 s_i + \varepsilon_i \quad \forall k = 1, 2, \dots, 10 \quad (0.1)$$

Where  $y$  is the preference score for each channel and respondent,  $t$  is timeliness,  $r$  is relevance,  $q$  is accessibility,  $s$  is the number of businesses the respondent runs, and  $b$  is

business types the respondent is involved in. The subscript  $i$  is the individual respondents,  $k$  is the different channels, and  $j$  is the alternative business types and the Greek letter epsilon,  $\varepsilon$ , is the error term. The alternative hypotheses are presented in Table 3.2. For example, the table, based on a priori expectations from Equation 3.1, the null hypothesis for business types is stated as  $a_{4j} = a_{40} \quad \forall j \neq 0$ . The alternative is that  $a_{4j} \neq a_{40}$ . The null hypothesis for relevance states that the coefficient is equal zero, indicating that there is no statistical significance difference between relevant and not relevant on their effect on preference for the different channels.

**Table 3.2: A Priori Expectations for Information Dimensions by Channel**

Channel	Timeliness	Relevance	Accessibility
Printed catalog	+	+	+
Digital catalog	0	+	0
Phone call to supplier	0	+	-
Phone call from supplier	0	?	0
Email from supplier	0	?	0
Text message from supplier	0	?	0
Text message to supplier	0	?	0
Email to supplier	0	?	0
Visit from suppliers' staff	0	?	0

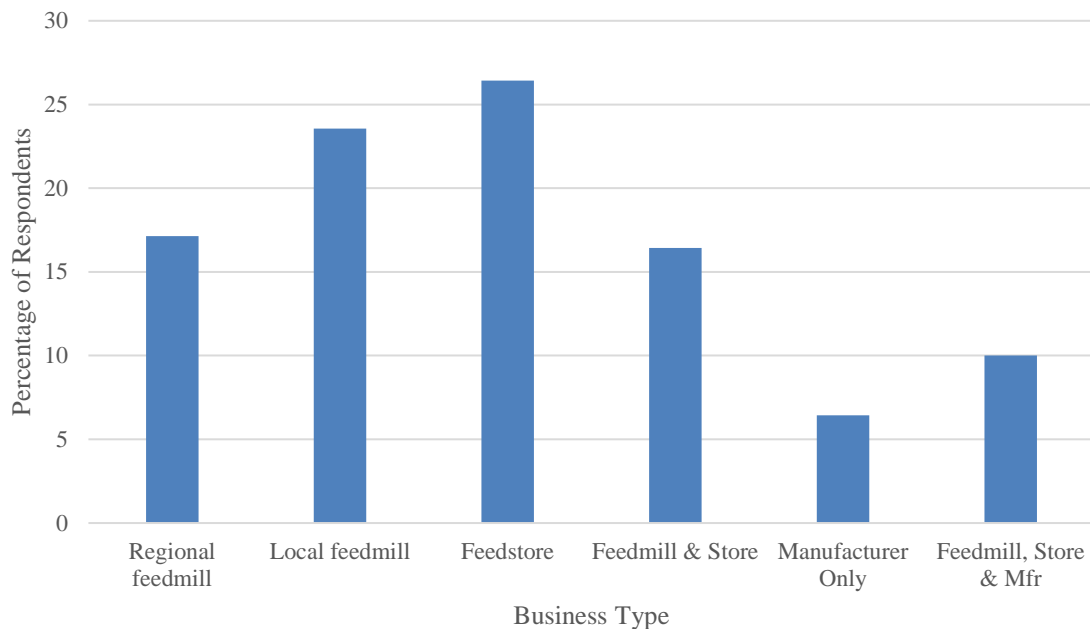
## CHAPTER IV: RESULTS AND DISCUSSION

The results of the analyses and their discussions are presented in this chapter. The first section of the chapter presents the summary statistics of the data collected for the research. The remaining six sections present the results addressing the specific objectives of the study. The final section covers the discussion of the results emanating from the analyses.

### 4.1 Summary Statistics

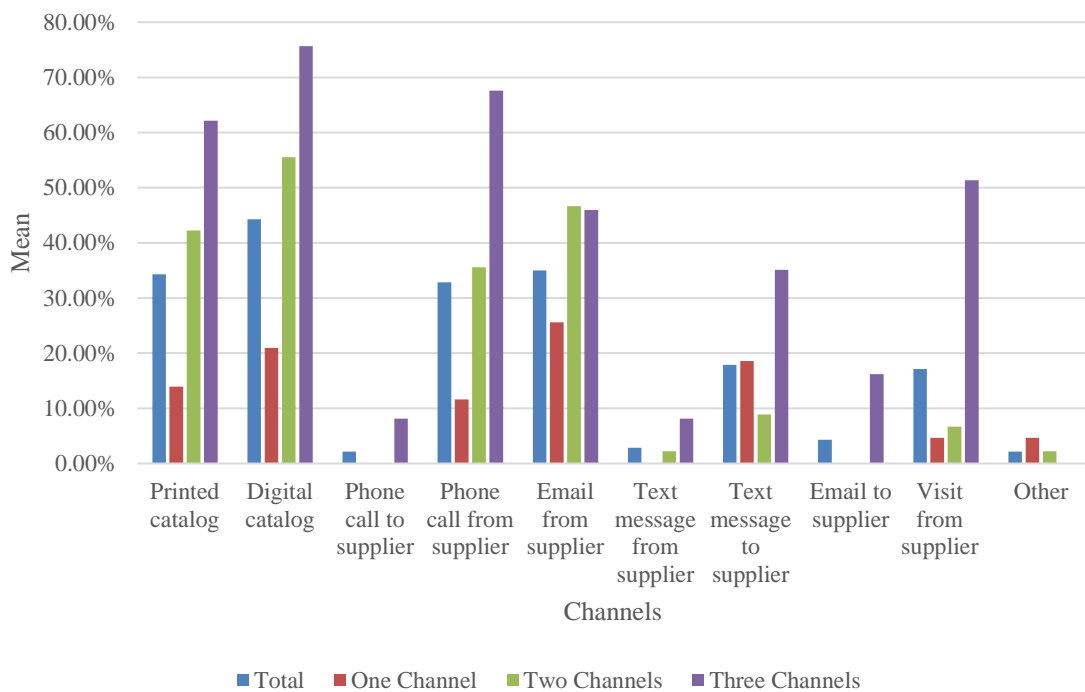
As previously mentioned in Chapter 3.1, the survey of feed companies resulted in a 140 respondents. Of those 140, 17.14% were regional feed mills, 23.57% local feed mills, 26.43% feed stores/retailer, 6.43% manufacturers, 16.43% regional/local feed mills and stores, 10% regional/local feed mills, store and manufacturer. Figure 4.1 showcases the respondent business type distribution.

**Figure 4.1: Respondents by Business Type**



To get a feel of how the sample currently receives information, Figure 4.2 showcases the total distribution of channels, as well as what mode is being used based on the number of channels they receive. The most frequently used channel for the entire sample was the digital catalog at 44.3%. For those who only use one channel (43 observations), it was email from their supplier at 25.58% with the digital catalog close behind at 20.93%. For firms who receive price information by two (45 observations) or three channels (37 observations) the digital catalog was selected 55.56% and 75.68% respectively.

**Figure 4.2: Current Channels by Number of Channels Selected**



#### 4.2 Firms' Preferred Price Communication Channels

Recall, the first objective of this research is to identify feed companies' preferred price communication channel. Secondly, the definitions from the literature review state that preferences are comparative in nature (Druckman and Lupia 2000, 2) that is, it is the act of

choosing or ranking one object over the other (Merriam-Webster 2022). With that said, for the firms who are only receiving information via one channel do not necessarily have a choice, or comparison for the preference formation. Therefore, the preference ranking analysis will focus on companies with two or more channels. The preference score can be defined by the ranking of importance for each channel they receive as well as their satisfaction with receiving information via that method. Importance was scored from ten to one with ten being the highest satisfaction. Channel satisfaction was categorized as zero being dissatisfied, one neither satisfied or dissatisfied and two for satisfied.

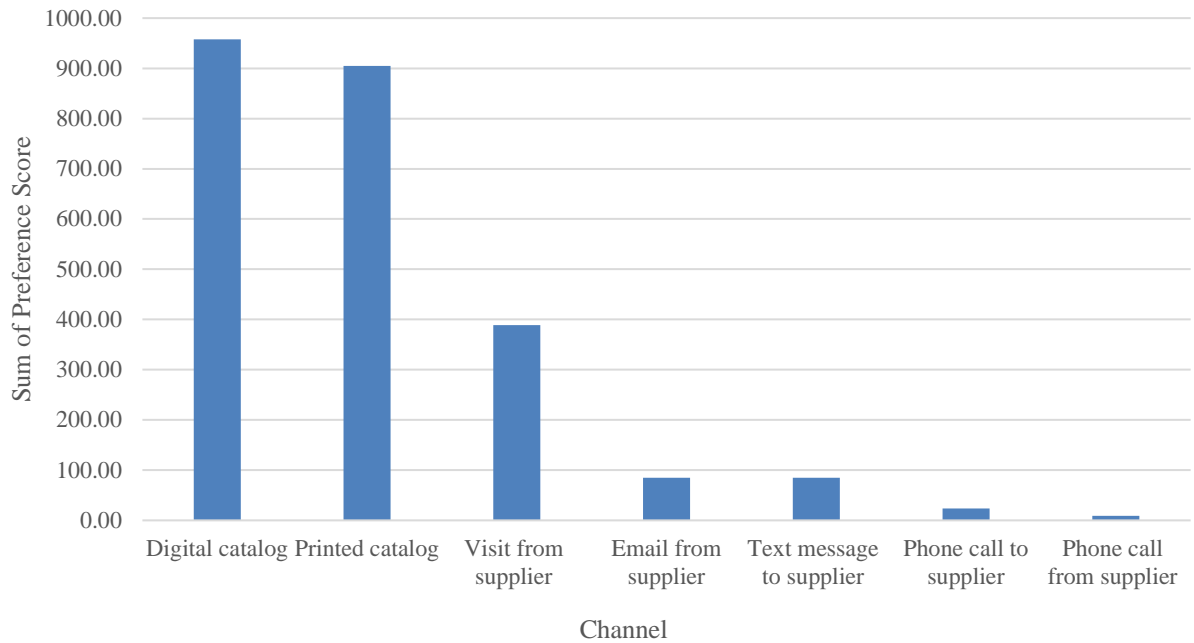
Table 4.1 presents the preference score for the whole sample for all channels for those receiving two or more channels. The channel with the higher sum of preference scores, is the most preferred channel. Out of all the channels, a digital catalog is the most preferred channel at 958 with a printed version close at 905 and lagging behind in distant third was a visit from their supplier. The difference between their preference scores (53.0) was statistically significant ( $t = 28.11$ ;  $p < 0.000$ ). The table also shows that while 38 respondents received printed catalogs with other formats, only one person used the phone to call their supplier in addition to one or more other channels to get their information.

Figure 4.3 shows the preference ranking of the alternative channels.

**Table 4.1: Channel Preference Score (Channel Satisfaction x Channel Importance)**

Channel	N	Mean	SD	Sum
Printed catalog	38	23.82	8.03	905.00
Digital catalog	42	22.81	8.76	958.00
Phone call to supplier	1	24.00	.	24.00
Phone call from supplier	2	4.50	2.12	9.00
Email from supplier	4	21.25	8.38	85.00
Text message to supplier	4	21.25	8.02	85.00
Visit from supplier	18	21.61	7.76	389.00

**Figure 4.3: Preference Ranking by Sum of Preference Score**



### **4.3 Importance of Timeliness**

As noted earlier, timeliness was scored slightly different than its communication dimension counterparts; the firms' importance ranking of timeliness was multiplied by their perception of suppliers' timeliness performance. The mean score for the adjusted timeliness variable was 11.13, with a minimum of 5 and a maximum of 15. Looking at timeliness strictly from an importance standpoint, to no surprise, 88.7% of the respondents ranked timeliness as very important to extremely important.

### **4.4 Regression Results**

#### *4.4.1 Printed Catalog Regression Results*

Table 4.2 presents the regression results for the printed catalog. They show that the model was statistically significant overall ( $F(10,111) = 24.28; p < 0.000$ ). The R-squared was estimated at 68.63%, indicating that the variability in the independent variables explain more than 68.63% of the variability in the dependent variable. The dependent variables include all respondents indicating they received the printed catalog. This includes those

who receive their information through other channels, such as the digital catalog (See Figure 4.3). The results tell us a percentage point increase in the timeliness score, will increase the preference score for the printed catalog by about 0.24 percentage points ( $t = 2.11$ ;  $p < 0.037$ ). While there is a positive coefficient on the number of businesses operated, it was not statistically significant. The results also show that there is no statistically significant difference between the preference effect of all the other business types and the reference type, regional feed mill. However, respondents selecting relevant or extremely relevant compared to those selecting not relevant increased the preference score by 65.73% points and 56.15% points; both coefficients were statistically significant at the less than 1% level. The coefficient of accessibility was not statistically significant.

**Table 4.2: Regression Results for Printed Catalog**

Preference for Print	Coefficient	Std. Err.	t	P>t	[95% conf.	interval]
Timeliness	0.24**	0.11	2.11	0.037	0.02	0.46
Number of Businesses	8.29	9.02	0.92	0.360	-9.58	26.16
Types of Business (Regional Feed Mill = 0)						
Local feed mill	4.58	7.20	0.64	0.526	-9.69	18.85
Feedstore	3.18	7.07	0.45	0.654	-10.83	17.19
Local/Regional Feed mill & Feedstore	9.82	10.84	0.91	0.367	-11.67	31.30
Manufacturer Only	-2.08	9.82	-0.21	0.833	-21.54	17.39
Feed mill Store & Manufacturer	-13.89	20.24	-0.69	0.494	-54.00	26.22
Relevance (Base = Not Relevant)						
Relevant	65.73***	5.76	11.41	0.000	54.31	77.15
Extremely Relevant	56.15***	6.01	9.35	0.000	44.25	68.06
Accessibility (Base = Not Accessible)						
Accessible	-8.15	4.94	-1.65	0.102	-17.94	1.65
Intercept	-27.82**	13.41	-2.08	0.040	-54.39	-1.26

\*\* (5% level of statistical significance); \*\*\* (1% level of statistical significance)

#### 4.4.2 Digital Catalog Regression Results

The regression results for digital catalog preference are presented in Table 4.3. The model was statistically significant ( $F(10, 111) = 10.98$ ) with an R-squared of 47.72. Unlike for the printed catalog, timeliness was not statistically significant for the digital version, and its coefficient was virtually zero. This may be because this channel is already considered timely. However, the relevance variable was as statistically significant for the preference of digital catalogs as it was for printed.

**Table 4.3: Regression Results for Digital Catalog**

Preference for Digital	Coefficient	Std. Err.	t	P>t	[95% conf.	interval]
Timeliness	-0.05	0.15	-0.33	0.744	-0.34	0.24
Number of Businesses	12.50	11.40	1.10	0.275	-10.09	35.09
Types of Business (Regional Feed Mill = 0)						
Local feed mill	12.71	9.29	1.37	0.174	-5.71	31.12
Feedstore	11.85	9.14	1.30	0.197	-6.26	29.97
Local/Regional Feed mill & Feedstore	-2.14	13.87	-0.15	0.878	-29.63	25.35
Manufacturer Only	9.83	12.35	0.80	0.428	-14.64	34.30
Feed mill store & manufacturer	-14.26	25.68	-0.56	0.580	-65.15	36.62
Relevance (Base = Not Relevant)						
Relevant	55.08***	7.11	7.75	0.000	41.00	69.16
Extremely Relevant	56.86***	7.27	7.82	0.000	42.45	71.26
Accessibility (Base = Not Accessible)						
Accessible	-12.22**	5.91	-2.07	0.041	-23.93	-0.52
Intercept	-15.63	17.68	-0.88	0.379	-50.67	19.41

\*\* (5% level of statistical significance); \*\*\* (1% level of statistical significance)

#### 4.5 Preference for a Web-based Platform

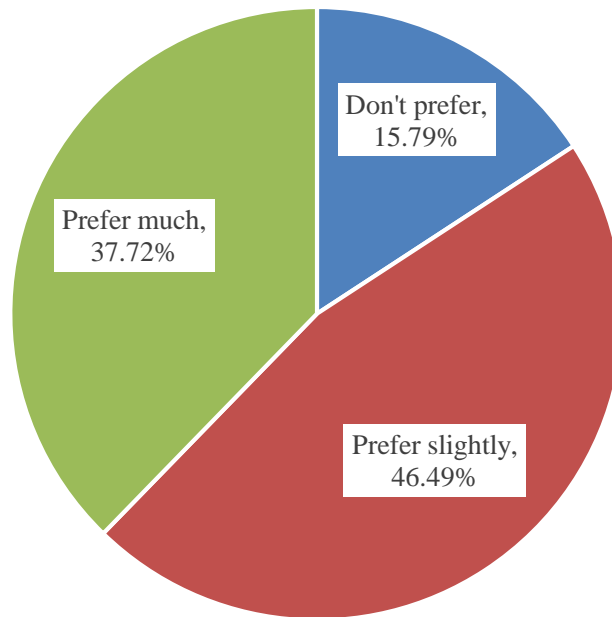
Understanding feed companies' preferences with the current communication channels is certainly helpful, but to help shape the communication strategy moving forward, it is key to uncover their openness to new mediums. The final section in the survey focuses on respondents' preference for a web-based and app-based information



system over their current channel(s). With these questions it was communicated that a web or app based platform would improve all three communication dimensions.

When asked about their preference of a web-based platform compared to their current channels, 46.49% indicated they would prefer it slightly more (Figure 4.4). However, only about 38% indicated they would much prefer the web-based platform over their current channel. Figure 4.3 illustrates the web-based preference distribution.

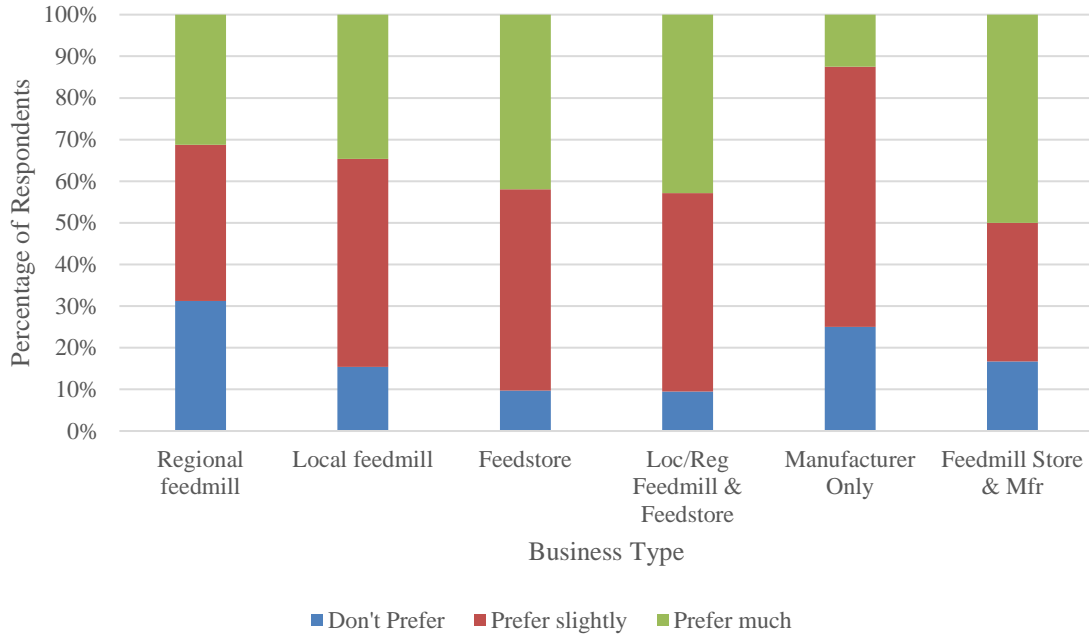
**Figure 4.4: Preference for Web-based Platform Over Current Channel(s)**



Looking at the web-based preference from a business type perspective, more than 31.2% of respondents who were operating regional feed mills indicated they did not prefer web-based platform to their current channel. Since this category of businesses purchase ingredients frequently, the relatively large proportion of respondents in the category indicating they would not prefer it was surprising. On the other hand, feed stores and retailers as well as the mix of regional/local feed mills and feedstores had the highest percentage of “slightly to much preferred” for a web-based platform over the current

channel mix at 90.33% and 90.48% respectively. Figure 4.5 summarizes the foregoing preferences.

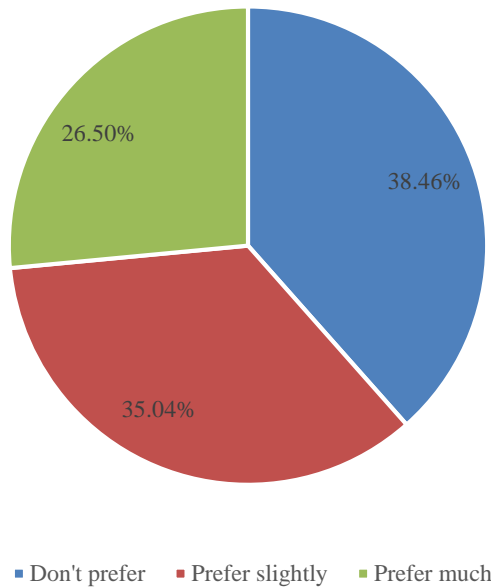
**Figure 4.5: Web-based Platform Preference by Company Type**



#### 4.6 Preference for an App Solution

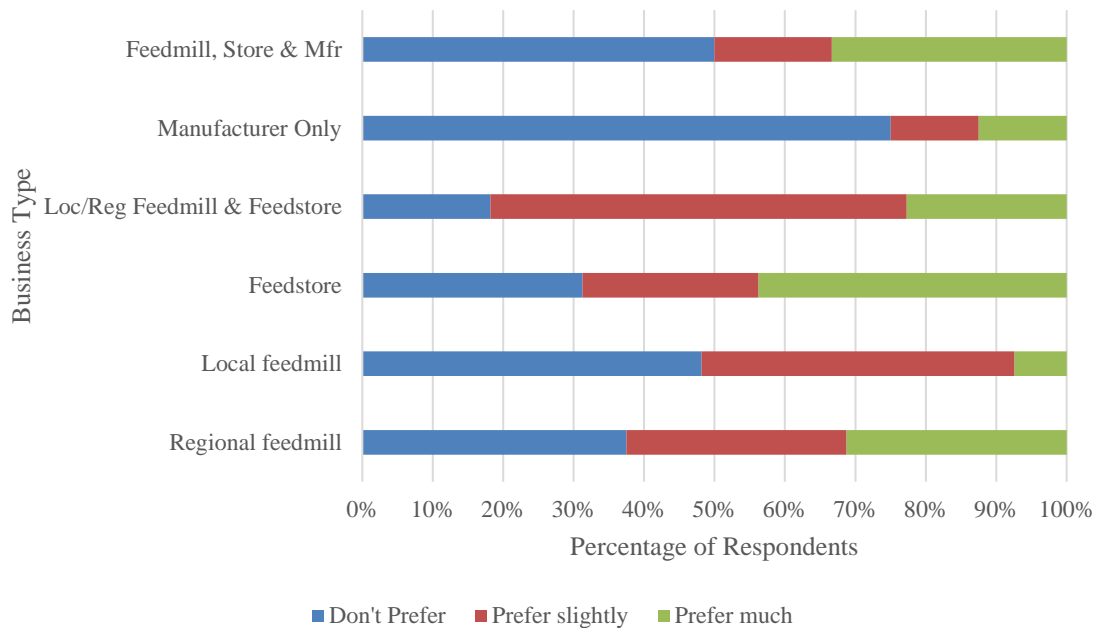
In discussions with supplier sales teams, it was uncovered that some purchasers have many responsibilities that often take them out of an office setting. Thus, a question gauging interest in a new app was included in the survey as well. Unlike the web-version, the app channel had the highest percentage of respondents say they did not prefer this over their current source of information. Figure 4.6 illustrates the breakdown of respondents' preferences. Although 61.54% selected slightly to much preferred for an app over their current channels, the openness to a web-based version was much stronger.

**Figure 4.6: Respondents' Preferences for an App Over Their Current Channel**



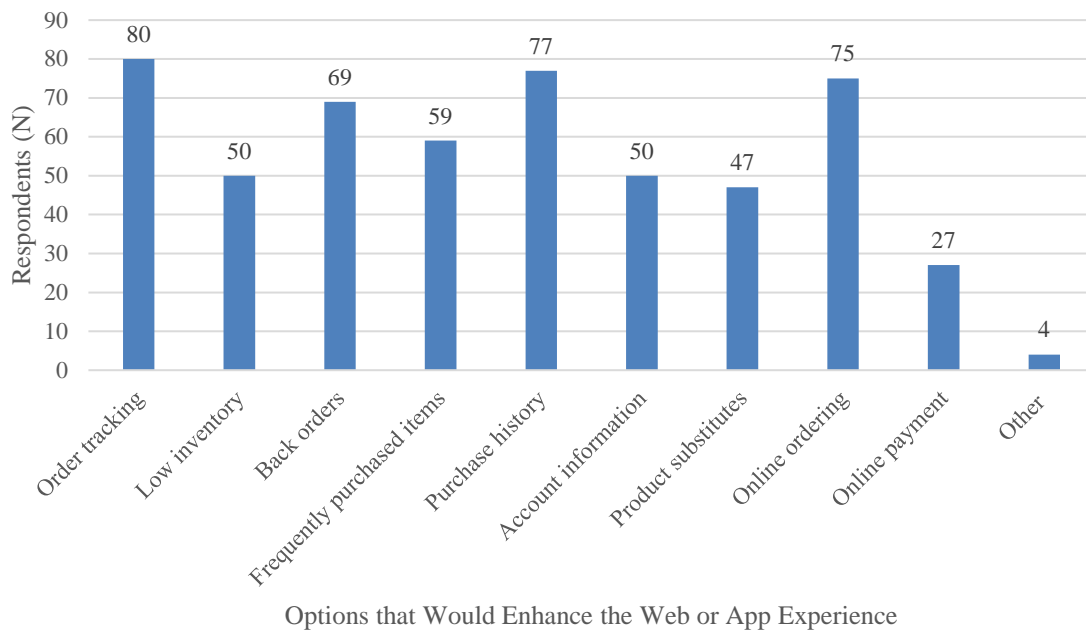
From a business type perspective, once again the regional/local feed mill and store combination had the most respondents “prefer slightly” to “prefer much” the app version at 81.82%. However, looking at just the “prefer much” respondents, feed stores had the largest response at 43.75%. On the opposite side of the spectrum, manufacturers had a large “do not prefer” response at 75%. The breakdown of varying business types app preferences are shown in Figure 4.7.

**Figure 4.7: App Preference by Business Type**



While crafting this section of the survey, the idea was that sometimes people do not know what they want or what would be useful when a tool/channel does not exist yet. Although web or app-based solutions are certainly nothing out of the ordinary in 2023, it was still important to understand what features feed companies had an appetite for. A multiple-selection question was included to gauge interest in information other than pricing that may enhance a web or app platform. As Figure 4.8 showcases, the ability to track the status of an order, access purchase history and to place orders online were the top three options. Similar to what Pawlowski and Pastuszak found in their literature review, B2B customers expect quality service, product information and tracking capabilities (2016, 30).

**Figure 4.8: Information Options to Enhance a Web or App Channel**



#### **4.7 Communication Strategy**

Among the top two channels, relevance was the common statistically significant variable in preference formation. From a commonsense perspective this is certainly understandable, but how does this shape the communication strategy since the relevance judgment can be a bit subjective? What makes one channel or information relevant to a regional feed mill may be deemed as irrelevant to a feed store yet nonetheless, it's important to all. This echoes Becker and Stigler's sentiment that there is no sense in arguing over tastes or preferences since they simply exist as do the Rocky Mountains (1977, 76). Thus, the recommended communication strategy is to continue to offer an omnichannel approach. Once again, omnichannel is defined as a synergy of online and traditional channels used to reach customers where they are or want to be (Pawlowski and Pastuszak 2016, 26).

Although the digital and printed versions of the catalog were the top two most preferred channels, the more robust, web-based platform had a high preferability response

over current channels (Figure 4.3) thus this channel should be added to the communication offering. Based off respondents' feedback (Figure 4.8), beyond pricing information this channel would be enhanced by the following features: order tracking, purchase history, online ordering, back orders, low inventory and account information. Once again, this new channel does not negate the need for current, traditional modes of communication either. Like the viewpoint of Pawlowski and Pastuszak, B2B customers still expect personalized experiences through multiple channels, including personal contact (2016, 29, 32, 33). In this research, this notion comes through with the visit from suppliers' staff being the third preferred channel as well as the large proportion of respondents who only slightly preferred a new web-based portal. It is plausible that they like the sounds of this new channel yet aren't fully committed to ditch their current channels until they have a chance to use the new tool. In the same vein, although respondents did not indicate that phone calls, texts or emails were a preferred channel for pricing information, it is suspected feed companies will still utilize these channels when they deem appropriate or fitting to their needs. Of course, there is no recommendation to eliminate these options, more so understand there is no need to make those channels more robust or to incorporate them in a formal strategy.

Overall, the multi-channel approach means keeping channel options in front of feed firms constantly, so they understand the choices they have in receiving information, especially in the new customer onboarding process. Since preferences are comparative, as the new digital platform is deployed and in use for a few years, follow-up research will need to be conducted to see if tastes will shift and if channels like the printed or digital catalog will still be preferred.

## CHAPTER V: SUMMARY

### 5.1 Summary

The purpose of this research was to understand feed companies' current channel preferences, what variables impact those preferences and understand their receptiveness for new, enhanced communication channels. These results would not only provide insight to how feed companies want to receive information but overall, drive the communication strategy. The importance can be evaluated from both suppliers' and feed companies' perspectives. Maintaining or creating new channels that improve the timeliness, accessibility and relevancy of information could allow feed companies to better make production decisions and to make the purchasing process easier. By providing information to firms in a manner they prefer and that makes their lives easier, jointly improves the supplier experience. Of course, the enhancement in the purchasing experience supports the overall goal of being the feed ingredient supplier of choice.

With the specificity of this research, a case study approach was taken. Primary data was collected from feed companies through an electronic survey instrument served on Qualtrics®. The data procured from the 140 respondents was analyzed through STATA utilizing linear regression models. The top two channels – digital catalog and printed catalog – similarly were not influenced by the number of business type combinations or the type of business themselves. Timeliness and relevancy were both statistically significant in the preference for the printed catalog whereas relevancy and accessibility were the significant variables in the preference for the digital version. With the evaluation of a web-based and app-based channel, the majority of respondents slightly to much preferred (84.21%) a web-based channel over their current method of receiving price information. The app-based version had a large group of respondents who didn't prefer an app-based

channel at 38.46%. The research certainly supports the addition of a more robust web-based communication channel, however, with more traditional channels like the printed catalog and even visits from supplier employees making the top three preferred channels, an omni-channel approach is recommended. Despite the technological world we live in, there is still a demand for traditional methods of communication, in which it's important to meet customers in their preferred "zone" of doing business.

## **5.2 Improvements & Future Research**

To gain a more wholistic, in-depth view of feed companies' communication preferences, the next step and/or improvement would be to employ a mixed methods approach, more specifically interview a wide variety of feed firms and business types. It would be anticipated that these conversations could yield even richer information to build a communication strategy around. Conversation would help uncover any omitted variables, and perhaps other factors that may influence the channel preference scores. Beyond uncovering other unknown uses and likes/dislikes with the current channels, these discussions may uncover new, unexplored channel options. A mixed method approach also provides a way to collect preference data for those who don't utilize digital channels.

Another continuation would be to ask companies their preferences on how they receive information from other vendors/partners/suppliers; whether that's a direct competitor or an unrelated firm. This would provide some benchmarking metrics for suppliers to better understand where they currently stand.

To improve the strength of this research in the future, the metrics for relevance and accessibility should be adjusted to match that of timeliness. Once again, the timeliness metric is a product of respondents' perception of suppliers' performance of delivering timely information and customers' importance ranking of timeliness in price information



delivery. Currently, the questions on the importance of relevancy and accessibility are specifically tied to the channel(s) companies receive. These questions should be adjusted to broadly uncover how much feed companies' value relevancy and accessibility in price communication as well as their perceptions of suppliers' performance in these two dimensions.

### **5.3 Conclusion**

For suppliers' to provide excellent customer service, they will need to provide relevant information in a multitude of ways that reaches feed companies "where they are"; that is in a manner each business prefers and deems relevant to their procurement process. As such an omnichannel approach will aid suppliers to be the feed ingredient distributor of choice.

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