MULTICHANNEL SERVICE OFFERINGS: DETERMINANTS AND CONSEQUENCES OF FULFILLMENT AND RETURNS EXPERIENCES

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ABSTRACT

MULTICHANNEL SERVICE OFFERINGS: DETERMINANTS AND CONSEQUENCES OF FULFILLMENT AND RETURNS EXPERIENCES

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My three essay dissertation considers fulfillment and returns service offerings in multi-channel supply chains. The demand for multichannel offerings is growing and though there are benefits for multichannel retailers, there is also greater complexity of the fulfillment and returns network. Through this research I examine the drivers and outcomes of retailer multichannel offerings.

Essay 1 examines customer channel choice for retail returns. Retailers are increasingly offering more ways for customers to shop and interact through different channels, including options for returning product through different channels. Some consumers choose to stay in the same channel when returning product, while others choose to switch channels. Survey research was conducted to analyze how differences between consumers staying in the same channel or switching channels for returns influences how the retailing experience relates to customer satisfaction and behavior. The results support that delivery performance and returns convenience positively relate to customer satisfaction, and there is a stronger positive effect of delivery performance on customer satisfaction for customers that stay in the same channel for returns.

Essay 2 considers boundary conditions of the relationship between interpersonal and informational justice and satisfaction and customer behavioral intentions. A scenario based experiment was used to test the relationships of interest. Scenarios include manipulations of interpersonal justice, informational justice, and moderator variables. Results support a direct effect of interpersonal and information justice on satisfaction and customer behavioral intentions. There is also support for moderating effects of attributions of blame, returns policy restrictiveness, and returns process convenience on the relationships between interpersonal justice and certain outcome variables.

Essay 3 examines the effects of multichannel offerings on retailer performance. Two of the multichannel offerings examined relate to order fulfillment (buy online pick up in store and ship from store) and one of the multichannel offerings relates to returns management (return to store). Secondary data was analyzed to test the relationships of interest. Support was found that multichannel offerings related to aspects of order fulfillment have an effect on retailer performance.

This dissertation is dedicated to my parents, Thomas and Alice Jones. They did not live to see the completion of my dissertation, but they always believed in and supported me.

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1. INTRODUCTION

Consumers expect to be able to shop with retailers when, where, and how they desire. To accommodate consumer demand for flexibility, retailers are increasingly offering consumers options for interacting with them across multiple channels (e.g., online, brick and mortar). For example, some retailers allow consumers to make online purchases from within their local retail store and have that product shipped to their home or picked up at the local retail store.

In addition to multichannel offerings for purchases, many retailers also provide multichannel offerings for returns. When a retailer provides multichannel returns, consumers are allowed to return product through either to a brick and mortar store or through an online channel, regardless of where the product was purchased. When multichannel returns are offered, consumers might choose to stay in the same channel for purchase and return (i.e., buy in-store, return to the store), or might choose to switch channels and purchase via one channel (e.g., online) and return via a different channel (e.g., brick and mortar). The consumer's choice in returns channel will depend on whether they prefer to use a single channel for any retailer interactions or value the flexibility to switch channels for returns. It is typically the case when consumers switch channels for returns that they have purchased online and returned to the local brick and mortar store, since the opposite scenario of purchasing in the brick and mortar store and returning online is not commonly offered by retailers or demanded by consumers.

Although consumers value the flexibility of multichannel returns, it can come at a cost to retailers; generally in the form of increased inventory and handling costs. Multichannel returns can also result in costly inventory challenges, which can be especially complex for retailers that offer an assortment online that is different from the assortment offered in brick and mortar stores. A shift towards providing multichannel returns also increases complexity for store employees,

who traditionally only handled store returns, and now have to understand the processes and systems needed for returning products purchased online. Such returns processes may require employees to make additional disposition decisions especially if returned product is not sold in the store. The investment and expense related to supporting multichannel returns can be significant (Gallino and Moreno 2014; Harrington 2017).

Despite previous research focused on multichannel shopping, little work has examined the impacts of multichannel returns offerings. This is surprising since it is vital that retailers have a clear understanding of the potential impacts of offering multichannel returns. Retailer investment in multichannel returns is growing, making it crucial to understand whether there are positive outcomes that outweigh the added cost and complexity of multichannel returns. We examine how elements of the online purchase and returns experience relate to customer satisfaction, and, ultimately, loyalty and positive word of mouth (WOM) intentions. While there has been a great deal of research on the drivers of customer satisfaction, there is only limited work on satisfaction related to consumer returns.

In the next section, we present background on multichannel retailing, and, specifically, multichannel returns, and note a gap in the literature. We then provide an overview of Service Dominant Logic (S-D Logic) as the theoretical basis for our proposed framework. This is followed by hypothesis development, research methodology, results and discussion. Finally, implications, future research, and conclusions are presented.

2. BACKGROUND

2.1 Emergence of Multichannel Retailing

Online retailing has experienced tremendous growth in recent years. Global online sales are expected to reach $3.5 trillion within the next five years (Harrington 2017). Online shopping offers a win/win situation because retailers can reach a much larger market than with only brick and mortar stores alone. Additionally, consumers often value the convenience of shopping online and having product delivered to their doorstep (Ofek et al. 2011).

There are some consumers, though, that prefer physically inspecting product before purchasing it (Balakrishnan et al. 2014). To accommodate differences in consumer preference, retailers offer consumers a wide range of options for shopping and product delivery. These multichannel strategies result in consumers purchasing more than consumers using a single channel (Kumar and Venkatesan 2005; Neslin et al. 2006). Multichannel consumers also tend to remain consumers of a particular retailer for a longer time (Kumar and Venkatesan 2005; Neslin et al. 2006).

2.2 Multichannel Purchases

In previous research, there has been attention to the drivers of consumer choice regarding purchasing channel. There is evidence that the characteristics of the product and the shopping process are related to channel choice (Balasubramanian et al. 2005; Peterson et al. 1997). Peterson et al. (1997) studied how channel choice throughout the retail experience might differ for different types of products, considering the impacts of price and frequency of purchase. Alternatively, Balasubramanian et al. (2005) examined how product and shopping utility affect shopping channel choice. Consumers can have different goals when shopping, such as

maximizing efficiency or social aspects of the experience, and these goals relate to the utility derived by consumers and their channel choice (Balasubramanian et al. 2005).

Another determinant of channel choice that has been identified in previous literature is channel integration (Blattberg et al. 2008; Neslin et al. 2006). Kahn and Mentzer (1998) suggest that integration is a multidimensional process involving interaction and collaboration between parties. Not only does channel integration relate to channel choice (Blattberg et al. 2008; Neslin et al. 2006), but also to the consumers' use of a variety of channels throughout their shopping experience (Blattberg et al. 2008; Neslin and Shankar 2009; Verhoef et al. 2007). For example, when consumers perceive integration through retailer offerings, such as providing store pick up for online orders, this drives more online customers to visit the brick and mortar channel (Neslin et al. 2006).

Lastly, support has been found that transaction costs play an important role in channel choice (Chintagunta et al. 2012). Chintagunta et al. (2012) considered how transaction costs, such as transportation costs, as well as time related opportunity costs, influence consumers decisions between purchasing groceries either online or in-store. As busy consumers look for ways to economize and spend less time shopping, transaction costs serve as a key determinant of choice of channel (Chintagunta et al. 2012). While this summary of previous research provides an understanding of the drivers of consumer channel choice for purchases, there has been limited attention to channel choice for consumer returns.

2.3 Multichannel Returns

Just as consumers may decide to use different channels and switch channels when shopping and purchasing (Balasubramanian et al. 2005), they may also decide to switch channels

for product returns. Consumers making online purchases may elect to return the product to the local retail store in order to avoid the hassle associated with online returns (Ofek et al. 2011). In a recent survey, more than one third of consumers indicated they are more likely to purchase online if given the option of returning product to the local store (DC Velocity Staff 2016). Therefore retailers can enhance value for a segment of their consumers by providing the option of multichannel returns.

Managing multichannel returns can be complex and costly (Bernon et al. 2016; JDA 2015). A number of issues contribute to this. Multichannel returns management has resulted in more of the functions that traditionally took place upstream at a warehouse, for online orders, now taking place at the local brick and mortar store. Prior to multichannel returns offerings, online returns needed to be sent back to a warehouse for processing, but today multichannel returns offerings allow for online products to get returned to the local brick and mortar store. Retail associates that previously only handled returns for products purchased in the brick and mortar store, now are faced with processing returns that were purchased online. Retailers may have different processes for handling returns for different channels, requiring that store employees be trained on how to process returns that were purchased both in-store and online. In some cases, there may even be different systems needed to process returns purchased in different channels. Store associate need to know how to determine the disposition of the returned items, and initiate the process of getting returned product to the appropriate location. The increase in handling by store personnel results in greater costs and more complexity (Harrington 2017).

Inventory synchronization creates another potential challenge with multichannel returns. A lack of synchronization occurs when retailers offer a wider array of products online than in-store (Emrich et al. 2015). Consumers might return an online purchase to a local store, and,

often, such merchandise is not a part of the standard store assortment. A mismatch in assortment across channels requires sophisticated inventory management systems to maintain inventory accuracy (Harrington 2017). Product returned to a store might be put back into stock locally, or, in some cases, it needs to be shipped upstream to be restocked at a distribution center. Shipping products through the retailer network in order to get inventory back to the proper location increases costs and can result in increased product damage. As multichannel retailing becomes more prevalent, it critical to have more attention on consumer channel choice for returns.

3. THEORETICAL DEVELOPMENT

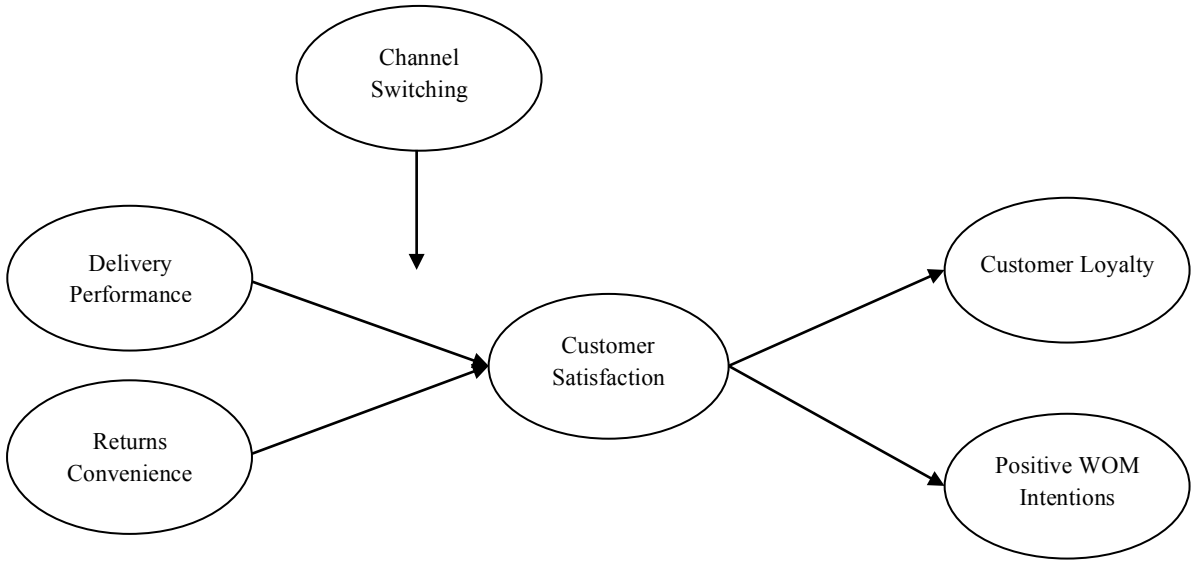
3.1 Service Dominant Logic

The theoretical basis for this research is service dominant (S-D) logic. Prior to S-D logic, the primary marketing philosophy was based on the exchange of tangible goods. Under S-D logic there has been a shift to integrate goods and services as part of an exchange (Lusch and Vargo 2006). Therefore, S-D logic can be applied to marketing offerings that involve tangible goods within the process of a service offering (Lusch and Vargo 2006). S-D logic is relevant for many aspects of the retailing experience since there is typically an exchange of goods between the retailer and consumer, along with the many intangible aspects of the retailing experience, including service attributes of the purchase experience (i.e., shipping and delivery offerings). S-D logic also applies to retail returns management, as there is an exchange from the consumer back to retailer along with the service provided by the retailer to facilitate the return (i.e., ease of returning product).

Two critical aspects of the service offering provided by retailers for purchases and returns are delivery performance (Griffis et al. 2012) and returns convenience (Berry et al. 2002; JDA

2015). Delivery performance is defined as the consumer's perception of the speed and on-time performance of a retailer's forward delivery service (Griffis et al. 2012), while returns convenience is a measure of a consumer's perception of retailer performance related to time and effort expended during the returns process (Berry et al. 2002). Delivery performance and returns convenience are valued by the consumer and should be embedded in the service offerings of a retailing experience.

Figure E1-1: Conceptual model



The service offering provided by a retailer should meet consumer needs. A customer's satisfaction is a measure of how well a retailing experience meets their needs. Customer satisfaction is defined as a cumulative evaluation of satisfaction based on experience with a firm over time (Homburg et al. 2005; Seiders et al. 2005). In addition to a customer's satisfaction with a retailer, there are likely to be long term implications of service as a consumer's needs are met, such as customer loyalty and positive word-of-mouth (WOM) intentions. Customer loyalty is

defined as a consumer's favorable attitude toward a retailer that results in repeat buying behavior (Srinivasan et al. 2002). Positive WOM is defined as the strength of intentions that a consumer will convey positive information about a firm to others (Ferguson et al. 2010). S-D logic supports that as retailers enhance consumer value, this is expected to correlate with positive customer outcomes, including increased satisfaction and loyalty (Flint et al. 2011). Therefore S-D Logic supports our conceptual model (Figure 1). The model depicts how aspects of the online retailing experience, specifically delivery performance and returns convenience, relate to satisfaction, and, ultimately, loyalty and positive WOM. Specific research hypotheses are described below.

4. RESEARCH HYPOTHESES

4.1 Delivery performance and customer satisfaction

When a consumer makes a purchase online, one of the most visible aspects of the fulfillment of their order is delivery performance. Consumers can easily determine if delivery performance meets their expectations for how quickly the order will be received (Griffis et al. 2012). Researchers have examined how aspects of order fulfillment, including delivery performance, affect customer behavior and perceptions (Griffis et al. 2012; Lewis 2006; Rao et al. 2011; Trocchia and Janda 2003), finding support that faster order fulfillment relates to greater satisfaction.

We consider how delivery performance relates to customer satisfaction. Satisfaction can be considered in terms of customer perceptions of a singular event, or based on customer perceptions of a collection of events (Oliver 2014). We specifically examine customer satisfaction as a global measure of satisfaction, therefore based on customer perceptions of a

collection of interactions with a retailer. S-D Logic suggests that a retailer can expect positive customer outcomes when efforts are made to enhance value for the consumer (Flint et al. 2011). When a retailer provides fast and on-time delivery performance, this should result in enhanced value for the consumer. Therefore, we propose that:

H1: Delivery Performance is positively related to Customer Satisfaction.

4.2 Returns convenience and customer satisfaction

Online shoppers pay great attention to the convenience of the retail experience (Reichheld and Schefter 2000). Colwell et al. (2008) found evidence that service convenience is a predictor of overall satisfaction. In addition to general service convenience, returns related convenience also matters to consumers and is a factor of importance when deciding where to shop (JDA 2015). Berry et al. (2002) suggests that consumers prefer a retailing experience where there is no need to return product, but when the need to return arises, a consumer will be more satisfied with a returns experience that is convenient. Previous research supports that satisfaction is evaluated based on price, performance, and expectations (Voss et al. 1998), and, in the current study, we examine returns convenience as a consumer's assessment of the performance related to a product return. Thus, a relationship is expected between returns convenience and satisfaction. When a retailing experience is convenient, including the returns experience, this saves the consumer time, enhancing value for the consumer (Devaraj et al. 2002). Based on S-D Logic, this enhanced value is expected to relate to positive outcomes such as increased satisfaction (Flint et al. 2011). Therefore, it is posited that:

H2: Returns Convenience is positively related to Customer Satisfaction.

4.3 Outcomes of customer satisfaction

Customer loyalty is defined as a long-term commitment to repurchase from a selling firm (Stank et al. 1999). Online retailing makes it easy, with limited effort and cost, for consumers to evaluate and choose between retailers for their purchases (Srinivasan et al. 2002). Thus, it is essential for retailers to focus on enhancing customer loyalty; otherwise consumers might move onto the next retailer. There has been evidence in literature of a relationship between customer satisfaction and loyalty (Daugherty et al. 1998; Innis and La Londe 1994; Stank et al. 1999). Innis and La Londe (1994) found support for a significant and positive effect of customer satisfaction with logistical service capabilities on repurchase intentions. In a personal products context, Daugherty et al. (1998) examined how retail purchasing agents satisfaction with product vendors related to loyalty. Evidence was found for a positive relationship between customer satisfaction and loyalty (Daugerty et al. 1998). Then, considering the fast food industry, Stank et al. (1999) examined relationships between fast food restaurants and distributors and found support for the effect of satisfaction on loyalty.

We also investigate how customer satisfaction relates to positive word of mouth (WOM) intentions. WOM is considered a credible communication source due to its informal and interpersonal nature (Harrison-Walker 2001). With the growth of ecommerce, and the internet as a medium, the sharing of WOM is facilitated, making it more impactful (Brown et al. 2005; Kwak et al. 2006; Pitt et al. 2002). WOM can be either positive or negative. Both types are important, and are typically associated with extreme satisfaction or dissatisfaction (Anderson 1998; de Matos and Rossi 2008). Positive WOM involves an individual sharing positive experiences, such as sharing support for an organization and making recommendations (Brown et al. 2005; Sweeney et al. 2014), while negative WOM includes sharing negative experiences,

such as spreading rumors or complaints. Early WOM research suggested that negative WOM had a stronger impact on consumers than positive WOM (Arndt 1967; Mizerski 1982). This is attributed to the fact that negative WOM is less common (Herr et al. 1991), and, thus, more noticeable and more influential (Mizerski 1982). However, more recent research suggests positive WOM is more common and has a greater influence on consumers than negative WOM (East et al. 2008; Schindler and Bickart 2002; Sweeney et al. 2014). Further, East et al. (2008) found support that positive WOM is more likely to positively influence purchase decisions. Because positive WOM includes more detailed information, it can be more effective than negative WOM (Schindler and Bickart 2002).

A consumer is satisfied when their needs or expectations are met (Oliver 1997). When a product or service meets or exceeds a consumer's needs, the consumer is likely to share the positive experience with others (de Matos and Rossi 2008), spreading positive WOM to encourage friends and family (Babin et al. 2005; Brown et al. 2005). Previous research has supported the relationship between satisfaction and positive WOM intentions (Brown et al. 2005; de Matos and Rossi 2008; Wien and Olsen 2012). Consumers are likely to value a retailing experience that meets their expectations and that results in their satisfaction. Considering S-D logic and the value a consumer places on a satisfying experience, it is expected that customer satisfaction will relate to positive outcomes, such as customer loyalty and positive WOM intentions. Therefore it is posited that:

H3: Customer Satisfaction is positively related to Customer Loyalty.

H4: Customer Satisfaction is positively related to Positive WOM Intentions.

4.4 The potential moderating effects of channel switching

Analyzing the effects of a moderator allows for better understanding the breadth of the relationship and whether that relationship holds under varying conditions (Edwards and Berry 2010; Goldsby et al. 2013). We consider that channel switching may serve as a boundary condition for the hypothesized main effects. Channel switching is defined as a consumer's decision to return a purchased item to a different venue than the original purchase. Consumers who choose to stay in the same channel for making returns are referred to as stayers (i.e., buy instore-return to store or buy online-return online); consumers who choose to switch channels for making returns are referred to as switchers (i.e., buy online-return to store). We test whether or not the hypothesized relationships differ depending on whether a consumer is a stayer or a switcher.

As investment in developing multichannel offerings is growing, and it becomes more common for retailers to provide consumers with the option to switch channels for returns, it is important for retailers to understand the potential outcomes of consumers deciding to switch channels. Considering S-D logic, we expect that switchers experience enhanced value through multichannel returns options that provide consumers with greater flexibility. We expect that channel switching as a moderator will interact with the delivery performance and returns convenience for an amplified positive effect on customer satisfaction. Therefore, we propose that:

H5: Channel Switching positively moderates the relationship between Delivery Performance and Customer Satisfaction.

H6: Channel Switching positively moderates the relationship between Returns Convenience and Customer Satisfaction.

5. RESEARCH METHODOLOGY

5.1 Research design and data collection

A survey research design was utilized to test the hypothesized relationships since it allows for collecting data appropriate for testing complex relationships between independent and dependent variables and potential moderator variables (Kelley et al., 2003). An online survey was developed and administered through Amazon Mechanical Turk (MTurk) national consumer online panel, a popular method of testing consumer-related hypotheses (Cantor et al. 2014; Murfield et al. 2017; Peinkofer et al. 2015). Participants were compensated through MTurk with a cash reward for taking the survey. Based on the amount of time expected for completing the survey (10 minutes), participants were compensated with $.50 for completing the survey. Five hundred respondents were recruited for the study through MTurk. To ensure that respondents were paying proper attention to the questionnaire, respondents were asked in two sections to mark their place by providing a specific response. Of the responses, 28 were eliminated due to failing the attention check or outlier identification. Outliers were identified and considered based on a multivariate difference indicator. Respondents were asked to answer the questionnaire based on a recent returns experience that was either purchased online or in a brick and mortar store. Of the useable responses, 313 respondents had made their purchase online, while 159 had purchased from a brick and mortar store. Since channel switching (as mentioned previously) is not prevalent when purchases are made in store, the focus is on online purchases only, therefore analysis was performed on the 313 online shopper responses only.

The largest group of participants (41%) were between the ages of 25 and 35, with 10% of participants under 25 and 11% above 55. Over half of participants (59 %) were female, and almost half had a combined household income between $20,000 and $60,000. The majority of

respondents (88%) reported at least some college education.

5.2 Measurement Scales

The survey questionnaire was developed utilizing existing multi-item scales. All survey items used a seven-point Likert-type scale, from strongly agree to strongly disagree. The measurement items and descriptive statistics can be found in the Appendix and the construct correlation matrix is presented in Table E1-1. The delivery performance measure was adapted from Griffis et al. (2012), who adapted their measure from Mentzer et al. (2001). The returns convenience measure was adapted from Seiders et al. (2005, 2007) to include a broader consideration for aspects of the returns experience. The scales for customer satisfaction, customer loyalty, and positive WOM intentions were adapted from Brady et al. (2012) to reflect a broader service context. Construct reliability was assessed, and each construct had a Cronbach's alpha of .86 or higher.

Table E1-1: Construct correlation matrix

Construct	DELSPD	RETCON	CSTSAT	CSTLOY	PWOM
Delivery Performance	1				
Returns Convenience	.561**	1			
Customer Satisfaction	.546**	.587**	1		
Customer Loyalty	.476**	.499**	.752**	1	
Positive WOM Intentions	.593**	.615**	.772**	.779**	
Mean	5.853	6.038	5.686	5.513	5.880
Standard Deviation	1.093	.988	1.195	1.269	1.129

All Constructs have 7-point Likert-type scale: (1) Strongly disagree to (7) Strongly agree.

** Correlation is significant at the 0.01 level (2-tailed).

5.3 Measurement Model Test

A two-step approach was taken for testing the hypothesized structural equation model (Anderson and Gerbing 1988). EQS 6.3 for Windows was used to first test the measurement model alone, followed by a simultaneous test of the measurement model and the structural model (Anderson and Gerbing 1988). There were 18 items and 5 latent constructs. In order to test for discriminant validity, a one factor model was compared to a five factor model as recommended by Kline (2011). A significant improvement in model fit was found for the five factor model suggesting sufficient discriminant validity. Therefore, we proceeded with a test for convergent validity. All 18 factor loadings were significant (Table E1-2) supporting convergent validity (Anderson 1987). Measurement model results are presented in Table E1-2, indicating adequate fit of the measurement model. Comparative Fit Index (CFI) and Incremental Fit Index (IFI) have values greater than .90 suggesting an acceptable fit (Bagozzi and Yi 1988; Fornell and Larcker 1981; Hu and Bentler 1995).

5.4 Structural Model Test and Discussion

Structural equation modeling was used to test the direct relationships hypothesized in the conceptual model. Goodness-of-fit and residual-based indices for the structural model indicate adequate model fit as CFI was .94; IFI was .94; RMSEA was .095 (Bollen and Long 1993; Hu and Bentler 1999; Kline 2011). After establishing a sound model fit, the next step was the testing of hypotheses.

Structural model results appear in Table E1-3, and show tests of significance for the direct hypothesized relationships, with unstandardized parameters reported. H1 and H2 propose that delivery performance and returns convenience are positively related to customer satisfaction.

Results show a positive and significant effect of both delivery performance and returns convenience on customer satisfaction. Support for the main effects continued. H3 and H4 posit that customer satisfaction is positively related to customer loyalty and PWOM intentions, respectively. Results show a positive and significant effect of customer satisfaction on each of these outcome variables, indicating support for H3 and H4. Establishing support for the direct hypotheses, testing of the moderated hypotheses followed.

Table E1-2: Measurement model results

Construct	**Measurement Items**	**Standardized Parameter Estimate**	**Standard Error**	**t-value**
Delivery Performance	DELPRF1	.829		(Fixed)
	DELPRF2	.768	.06	14.71
	DELPRF3	.801	.07	15.49
Returns Convenience	RETCON1	.854		(Fixed)
	RETCON2	.911	.05	22.79
	RETCON3	.939	.05	24.26
	RETCON4	.944	.05	24.54
	RETCON5	.850	.05	19.34
	RETCON6	.892	.05	21.83
Customer Satisfaction	CSTSAT1	.913		(Fixed)
	CSTSAT2	.940	.04	29.18
	CSTSAT3	.931	.03	28.40
Customer Loyalty	CSTLOY1	.891		(Fixed)
	CSTLOY2	.857	.05	21.11
	CSTLOY3	.917	.05	24.12
Positive WOM Intentions	PWOM1	.941		(Fixed)
	PWOM2	.979	.03	40.42
	PWOM3	.928	.03	32.10

Fit statistics: Chi-square = 355.13 (df = 142, $p < 0.001$), CFI = .97, IFI = .97, RMSEA = .07.

Table E1-3: Hypothesized paths testing

Path	Unstandardized Parameter Estimate	Standard Error	*t-value*	Note
H_1: Delivery Performance → Customer Satisfaction	.399	.056	7.125	Supported
H_2: Returns Convenience → Customer Satisfaction	.597	.065	9.207	Supported
H_3: Customer Satisfaction → Customer Loyalty	.781	.051	15.342	Supported
H_4: Customer Satisfaction → PWOM Intentions	.745	.042	17.908	Supported

Fit statistics: Chi-square = 563.485 (*df* = 148, $p < 0.001$), CFI = .937, IFI= .937, RMSEA=.095.

5.5 Moderating Analyses and Discussion

The hypotheses examining moderated effects were analyzed using multi-group structural equation modeling (Steenkamp and Baumgartner 1998). Multi-group structural equation modeling has been used in logistics research to test moderating effects (Cahill et al. 2010). Respondents were assigned to groups depending on whether they were stayers or switchers (with respect to returns channel). Measurement invariance was first established to ensure that constructs were being measured by indicators in a consistent manner across the two groups. A model with the relationships between indicators and constructs, fixed to be equivalent for the two groups, was compared to a model where these relationships were freely estimated. There was no significant difference in model fit supporting measurement invariance, thus, enabling the testing of invariance of the structural paths.

Tests of invariance between the structural paths were performed using the segmented respondent groups (Byrne 2006, Zimmer-Gembeck et al. 2005). This involved running a free model, in which the parameters for each group were estimated separately, and then comparing it to a model in which the structural paths were constrained to be equal for the two groups. The

Lagrange Multiplier test of equality constraints (L-M test) was used to indicate invariance of the structural paths, showing whether a significant difference exists in chi-square between the free model and the constrained model (Byrne 2006). A significant difference in the chi-square for the constrained model compared with the chi-square for the free model suggests that there are differences in the structural path between the two groups, indicating moderation. Cases with no significant difference in chi-square suggest invariance of the structural paths between the groups. Incremental chi-square values with probability < .05 were the basis of significance decisions (Byrne 2006).

Results of the tests of significance for the moderated hypotheses are shown in Table E1-4. Hypothesis H5 posits that channel switching positively moderates the relationship between delivery performance and customer satisfaction. Results show support that there is a significant interaction between channel switching and delivery performance as it relates to customer satisfaction but it is not in the expected direction. Results support a stronger effect of delivery performance and customer satisfaction for stayers rather than switchers. Support is not found for H6, which proposed that channel switching positively moderates the relationship between returns convenience and customer satisfaction.

Table E1-4: Two-group analysis to test for moderation

Path	Channel Switching
H_5: Delivery Performance → Customer Satisfaction	χ^2=5.15*
H_6: Returns Convenience → Customer Satisfaction	n.s.

* - denotes significant (p<0.05)

We consider that support was found for a significant interaction of channel switching and delivery performance related to customer satisfaction, though not in the expected direction. Based on theory, we proposed that switchers would place more value on receiving multichannel returns options, and, this would show a stronger positive effect on the relationship between delivery performance and customer satisfaction. The results support the opposite; that for stayers, who purchase and return in the online channel, that the positive effect of delivery performance on customer satisfaction is amplified. In considering this unexpected result, we keep in mind that previous research supports that single channel customers and multichannel customers are expected to have different personal characteristics (Blattberg et al. 2008). Single channel customers, such as the stayer group in this research, are more likely to make fewer purchases from the retailer than switchers, who are multichannel customers. Stayers are also expected to initiate less contact with the retailer than switchers. These stayer characteristics might help to understand our results. Stayers are not as interested in frequenting and making contact with the retailer, so it makes sense that a performance attribute of online shopping that allows them to receive their product quickly without having to walk into the store would have a strong influence on their level of satisfaction. It may be that stayers place greater value on being able to use the online channel where product is shipped for both purchase and return, and, therefore, value the ability to utilize shipping for both purchase and returns, while minimizing interaction with the retailer. Therefore, the stayer group places greater value on the speed and on-time performance of delivery service, which may explain the amplified effect for the stayer group on this relationship. Future research might help to uncover the drivers of the choice to stay or switch for greater insight into this finding.

There was not a significant interaction between returns convenience and channel switching as proposed. Returns convenience is clearly important to consumers and has a positive direct effect on customer satisfaction. It may be that returns convenience is equally important to both stayers and switchers, explaining the lack of a significant different between the two groups.

6. MANAGERIAL IMPLICATIONS

Retailers are struggling to compete and to grow market share in today's competitive retailing environment. This research provides multichannel retailers with insight into the behavior of their customers and differences between distinct customer segments. Understanding customer behavior and customer segmentation is necessary for growing market share and gaining competitiveness.

Retailers can gain advantage through understanding multichannel returns opportunities and the impact of returns channel choice. This research provides insight into how the options provided to consumers for returns channel relate to satisfaction and ultimately customer behavior. Consistent with previous research, we expected to find support that delivery performance and returns convenience relate to customer satisfaction (Berry et al. 2002; Colwell et al. 2008), and that customer satisfaction relates to both customer loyalty and positive WOM intentions. Although, the direct effects were expected, these results should further encourage retailers to invest in the service dimensions of delivery performance and returns convenience. The expected outcomes of such investment, especially enhanced loyalty, should equate to positive sales as the loyal customer base is retained.

It is also recommended that firms consider tracking delivery performance as a key performance indicator. Our findings support the importance of maintaining control of delivery

performance since it impacts customer satisfaction and behavior. Even online retailers that rely on the support of drop-ship vendors to provide a broader online assortment should be focused on delivery performance. It is in the best interest of retailers to have visibility and some control over the delivery process, even when a vendor or third party is shipping on their behalf.

More important are the results found through examination of the moderating effects of channel switching. A stronger relationship was found between delivery performance and customer satisfaction for consumers that stay in the same channel for returns. Stayers may value the delivery performance provided by the retailer as they have a preference for interaction through the online channel and this may be the reason for this stronger effect for stayers. These results suggest to retailers that they can influence customer satisfaction by meeting delivery performance expectations, especially for customers that prefer to interact online. The results also support that there does not seem to be a significant difference between customer segments as it relates to returns convenience, indicating that it may be equally important for all consumers.

The results provide managers with an understanding that customer satisfaction may differ between different customer segments depending on what they value most in the retail experience. This understanding of consumer segments could help with developing programs to influence consumers for positive outcomes.

7. THEORETICAL IMPLICATIONS AND FUTURE RESEARCH

S-D logic has been applied in the context of retailing in the past (Ehrenthal et al. 2014; Lusch et al. 2007). The focal research extends previous work by applying S-D logic to a multi-channel retailing environment. S-D logic is especially relevant in providing understanding of how

retailers can develop service offerings to support multi-channel retailing to enhance value for consumers for positive outcomes.

We also extend previous research through our examination of the moderating effects of returns channel choice on how the consumer returns experience affects customer satisfaction. In previous work, no attention has been given to the differences between segments of consumers based on returns channel choice. A consideration for the boundary conditions based on returns channel choice extends both consumer returns research and customer satisfaction research. Though we examine how returns channel choice can enhance or detract from the way that the retailer service offering relates to customer outcomes, future research might consider additional moderators of the relationships of interest. For example, it could be interesting to consider how product category (e.g., technology products, apparel) could influence these relationships. We might find that delivery performance and convenience have a stronger effect on customer outcomes for specific product categories.

A potential limitation of this research is the focus on only two aspects of the consumer online retailing experience, delivery performance and returns convenience. There may be other aspects of the online shopping and returns experience that could have an influence on the outcomes examined in this research. Other aspects of the online shopping and returns experience should be identified and examined in future research.

Future research exploring the drivers of returns channel choice could help to provide insight into the behavior of different customer segments based on returns channel choice. We have examined some of the customer outcomes influenced by channel choice, but further insight could be gained by examining firm outcomes such as economic performance. There are

financial implications related to offering returns options, such as inventory holding policy implications. Quantifying the impact on financial outcomes could benefit retailers.

8. CONCLUSIONS

Consumer demand for flexibility and convenience will continue to make multichannel service offerings a competitive necessity. Consumers do not all respond in the same way to multichannel service offerings; gaining an understanding of customer segments and behaviors allows for tailoring programs and incentives. Understanding consumer behavior can help retailers competitive differentiation within the complex multichannel retailing environment.

APPENDIX

Appendix A: Construct Measurement Descriptive Statistics

Table E1-A1: Construct measurement descriptive statistics

Constructs and Measurement Items	Mean	Std. Dev.
Delivery Performance (Cronbach's alpha = 0.859)[a]		
Please indicate your level of agreement with the following statements:		
DELPRF1. The time between ordering the product and receiving delivery was short.	5.70	1.27
DELPRF2. The delivery arrived on the date promised.	6.12	1.21
DELPRF3. Delivery was slow.(R)	5.94	1.40
Returns Convenience (Cronbach's alpha = 0.962)[b]		
Regarding your return, please indicate your level of agreement with the following statements:		
RETCON1. It was easy to take care of returns and exchanges with this retailer.	6.09	1.04
RETCON2. This retailer takes care of product exchanges and returns promptly.	6.04	1.10
RETCON3. This retailer makes it convenient to make returns.	6.04	1.10
RETCON4. Returning products to this retailer is easy.	6.01	1.12
RETCON5. I can quickly prepare products for returns to this retailer.	6.07	1.00
RETCON6. Product returns to this retailer can be done quickly.	5.98	1.12
Customer Satisfaction (Cronbach's alpha = 0.948) [c]		
Please indicate your level of agreement with the following statements:		
CSTSAT1. I am happy that I made a purchase from this retailer.	5.63	1.30
CSTSAT2. I am satisfied with my decision to purchase from this retailer.	5.68	1.28
CSTSAT3. I think I did the right thing when I purchased from this retailer.	5.75	1.18
Customer Loyalty (Cronbach's alpha = 0.915) [e]		
Please indicate your level of agreement with the following statements:		
CSTLOY1. I am loyal to this retailer.	5.66	1.29
CSTLOY2. This retailer is my first choice when I purchase this type of product.	5.42	1.46
CSTLOY3. I am dedicated to doing business with this retailer.	5.45	1.37
Positive WOM Intentions (Cronbach's alpha = 0.963)[e]		
Please indicate your level of agreement with the following statements:		
PWOM1. I would recommend this retailer to friends.	5.93	1.12
PWOM2. I would say good things about this retailer to others.	5.90	1.14
PWOM3. I would encourage friends and relatives to shop with this retailer.	5.81	1.25

[a] Sources: Adapted from Griffis et al. 2012; Mentzer et al. 2001.

[b] Sources: Adapted from Seiders et al. 2005, 2007.

[c] Source: Adapted from Brady et al. 2012.

REFERENCES

REFERENCES

Anderson, E.W. 1998. “Customer satisfaction and word-of-mouth.” Journal of Service Research 1(1): 1–14.

Anderson, J.C. 1987. “An approach for confirmatory measurement and structural equation modeling of organizational properties.” Management Science 33(4):525-541.

Anderson, J.C. and Gerbing, D.W. 1988. "Structural equation modeling in practice: A review and recommended two-step approach." Psychological Bulletin 103(3):411-23.

Anderson, R.E. and Srinivasan, S.S. 2003. “E-satisfaction and e-loyalty: a contingency framework.” Pyschology & Marketing 20(2): 123-138.

Arndt, J., 1967. *Word of mouth advertising: A review of the literature*. Advertising Research Foundation.

Bagozzi, R.P. and Yi, Y. 1988. “On the evaluation of structural equation models.” Journal of the Academy of Marketing Science 16(1): 74-94.

Balakrishnan, A., Sundaresan, S. and Zhang, B. 2014. “Browse-and-Switch: Retail-Online Competition under Value Uncertainty.” Production and Operations Management 23(7): 1129–1145.

Balasubramanian, S., Raghunathan, *R,* and Mahajan V. 2005. “Consumers in a multichannel environment: Product utility, process utility, and channel choice.” Journal of International Marketing 19(2): 12–30.

Berry, L.L., Seiders, K., and Grewal, D. 2002. “Understanding service convenience.” Journal of Marketing 66(3): 1-17.

Bernon, M., Cullen, J., and Gorst, J. 2016. “Online retail returns management: integration within an omni-channel distribution context.” International Journal of Physical Distribution & Logistics Management 46(6/7): 584-605.

Blattberg, R.C., Kim, B.D., and Neslin, S.A. 2008. Multichannel Customer Management. Database Marketing: Analyzing and Managing Customers, 635-674.

Bollen, K.A. and Long, J.S. 1993. Testing structural equation models. Newbury Park: Sage Publications.

Brady, M.K., Voorhees, C.M., and Busco, M.J. 2012.” Service sweethearting: its antecedents and customer consequences.” Journal of Marketing 76(2):81-98.

Brown, T.J., Barry, T.E., Dacin, P.A., and Gunst, R.F. 2005. "Spreading the word: investigating antecedents of consumers' positive word-of-mouth intentions and behaviors in a retailing context." Journal of the Academy of Marketing Science 33(2): 123-138.

Byrne, B.M. 2006. Structural equation modeling with EQS: basic concepts, applications, and programming (2nd ed.). Mahwah, N.J.: Lawrence Erlbaum Associates.

Cahill, D.L., Goldsby, T.J., Knemeyer, A.M., and Wallenburg, C.M. 2010. "Customer loyalty in logistics outsourcing relationships: An examination of the moderating effects of conflict frequency." Journal of Business Logistics 31(2): 253-277.

Cantor, D.E., Blackhurst, J.V. and Cortes, J.D., 2014. "The clock is ticking: the role of uncertainty, regulatory focus, and level of risk on supply chain disruption decision making behavior." Transportation Research Part E: Logistics and Transportation Review 72: 159-172.

Chang, Y.-W. and Polonsky, M.J. 2012 "The influence of multiple types of service convenience on behavioral intentions: the mediating role of consumer satisfaction in a Taiwanese leisure setting." International Journal of Hospitality Management 31(1): 107-118.

Chen, P.-Y. and Hitt, L.M. 2002. "Measuring switching costs and the determinants of customer retention in internet-enabled businesses: a study of the online brokerage industry." Information Systems Research 13(3): 255-274.

Chintagunta, P.K., Chu, J. and Cebollada, J. 2012. "Quantifying transaction cost in online/off-line grocery channel choice." Marketing Science 31(1): 96-114.

Colwell, S.R., Aung, M., Kanetkar, V., and Holden, A.L. 2008. "Toward a measure of service convenience: multiple-item scale development and empirical test." *Journal of Services Marketing 22*(2): 160-169.

Daugherty, P.J., Stank, T.P, and Ellinger, A.E. 1998. "Leveraging logistics/distribution capabilities: the effect of logistics service on market share." *Journal of Business Logistics* 19(2): 35-51.

DC Velocity Staff, 2016. "Survey: Consumers demand blend of online and in-store shopping options." DC Velocity, November 16, 2016. http://www.dcvelocity.com/articles/20161116-survey-consumers-demand-blend-of-online-and-in-store-shopping-options/.

de Matos, C.A. and Rossi, C.A.V. 2008. "Word-of-mouth communications in marketing: a meta-analytic review of the antecedents and moderators." Journal of the Academy of Marketing Science 36(4):578-596.

Devaraj, S., Fan, M., and Kohli, R. 2002. "Antecedents of B2C channel satisfaction and preference: validating e-commerce metrics." Information Systems Research 13(3): 316-333.

East, R., Hammond, K. and Lomax, W. 2008. “Measuring the impact of positive and negative word of mouth on brand purchase probability.” International Journal of Research in Marketing 25(3): 215-224.

Edwards, J.R. and Berry, J.W. 2010 “The presence of something or the absence of nothing: increasing theoretical precision in management research.” Organizational Research Methods 13(4):668-689.

Ehrenthal, J.C.F., Gruen, T.W., Hofstetter, J.S. 2014. “Value attenuation and retail out-of-stocks: a service-dominant logic perspective.” International Journal of Physical Distribution & Logistics Management 44(1/2): 39-57.

Emrich, O., Paul, M., and Rudolph, T. 2015. “Shopping benefits of multichannel assortment integration and the moderating role of retailer type.” Journal of retailing 91(2): 326-342.

Eroglu, S.A., Machleit, K.A., and Davis, L.M. 2001. “Atmospheric qualities of online retailing: a conceptual model and implications.” Journal of Business Research 34(2): 177–84.

Ferguson, R.J., Paulin, M., and Bergeron, J. 2010. “Customer sociability and the total service experience: antecedents of positive word-of-mouth intentions.” Journal of Service Management 21(1): 25-44.

Flint, D.J. Blocker, C.P., and Boutin Jr., P.J. 2011. “Customer value anticipation, customer satisfaction and loyalty: an empirical examination.” Industrial Marketing Management 40(2): 219-230.

Fornell, C. and Larcker, D.F. 1981. “Evaluating structural equation models with unobservable variables and measurement error.” Journal of Marketing Research 18(1): 39-50.

Gallino, S. and Moreno, A. 2014. “Integration of online and offline channels in retail.” Management Science 60(6): 1434–1451.

Goldsby, T.J., Knemeyer, A.M., Miller, J.W., and Wallenburg, C.M. 2013. “Measurement and moderation: finding the boundary conditions in logistics and supply chain research.” Journal of Business Logistics 34(2):109-116.

Griffis, S.E., Rao, S., Goldsby, T.J., Voorhees, C.M., and Iyengar, D. 2012. “Linking order fulfillment performance to referrals in retailing: an empirical analysis.” Journal of Business Logistics 33(4): 279-294.

Harrington, L. 2017. “Omni-channel retail: roadmap to profit.” Inbound Logistics, January 2017: 112-120.

Harrison-Walker, L.J. 2001. “The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents.” Journal of Service Research 4(1): 60-75.

Herr, P.M., Kardes, F.R., and Kim, J. 1991. “Effects of word-of-mouth and product-attribute information on persuasion: An accessibility-diagnosticity perspective.” *Journal of consumer research 17*(4): 454-462.

Homburg, C., Koschate, N., and Hoyer, W.D. 2005. “Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay.” Journal of Marketing 69(2):84-96.

Hu, L.-T. and Bentler, P.M. 1995. “Evaluating Model Fit.” in Structural Equation Modeling: Concepts, Issues, and Applications, R. H. Hoyle ed., Thousand Oaks, CA: Sage Publications, 76-99.

Hu, L.-T. and Bentler, P.M. 1999. "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives." Structural Equation Modeling: A Multidisciplinary Journal 6(1):1-55.

Innis, D.E. and La Londe, B.J. 1994. "Customer service: the key to customer satisfaction, customer loyalty, and market share." Journal of Business Logistics 15(1): 1-27.

JDA, 2015. “Despite great investment in omnichannel, only 16 percent of retailers, CPG manufacturers report profitable fulfillment.” SupplyChainBrain, April 17, 2015. http://www.supplychainbrain.com/content/index.php?id=5032&cHash=081010&tx_ttnews[tt_news]=32314

Kahn, K.B. and Mentzer, J.T. 1998. “Marketing’s integration with other departments.” Journal of Business Research 42(1): 53-62.

Kline, R.B. 2011. Principles and practice of structural equation modeling (3rd ed.). New York: Guilford Press.

Kumar, V. and Venkatesan, R. 2005. “Who are multichannel shoppers and how do they perform? Correlates of multichannel shopping behavior.” Journal of Interactive Marketing 19(Spring): 44-61.

Kwak, H. , Zinkhan, G.M., Pan, Y., and Andras, T.L. 2008. “Consumer communications, media use, and purchases via the internet: a comparative, exploratory study.” Journal of International Consumer Marketing, 20(3-4): 55-68.

Lewis, M. 2006. “The effect of shipping fees on customer acquisition, customer retention, and purchase quantities.” Journal of Retailing 82:13-23.

Lusch, R.F. and Vargo, S.L. 2006. The Service-Dominant Logic of Marketing. Armonk, N.Y.: M.E. Sharpe.

Lusch, R.F., Vargo, S.L., and O'Brien, M. 2007. "Competing through service: insights from service-dominant logic." Journal of Retailing 83(1): 5-18.

Mac Donald, M. 2015. "Something's happening here." DC Velocity, December 1, 2015. http://www.dcvelocity.com/articles/20151201-somethings-happening-here/

Malhotra, M.K. and Grover, V. 1998. "An assessment of survey research in POM: from constructs to theory." Journal of Operations Management 16(4): 407-425.

Mentzer, T., Flint, D., and Hult, T.G. 2001. "Logistics Service Quality as a Segment Customized Process." Journal of Marketing 65(4):82–104.

Mizerski, R.W. 1982. "An attribution explanation of the disproportionate influence of unfavorable information." *Journal of Consumer Research 9*(3): 301-310.

Mollenkopf, D.A., Rabinovich, E., Laseter, T.M., and Boyer, K.K. 2007. "Managing internet product returns: a focus on effective service operations." Decision Sciences 38(2): 215-250.

Murfield, M., Boone, C.A., Rutner, P., Thomas, R. 2017. "Investigating logistics service quality in omni-channel retailing." International Journal of Physical Distribution & Logistics Management 47(4).

Neslin, S.A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M.L., Thomas, J.S., Veroef, P.C. 2006. "Challenges and opportunities in multichannel customer management." Journal of Service Research 9(2): 95-112.

Neslin, S.A. and Shankar, V. 2009. "Key issues in multichannel customer management: current knowledge and future directions." Journal of Interactive Marketing 23(1): 70-81.

Ofek, E., Katona, Z., and Sarvary, M. 2011. ""Bricks and Clicks": the impact of product returns on the strategies of multichannel retailers." Marketing Science 30(1): 42-60.

Oliver, R.L 2014. Satisfaction: A behavioral perspective on the consumer. Routledge.

Peinkofer, S.T., Esper, T.L., Smith, R.J., and Williams, B.D. 2015. "Assessing the impact of price promotions on consumer response to online stockouts." *Journal of Business Logistics 36*(3): 260-272.

Peterson, R.A., Balasubramanian, S., and Bronnenberg, B.J. 1997. "The marketing implications of the internet for consumers." Journal of the Academy of Marketing Science 25(4): 329-346.

Pitt, L.F., Berthon, P.R., Watson, R.T., and Zinkhan, G.M. 2002. "The internet and the birth of real consumer power." Business Horizons 45(4): 7-14.

Pyke, D.F., Johnson, M.E., and Desmond P. 2001. “E-fulfillment: It’s harder than it looks.” Supply Chain Management Review 5(1):26–32.

Rao, S., Griffis, S.E., and Goldsby, T.J. 2011. “Failure to Deliver? Linking Online Order Fulfillment Glitches With Future Purchase Behavior.” Journal of Operations Management 29(7–8):693–703.

Reichheld, F.F. and Schefter, P. 2000. “E-loyalty: your secret weapon on the web.” Harvard Business Review 78(4): 105-115.

Schindler, R.M. and Bickart, B. 2002. “Characteristics of online consumer comments valued for hedonic and utilitarian shopping tasks.” Advances in Consumer Research 29: 428-429.

Seiders, K., Voss, G.B., Grewal, D., and Godfrey, A.L. 2005. “Do satisfied customers buy more? Examining moderating influences in a retailing comtext.” Journal of Marketing 69(4): 26-43.

Seiders, K., Voss, G.B., Godfrey, A.L., and Grewal, D. 2007. “SERVCON: development and validation of a multidimensional service convenience scale.” Journal of the Academy of Markeing Science 35(1): 144-156.

Spreng, R.A., and Mackoy, R.D. 1996. “An empirical examination of a model of perceived service quality and satisfaction." Journal of Retailing 72(2): 201-14.

Srinivasan, S.S., Anderson, R., and Ponnavolu, K. 2002. “Customer loyalty in e-commerce: an exploration of its antecedents and consequences.” Journal of Retailing 78(1): 41-50.

Stank, T.P., Goldsby, T.J., and Vickery, S.K. 1999. “Effect of service supplier performance on satisfaction and loyalty of store managers in the fast food industry.” Journal of Operations Management 17(4): 429-447.

Steenkamp, J.-B.E.M. and Baumgartner H. 1998. “Assessing measurement invariance in cross national consumer research.” Journal of Consumer Research 25(1):78-90.

Sweeney, J., Soutar, G., and Mazzarol, T. 2014. “Factors enhancing word-of-mouth influence: positive and negative service-related messages.” European Journal of Marketing 48(1/2): 336-359.

Taylor, J., Fawcett, S., and Jackson, G. 2004. “Catalog Retailer in Stock Performance: An Assessment of Service Levels.” Journal of Business Logistics 25(2): 119–38.

Trocchia, P. and Janda, S. 2003. “How do consumers evaluate internet retail service quality.” The Journal of Services Marketing 17(2/3):243-251.

Verhoef, P.C., Neslin, S.A., and Vroomen, B. 2007. "Multichannel customer management: understanding the research-shopper phenomenon." International Journal of Research in Marketing 24(2): 129-148.

Voss, G.B., Parasuraman, A., and Grewal, D. 1998. "The roles of price, performance, and expectations in determining satisfaction in service exchanges." Journal of Marketing 62(4): 46-61.

Zimmer-Gembeck, M.J., Geiger, T.C., and Crick, N.R. 2005. "Relational and physical aggression prosocial behavior and peer relations. Gender moderation and bidirectional associations." Journal of Early Adolescence 25(4): 421-452.

ESSAY 2

THE EFFECT OF PERCEPTIONS OF JUSTICE IN RETURNS ON SATISFACTION AND ATTITUDES TOWARD THE RETAILER

1. INTRODUCTION

In today's competitive retailing environment, it is critical that retailers provide high levels of service to their customers so that they can stand out amongst the competition. Providing great service is becoming more complex for retailers as customers continue to expect more service options (Jones 2015), including the ability to view product online or in-store as well as purchase in either channel. These expectations are driving retailers to provide more multichannel offerings (Specter 2016). In fact, about 40% of all purchases involve a combination of store and online interactions (Douglas 2016) making it more challenging for retailers to manage (Gooley 2016). At the same time, retailers need to provide a positive and consistent service experience no matter which channel is used.

It is especially important that retailers differentiate their service offerings in the area of product returns, since customers prioritize returns when choosing between retailers (Strang 2016). Multichannel returns are challenging for retailers (Agatz et al. 2008; Bernon et al. 2016) since processes for handling returns can differ across channels. It is critical that employees are trained on processing returns that were purchased through any channel and that they prioritize providing the customer with a positive returns experience.

Considering the service experience, customers, whether purchasing or returning product, evaluate how fairly they are treated by the retailer. Many customers choose where to shop based on fairness experienced from a retailer (Teo and Lim 2001). Fair treatment might even lead to a customer feeling more positive about an outcome that was initially unfavorable, for example, receiving a defective product (Colquitt 2001). This can be valuable for a retailer's service recovery efforts in the area of product returns. Dissatisfied customers who return products may

end up feeling more positive about the experience if they are treated with fairness and with respect by the retailer. Customers that is dissatisfied enough to return product may feel more positive about the experience if they are treated with fairness and respect during the returns process.

There has been previous research where fairness in a returns context has been examined with the basis of procedural justice (Griffis et al. 2012; Mollenkopf et al. 2007). When considering procedural justice in a returns context, researchers have examined how customer perceptions of returns related policies and procedures relate to customer satisfaction and outcomes.

The focus of this research is on the fairness of interactions between retailers and customers for retail returns, therefore we base our research on interactional justice. Interactional justice is the fairness of interpersonal treatment when procedures are implemented (Bies and Moag 1986; Colquitt et al. 2013). Though, even with research done on fairness of returns procedures, the fairness of interactions during the returns process between retailers and customers has not been examined from a fairness perspective. Perceptions of fairness and how customers are treated through interactions with a retailer are likely to affect their satisfaction and behavior. We specifically examine the two distinct types of interactional justice in this research, interpersonal justice and informational justice. We consider interpersonal and information justice as we examine how perceptions of fair treatment in retail returns relates to customer satisfaction, attitudes and behaviors. In addition to interpersonal and information justice, we also consider how social exchange theory supports this research. Social exchange theory suggests that interactions between individuals and organizations, that exhibit fairness, will result in positive outcomes. We consider this in developing hypothesized relationships.

In order to test the relationships of interest in this research, we utilize the scenario based experiment methodology. Scenario based experiments allow for examining situations within a specific context that are not easily duplicated (Pilling et al. 1994), allowing us to examine specific retail circumstances and related customer outcomes. In addition to our examination of the direct effects of interpersonal and information justice on customer satisfaction, and behavioral outcomes, we also consider the effects of a set of potential moderators of these relationships. We individually examine the effects of the moderators in three different study phases. In the first study phase, we examine the direct effects of interpersonal and informational justice, but we also examine the potential moderating effect of attributions of blame, or the level to which customers blames the retailer for their need to return the product. When customers needs to return product we expect they will be influenced by whether the return was the fault of the retailer or if they are returning product due to something under the customer's control. Next, in the second study phase, we examine the potential moderating effect of returns policy restrictiveness on the direct relationships. Returns policy restrictiveness is defined as the degree of difficulty involved in returning products (Richey et al. 2005) and we expect this to influence customers. Then lastly, in the third study phase, we examine the effects of returns process convenience as a moderator. Returns convenience is important to customers (Ofek et al. 2011) and is expected to influence customer outcomes.

Through this research, we provide support for retailers investing resources in developing returns service offerings in which customers are treated with fairness through retailer interactions. In the next section, we present a literature review, including an overview of justice theory and social exchange theory, as the basis for this research. The sections that follow include

our hypothesis development, research methodology, and results for each of the three experiments. Finally, we present implications, future research, and conclusions.

2. LITERATURE REVIEW

2.1 Multichannel Retailing Impacts

The multichannel retail landscape is competitive. Retailers need to compete against online, multichannel, and brick and mortar retailers, and this intense competition drives the need for retailers to differentiate themselves and understand what is important to customers. For example, retailers attempting to compete with online retail giant, Amazon, may offer fast and free shipping, but, in many cases, speed alone is not enough to win sales. Retailers need to stay informed to provide a retailing experience that meets needs. Since unsatisfied customers have numerous options in the retail landscape, it is critical that retailers provide a positive experience. One way to ensure a positive experience is through processes customers deem as fair (e.g. purchasing and returning). Fair customer treatment is a key differentiator for retailers (Nguyen and Klau 2013) and when customers shop at a retailer, they take into account the fairness of the entire retailing experience (Teo and Lim 2001). That retailing experience can include shopping, purchasing, and returning product.

The multichannel retailing environment makes fairness interactions even more challenging, as retailers need to not only be fair to customers, but also consistent through interactions with customers across all channels. It is essential that retailers focus on developing policies and procedures that facilitate consistency of the customer's experience across channels, which is expected to enhance perceptions of fairness and positively relate to customer attitudes and behaviors.

2.2 Returns Management Implications

Returns are costly (Bernon et al. 2016; HRC Advisory 2015) and returns volumes can be significant for retailers, with 2015 US returns coming in at $260.5 billion (Swagemakers 2016). Online purchases result in three times more returns than bricks and mortar purchases (Berman 2016), therefore, as online sales continue to grow, return volume is also likely to increase (Hubner et al. 2016; Planet Retail 2014; PwC 2013). Returns rates are higher for online purchases, in part, because online customers cannot fully assess products prior to purchase, increasing purchase uncertainty, and resulting in greater return rates (Ofek et al. 2011). Retailers must understand and plan for the potential impacts of large and growing returns volumes.

Returns are also important to customers. Returns have been shown to influence where customers decide to shop (Strang 2016). Therefore, it is critical that retailers provide customers with a returns experience that meets their needs. It can be difficult for retailers to control the customer returns experience. This is especially challenging when retailers offer returns through multiple channels and returns processes differ for product purchased in different channels.

2.3 Justice Theory

We rely on justice theory to support our examination of the outcomes of fair treatment in retail returns. Justice theory has been applied in a retail context in previous research. Blodgett et al. (1997) considered the effects of procedural, distributive, and interactional justice in a retail context. Procedural justice is the fairness of the procedures used to determine outcome distributions or allocations (Leventhal 1980; Leventhal et al. 1980; Thibaut and Walker 1975), distributive justice is concerned with the fairness of outcome distributions or allocations (Adams 1965; Deutsch 1975; Homans 1961; Leventhal 1976); while interactional justice is the fairness of

interactions between individuals or organizations; more specifically, the fairness of interpersonal treatment when procedures are implemented (Bies and Moag 1986; Colquitt et al. 2013). Blodgett et al. (1997) found support that distributive and interactional justice positively impact repatronage and word of mouth (WOM). In a retailing context, Rao et al. (2011) examined the effect of distributive justice on customer response to order fulfillment delays. Support was found that order fulfilment delays negatively impact future customer ordering (Rao et al. 2011).

In the context of retail returns, Griffis et al. (2012) applied procedural justice and found that customer experience in product returns, specifically refund speed, relates to repurchase behavior. Mollenkopf et al. (2007) also examined procedural justice in a retail returns context, and found that customer effort, an indicator of justice, is negatively related to perceived value of the returns experience and customer satisfaction (Mollenkopf et al. 2007).

While there has been some attention to procedural justice in a retail returns context, there has not been a focus on interactional justice in retail returns. Interactional justice plays a key role in customer evaluations and behaviors (Blodgett et al. 1997; Goodwin and Ross 1989; Martinez-Tur et al. 2006). Two distinct types of interactional justice have been identified and tested, interpersonal and informational justice. Interpersonal justice is the degree to which people are treated with politeness, dignity, and respect by parties that execute procedures or determine outcomes (Colquitt et al. 2001; Colquitt et al. 2013; Greenberg 1990). Informational justice differs from interpersonal justice and considers the extent to which explanations convey information about why procedures were used or outcomes were distributed in a certain way (Colquitt et al. 2001; Colquitt et al. 2013; Greenberg 1990). Interpersonal and informational justice are especially important in multichannel retailing given the increasing options for channels through which retailers and customers might interact. Considering a retail returns

context, we operationalize interpersonal justice as the degree to which customers feel that they are treated with politeness, dignity and respect during the returns experience. We operationalize informational justice in a retail returns context, as the degree to which information is provided by the returns associate that adequately explains returns policies and procedures.

The broadened base of interactions between customers and retailers across multiple channels makes it important to understand how multichannel interactions impact the customer and their perceptions of service. We extend research on justice in retail returns, which has previously focused on the fairness of returns procedures, by examining interpersonal and interactional justice, providing insight into how customers perceive their treatment and the information provided by the retailer.

2.4 Social Exchange Theory

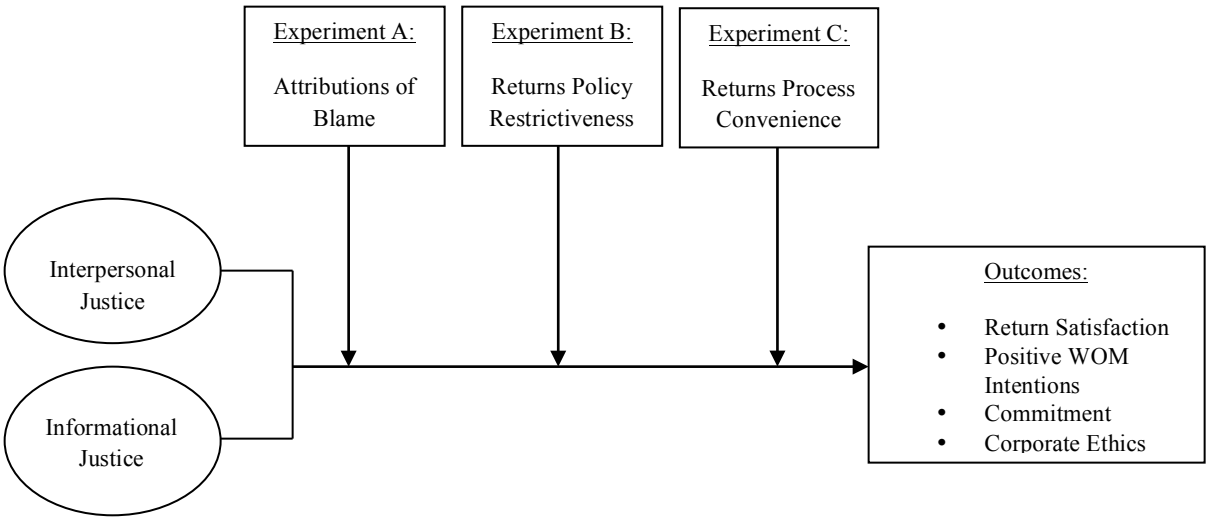
Interactional justice has been tied to social exchange theory (Cropanzano et al. 2001). According to social exchange theory, people not only consider the economic importance of an outcome, but also the socioemotional value of the outcome (Martinez-tur et al. 2006). Socioemotional value is concerned with the status of relationships among people and includes such factors as the perceived dignity of an interaction (Martinez-tur et al. 2006). In social exchange theory, relationships between individuals and organizations are exchanges in which the individual that experiences fairness from an organization, will reciprocate, conferring positive outcomes toward the organization (Blau 1964; Yi and Gong 2008).

3. HYPOTHESIS DEVELOPMENT

Our conceptual model is presented in Figure 1. The model presents the focal relationships in which two forms of justice, interpersonal and informational, in a retail returns context, relate

to customer outcomes and perceptions of the retailer. Discussion of specific hypothesized relationships will follow.

Figure E2-1: Conceptual model



3.1 Interpersonal Justice and Customer Outcomes

In the current research, we first examine how interpersonal justice in a retail returns setting relates to satisfaction, customer behaviors and perceptions of the retailer. The type of customer satisfaction that we specifically examine is return satisfaction, which is defined as a customer's satisfaction with a specific return transaction (Mollenkopf et al. 2007). In addition to return satisfaction, positive WOM intentions is also examined as an outcome variable. Positive WOM intentions is defined as the strength of intentions to convey positive information about a firm to others (Ferguson et al. 2010). Commitment is defined as the relative strength of an individual's identification with and involvement in a particular organization. (Mowday et al. 1982). The last

outcome variable examined is corporate ethics, which is defined as the perceptions that corporate behavior and business practices are guided by a set of moral norms, principles, or values (Brunk 2010).

The link between justice and these types of outcomes has been established in the general business literature. Colquitt et al. (2001) perform a meta-analysis of previous organizational justice research and finds support for a relationship between interpersonal justice and job satisfaction, outcome satisfaction, and organizational commitment. Ambrose et al. (2007) examined customer responses to complaint handling and found support for interpersonal justice's relationship with satisfaction. In a different context, airport security, Sindhave et al. (2006) found that interpersonal justice plays a role in customer satisfaction.

It is also expected that interpersonal justice will positively relate to a customer's perception of how ethical an organization is (Hosmer and Kiewitz 2005). Corporate ethics has been operationalized as the objective way that managers assess the justice of an organization (Hosmer and Kiewitz 2005). It is expected that perceptions of justice for stakeholders will relate to an objective measure of justice in corporate ethics (Hosmer and Kiewitz 2005). When a retailer treats a customer with dignity and respect, this would likely be perceived as behavior in line with firm ethical business practices.

Therefore, based on social exchange theory, if a firm treats a customer with politeness, dignity, and respect, then the customer will reciprocate with positive outcomes. Though the relationships between interpersonal justice and the outcome variables have been previously examined in literature, this examination has not taken place with a consideration for interpersonal justice in a returns setting. We extend previous research to examine these effects in

a returns context. Similar to previous research, we expect that interpersonal justice will also positively relates to the outcome variables in a returns context. Therefore, we propose that:

H1: Interpersonal Justice in retail returns is positively related to ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

3.2 Informational Justice and Customer Outcomes

In the current research we also examine how informational justice relates to satisfaction, customer behaviors, and perceptions of the retailer. Previous research supports a relationship between informational justice and the outcome variables of interest.

In a study on employee satisfaction, Colquitt et al. (2001) found evidence of a relationship between informational justice and job satisfaction, outcome satisfaction, and organizational commitment. Sindhave et al. (2006) examined the effects of informational justice on customer satisfaction in the context of airport security and found that informational justice played a critical role in customer satisfaction. Given these previous findings, it is expected that when retailer's exhibit higher levels of informational justice, and, therefore, provide customers with explanations related to procedures or outcomes, this will be viewed positively by customers who will be more likely to share positive WOM about the retailer. Further, this would likely relate positively to how committed customers are to doing future business with the retailer. It is also expected that informational justice will positively relate to a customer's perception of how

ethical an organization is (Hosmer and Kiewitz 2005). When customers perceive that a retailer openly provides them with explanations regarding procedures or outcomes, they are more likely to perceive that retailer as having ethical business practices.

Based on social exchange theory, if a customer perceives fairness in the way that a retailer provides them with explanations for procedures or outcomes then the customer will reciprocate with positive outcomes. Previous research supports that informational justice relates to satisfaction, customer behaviors and perceptions of the retailer, but an examination of informational justice in a returns setting has not been considered, therefore we posit that:

H2: Informational Justice in retail returns is positively related to ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

3.3 Moderated Relationships

Finally, in addition to the direct relationships of interest, there is also an examination of a set of moderated hypotheses that provide an understanding of the boundaries of the direct hypothesized relationships. The first interaction effect examined is for the interaction of interpersonal and information justice on the outcome variables. It is expected that as retailers develop an organization that provides customers with high levels of both interpersonal justice and informational justice during the returns process that the effect of the interaction of both forms of justice on the outcome variables will be amplified. This suggests that not only do customers

value being treated with kindness and respect during a return, but if they additionally receive this positive treatment, while also having the retailer provide them with explanations and information about the returns process that is perceived as fair, then the overall positive effect on outcomes will be even greater. Therefore we posit that:

H3: There is a significant interaction effect of returns related interpersonal justice and informational justice positively on ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

Beyond fairness, there are aspects of the returns experience that matter to customers and may have an affect on their attitudes and behaviors. We examine these aspects of the returns experience as potential moderators of the direct hypothesized relationships. In this first study, we examine attributions of blame as a moderator. Attributions of blame is defined as the extent to which customers hold the seller responsible for a failure (Maxham and Netemeyer 2002). Attributions of blame for returns is expected to affect customer attitudes and behavior. An example of a return scenario that a customer might attribute blame to the retailer is in the case of a misshipment. If a retailer sends the customer a different item than was ordered, the customer is likely to blame the retailer for the need to return the product. Alternatively, there are examples of returns for which the customer might attribute the blame to his or herself. For example, a

customer that accidentally purchases the wrong size shirt. It is expected that the party to whom a customer attributes blame will likely have an effect on the customer's perceptions and behaviors.

Maxham and Netemeyer (2002) studied customer attributions of blame toward the firm related to service failure. In another work, Bower and Maxham (2012) examined how return reason attribution moderates how return policies and fees relate to perceptions of fairness and post-returns spending. In the current essay, we also consider the moderating effects of attributions of blame. We suggest that a customer's feelings of fairness about returns interactions with the retailer will have a weaker effect on the outcomes if the customer blames the retailer for the return. Alternatively, we expect that if a customer blames his/herself for the return, then the effect of fairness of returns interactions will have a stronger positive effect on the outcomes. Therefore, even if a retailer provides customers with fairness in returns, it is critical that the retailer minimize returns for which it is at fault, since this is expected to offset positive outcomes. We propose that:

H4: Attributions of blame negatively moderates the relationship between Interpersonal Justice in retail returns and ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

H5: Attributions of blame negatively moderates the relationship between Informational Justice in retail returns and ….

a. Return Satisfaction

b. Positive WOM Intentions

c. Commitment

d. Corporate Ethics

Another moderator of interest in this research is returns policy restrictiveness, which measures the level of difficulty in returning products (Richey et al. 2005). Strict returns policies often benefit the retailer by allowing for more cost effective and efficient returns management. There has been research to support that returns policy restrictiveness relates to reverse logistics performance (Richey et al. 2005). Though, there may be economic benefits of more restrictive returns policies, this must be considered against the potential effect of restrictive returns policies on customer behavior and purchase decisions (Wood 2001). Strict product return policies are likely to increase the customer's purchase risk and could decrease the customer's willingness to purchase product (Bechwati and Siegal 2005; Petersen and Kumar 2015). Some retailers, such as Zappos, choose to set a liberal returns policy in order to drive customer loyalty, positive WOM, and repeat purchase (Palmquist 2015). Retailers have made changes to the level of restrictiveness of returns policies over the years and can continue do so. Therefore, retailers need to understand the potential effect that these decisions might have on customers. In the current research, we consider the moderating effects of returns policy restrictiveness. We suggest that a more restrictive returns policy will negatively interact with informational and interpersonal justice for a weaker effect on the outcomes. It is expected that customers will consider more restrictive returns policies as less favorable and will not respond as positively even when treated with fairness in returns. We posit that:

H6: Returns policy restrictiveness negatively moderates the relationship between Interpersonal Justice in retail returns and ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

H7: Returns policy restrictiveness negatively moderates the relationship between Informational Justice in retail returns and ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

The last moderator examined is returns process convenience. Returns convenience is important to customers (Ofek et al. 2011) and can even drive where they decide to shop (JDA 2015). Returns process convenience is defined as a customer's perceptions of the time and effort expenditures during the returns process. Seiders et al. (2007) developed the measure of customer perceptions of length of time and extent of effort for returns. Previous research supports a relationship between convenience and satisfaction and customer behavior (Chang and Polonsky 2012; Reichheld and Schefter 2000). There is also support in previous research of a relationship between returns and customer behavior (Griffis et al. 2012; Mollenkopf et al. 2007; Petersen and Kumar 2009). We expect that returns process convenience will moderate the effect on

hypothesized direct relationships. If a retailer provides customers with fairness through the returns experience, then the positive outcomes of this fairness are expected to be amplified if the retailer also provides a convenient returns process. We propose that:

H8: Returns process convenience positively moderates the relationship between Interpersonal Justice in retail returns and ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

H9: Returns process convenience positively moderates the relationship between Informational Justice in retail returns and ….

a. Return Satisfaction
b. Positive WOM Intentions
c. Commitment
d. Corporate Ethics

4. RESEARCH METHODOLOGY

A scenario based experiment was performed with three main study phases to test the relationships of interest. The scenario based experiment methodology allows for analyzing a situation with specific circumstances that would be difficult to duplicate (Pilling et al. 1994) and was therefore selected due to the nature of the customer returns experiences that we set out to

examine. Pretests were conducted for each of the three experiments in order to ensure that the manipulations worked as expected.

In each of the three main studies, there is a moderator of interest represented within each treatment. The experiments for each study phase include eight treatment cells resulting from the 2 (interpersonal justice: high vs low) X 2 (informational justice: high vs low) X 2 (moderator variable: high vs low) factorial design. The three moderators represented across the three study phases are: attributions of blame (study phase 1); returns policy restrictiveness (study phase 2); and returns process convenience (study phase 3). The following dependent variables were included for each study: return satisfaction, positive WOM intentions, commitment, and corporate ethics.

A confirmatory factor analysis was performed using EQS in order to ensure valid and reliable measures. There were 16 items and 4 latent constructs. In order to test for discriminant validity, a one factor model was compared to a seven factor model (Kline 2011). The one factor model had a chi-square of 1345.50 ($df = 104$) and the four factor model had a chi-square of 314.94 ($df = 95$). The significant improvement in model fit for the four factor model (X^2 ($df = 9$) = 1030.56, $p < .01$) suggests sufficient discriminant validity. Therefore, we proceeded with a test for convergent validity. All 16 factor loadings were significant (Table E2-1) supporting convergent validity (Anderson 1987). The results of the confirmatory factor analysis indicated adequate fit of the measurement model ($\chi^2 = 314.94$, df = 95, comparative fit index (CFI) = .962, incremental fit index (IFI) = .962, standardized root mean square residual (SRMR) = .040. The Comparative Fit Index (CFI) and Incremental Fit Index (IFI) have values greater than .90 suggesting reasonable fit (Bagozzi and Yi 1988; Fornell and Larcker 1981; Hu and Bentler 1995). Construct reliability estimates ranged from .886 (Return Satisfaction) to .965 (Positive

WOM Intentions), suggesting reliability of the scales. Results of the confirmatory factor analysis are presented in Table E2-1. For each study, the hypothesized main effects and interaction effects were tested in SPSS using MANOVA due to the categorical nature of the treatment conditions as prescribed by Hair et al. (2006).

Table E2-1: Measurement model results

Construct	Measurement Items	Standardized Parameter Estimate	Standard Error	t-value
Returns Satisfaction	RETSAT1	.586		(Fixed)
	RETSAT2	.794	.14	11.34
	RETSAT3	.913	.16	12.28
	RETSAT4	.876	.14	12.02
Positive WOM Intentions	PWOM1	.946		(Fixed)
	PWOM2	.977	.02	44.33
	PWOM3	.954	.03	39.37
Commitment	COMMIT1	.640		(Fixed)
	COMMIT2	.944	.10	14.41
	COMMIT3	.860	.10	13.52
	COMMIT4	.692	.09	11.40
Corporate Ethics	ETHICS1	.851		(Fixed)
	ETHICS2	.497	.07	9.83
	ETHICS3	.897	.05	22.83
	ETHICS4	.925	.04	24.28
	ETHICS5	.932	.05	24.60

Fit statistics: Chi-square = 314.935 ($df = 98$, $p < 0.001$), CFI = .96, IFI = .96, SRMR = .04.

5. STUDY 1: DIRECT EFFECTS AND THE EFFECT OF ATTRIBUTIONS OF BLAME

5.1 Study 1 Pretest

Prior to testing the hypothesized relationships, pretests of experimental manipulations were performed. The manipulations represent a customer returns scenario in which the participant imagines experiencing a targeted level of each of the following: interpersonal justice (high/low), informational justice (high/low), and attributions of blame (high/low). Eight experimental conditions were utilized based on the 2 X 2 X 2 experiment.

Amazon's Mechanical Turk (MTurk) online labor system was used to collect survey responses from a total of 144 respondents. One respondent failed an attention check and was eliminated leaving 143 responses for analysis. Survey participants were randomly assigned to one of the eight treatments and asked to answer a questionnaire based on the scenario details included in the treatment.

An analysis was performed to confirm the validity of the manipulations. Results of t-tests confirm the validity of the following manipulations: interpersonal justice manipulation ($t = -24.87$, $df = 141$, $p < .0001$); informational justice manipulation ($t = -11.06$, $df = 141$, $p < .0001$); and attributions of blame manipulation ($t = -14.03$, $df = 141$, $p < .0001$). We proceeded with study 1.

5.2 Study 1 Experimental Design and Sample

There were a total of 362 respondents that participated in study 1 through Amazon MTurk, and 344 remained after eliminating 10 for failure of attention checks and 8 identified as outliers

considering multivariate distance. About half of all respondents (51%) were female, and approximately 87% have at least attended some college. The majority of respondents (84%) make less than $80,000 income per year with more than half of respondents between the ages of twenty-five and forty-five.

An online survey was developed to collect data on the relevant constructs. Participants were asked to read a scenario (see Appendix A for an example) in which they were directed to imagine that they have purchased a pair of jeans online that they need to return to the retailer, including a description of the returns experience at the retail store. The scenarios include manipulations for interpersonal justice, informational justice, and attributions of blame. After reading the scenario, participants were asked to answer questions based on how they would react to the retailer returns experience described. The questionnaire included the dependent variables and manipulation checks.

5.3 Study 1 Dependent Variables and Manipulation Check Measures

Measurement scales for the dependent variables and manipulation checks were adapted from existing constructs. The measurement items descriptive statistics can be found in Appendix D and the construct correlation matrix is presented in Table E2-2.

Return satisfaction was measured with a four-item 7-point Likert scale (1 = very dissatisfied/7 = very satisfied), adapted from Mollenkopf et al. (2007). Positive WOM intentions was measured with a three-item 7-point Likert scale (1 = strongly disagree/7 =strongly agree), adapted from Brady et al. (2012), who adapted their measure from Zeithaml et al. (1996). The commitment measure was adapted from Ambrose et al. (2007), who adapted their measure from Crosby et al. (1990) from a broader service operations context to a retailing context. The

corporate ethics measure was adapted from Lagace et al. (1991). Reliability was assessed for the constructs with each construct having a Cronbach's alpha greater than .87. Details on all constructs are included in Appendix D.

Table E2-2: Construct correlation matrix

Construct	RETSAT	PWOM	COMMIT	ETHICS
Return Satisfaction	1			
Positive WOM Intentions	.760**	1		
Commitment	.719**	.813**	1	
Corporate Ethics	.710**	.733**	.729**	1
Mean	4.648	4.320	4.063	4.768
Standard Deviation	1.479	1.602	1.291	1.146

All Constructs have 7-point Likert-type scale: (1) Strongly disagree to (7) Strongly agree.
** Correlation is significant at the 0.01 level (2-tailed).

Manipulation checks for interpersonal justice, informational justice, and attributions of blame were included at the end of the questionnaire. Interpersonal justice and informational justice were measured with 7-point Likert scales (1 = to a small extent/7 = to a large extent), adapted from Colquitt 2001, which was adapted from Bies and Moag (1986). Attributions of blame was adapted Bower and Maxham (2012) with a three item scale.

5.4 Study 1 Analysis and Results

MANOVA was used to test the direct and interaction effects with interpersonal justice, informational justice, and attributions of blame as the fixed factors, and the following dependent variables: return satisfaction, positive WOM intentions, commitment, and corporate ethics (Table

E2-3). The analysis supports that there were significant multivariate main effects of interpersonal justice (Wilks' $\lambda = .56$, $F = 66.47$, $p < .001$), informational justice (Wilks' $\lambda = .96$, $F = 3.45$, $p = .009$), and attributions of blame (Wilks' $\lambda = .92$, $F = 7.24$, $p < .001$). As hypothesized interpersonal justice individually influenced return satisfaction (H1a) ($F = 171.32$, $p < .001$), positive WOM intentions (H1b) ($F = 217.79$, $p < .001$), commitment (H1c) ($F = 201.34$, $p < .001$), and corporate ethics (H1d) ($F = 167.87$, $p < .001$). Support was also found that informational justice individually influenced return satisfaction (H2a) ($F = 8.22$, $p < .001$), positive WOM intentions (H2b) ($F = 7.07$, $p < .001$), commitment (H2c) ($F = 6.22$, $p < .001$), and corporate ethics (H2d) ($F = 12.83$, $p < .001$). Establishing support for the direct hypotheses, testing of the moderated hypotheses followed.

Support was found for significant multivariate interaction effects of interpersonal justice X informational justice ($F=.970$, $p=.037$), and support was also found for significant multivariate interaction effects of interpersonal jusice X attributions of blame ($F=2.26$, $p= .031$). No support was found for significant multivariate interaction effects of informational justice X attributions of blame. Individual effects of interactions on the dependent variables were also analyzed. Support was found for a significant interaction effect of interpersonal justice X informational justice on return satisfaction (H3a) ($F=4.33$, $p=.038$). Support was not found for the interaction of interpersonal justice X informational justice on positive WOM intentions (H3b), commitment (H3c), and corporate ethics (H3d). There was also support for a significant interaction effect of interpersonal justice X attributions of blame on positive WOM intentions (H4b) ($F = 4.27$, $p=.039$). No significant interaction effect was found for interpersonal justice X attributions of blame on return satisfaction (H4a), commitment (H4c), or corporate ethics (H4d). Additionally, there was not evidence of a significant interaction effect of informational justice X attributions of

blame on any of the dependent variables. Upon completion of study 1, we proceeded with the examination of a different moderator, returns policy restrictiveness in study 2.

Table E2-3: Multivariate analysis – study 1

	Multivariate Results		Univariate Results			
			Return Satisfaction	Positive WOM Intentions	Commitment	Corporate Ethics
	Wilks' λ	F	F	F	F	F
Fixed Factors						
Interpersonal Justice	.556	66.47*	171.32**	217.79**	201.34**	167.87**
Informational Justice	.960	3.45*	8.22**	7.07**	6.22*	12.83**
Attributions of Blame	.920	7.24*	16.38**	22.96**	25.12**	11.38**
Interactions						
INTER * INFO	.970	2.59*	4.33*	.16	.00	.06
INTER * ATTRIBU	.974	2.26*	.02	4.27*	3.05	.46
INFO * ATTRIBU	.997	.22	.05	.00	.32	.12

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

6. STUDY 2: THE EFFECT OF RETURNS POLICY RESTRICTIVENESS

6.1 Study 2 Pretest

Prior to testing the hypothesized interaction effects for study 2, pretests of the related experimental manipulations were performed. The manipulations for study 2 differ from the

manipulations for study 1, by the inclusion of the moderator, returns policy restrictiveness. The study 2 manipulations represent a customer returns scenario in which the participant would imagine experiencing a targeted level of each of the following: interpersonal justice (high/low), informational justice (high/low), and returns policy restrictiveness (high/low). Eight experimental conditions were utilized based on the 2 X 2 X 2 experiment.

Amazon's MTurk was used to collect survey responses from a total of 128 respondents. None of the respondents failed the attention checks leaving 128 responses for analysis. Survey participants were randomly assigned to one of the eight treatments and asked to answer a questionnaire based on the scenario details included in the treatment.

Analysis was performed to confirm the validity of the manipulations. Results of t-tests supported the validity of the following: interpersonal justice manipulation ($t = -25.295$, $df = 126$, $p < .0001$); informational justice manipulation ($t = 8.78$, $df = 126$, $p < .0001$). Results also confirmed the validity of the returns policy restrictiveness manipulation ($t = 7.89$, $df = 126$, $p < .0001$). We proceeded to perform study 2.

6.2 Study 2 Experimental Design and Sample

There were a total of 372 respondents that participated in study 2 through Amazon MTurk, and 349 remained after eliminating 6 for failure of attention checks and 17 identified as outliers considering multivariate distance. Marginally more than half of all respondents (54%) were female, and approximately 93% have at least attended some college. The majority of respondents (85%) make less than $80,000 income per year with more than half of respondents between the ages of twenty-five and forty-five.

An online survey was developed to collect data on the relevant constructs. The scenario developed for study 2 was similar to the study 1 scenario, involving a customer purchase and returns experience, although the scenario for study 2 includes manipulations of interpersonal justice, informational justice, and returns policy restrictiveness. Participants were asked to answer a questionnaire after reading a scenario.

6.3 Study 2 Dependent Variables and Manipulation Check Measures

Measurement items descriptive statistics can be found in the Appendix D. The measurement items for the dependent variables are the same as in study 1. Manipulation checks for interpersonal justice, informational justice, and returns policy restrictiveness were included at the end of the questionnaire. Interpersonal justice and informational justice measures were the same as in study 1. Returns policy restrictiveness was adapted from Richey et al. (2005) with a three item 7-point Likert scale (1 = strongly disagree/7 =strongly agree).

6.4 Study 2 Analysis and Results

MANOVA was used to test the interaction effects with interpersonal justice, informational justice, and returns policy restrictiveness as the fixed factors, and the following dependent variables: return satisfaction, positive WOM intentions, commitment, and corporate ethics (Table E2-4).

Support was not found for multivariate interaction effects of interpersonal justice X returns policy restrictiveness or informational justice X returns policy restrictiveness. There was support found though for an individual significant interaction effect of interpersonal justice X

return policy restrictiveness on corporate ethics (H6d) (F=4.09, p=.044). No significant interaction effect was found for interpersonal justice X returns policy restrictiveness on return satisfaction (H6a), positive WOM intentions (H6b), or commitment (H6c). Additionally, there was not evidence of a significant interaction effect of informational justice X returns policy restrictiveness on any of the dependent variables. Upon completion of study 2, we proceeded with study 3, focused on the examination of the moderator, returns process convenience.

Table E2-4: Multivariate analysis – study 2

	Multivariate Results		Univariate Results			
			Return Satisfaction	Positive WOM Intentions	Commitment	Corporate Ethics
	Wilks' λ	F	F	F	F	F
Fixed Factors						
Interpersonal Justice	.611	53.82**	155.08**	197.02**	147.53**	103.72**
Informational Justice	.971	2.56*	2.42	5.28*	.12	.29
Restrictiveness	.973	2.36*	7.02*	4.78	5.68*	.02
Interactions						
INTER * INFO	.977	2.02*	6.91**	6.04*	3.91*	4.54*
INTER * RESTRICT	.980	1.71	.02	2.22	2.42	4.09*
INFO * RESTRICT	.985	1.31	.28	.69	.00	1.40

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

7. STUDY 3: THE EFFECT OF RETURNS PROCESS CONVENIENCE

7.1 Study 3 Pretest

Prior to testing the hypothesized interaction effects for study 3, pretests of the related experimental manipulations were performed. The manipulations for study 3 differ from the manipulations for studies 1 and 2, by the inclusion of the moderator, returns process convenience. The study 3 manipulations represent a customer returns scenario in which the participant would imagine experiencing a targeted level of each of the following: interpersonal justice (high/low), informational justice (high/low), and returns process convenience (high/low). Eight experimental conditions were utilized based on the 2 X 2 X 2 experiment.

Amazon's MTurk was used to collect survey responses from a total of 155 respondents. Two respondents failed an attention check and were eliminated leaving 153 responses for analysis. Survey participants were randomly assigned to one of the eight treatments and asked to answer a questionnaire based on the scenario details included in the treatment.

An analysis was performed to confirm the validity of the manipulations. Results of t-tests supported the validity of the following: interpersonal justice manipulation ($t = -22.957$, $df = 151$, $p < .0001$); informational justice manipulation ($t = -10.936$, $df = 151$, $p < .0001$). Results also confirmed the validity of the returns process convenience manipulation ($t = -5.245$, $df = 151$, $p < .0001$). Study 3 was next performed.

7.2 Study 3 Experimental Design and Sample

There were a total of 362 respondents that participated in the study through Amazon MTurk, and 339 remained after eliminating 15 for failure of attention checks and 8 identified as outliers

considering multivariate distance. More than half of all respondents (52%) were male, and approximately 85% have at least attended some college. The majority of respondents (83%) make less than $80,000 income per year with more than half of respondents between the ages of twenty-five and forty-five.

An online survey was developed to collect data on the relevant constructs. The scenario developed for study 3 was similar to the scenario from the other studies, except for the inclusion of manipulations of returns process convenience. Participants were asked to answer a questionnaire after reading the scenario.

7.3 Study 3 Dependent Variables and Manipulation Check Measures

Measurement items descriptive statistics can be found in Appendix D. The measurement items for the dependent variables are the same as in first two studies. Manipulation checks for interpersonal justice, informational justice, and returns process convenience were included at the end of the questionnaire. Interpersonal justice and informational justice measures were the same for study 3 as in the previous two studies. Returns process convenience was adapted from Seiders et al. (2005, 2007) with a six item 7-point Likert scale (1 = strongly disagree/7 =strongly agree).

7.4 Study 3 Analysis and Results

MANOVA was used to test the interaction effects with interpersonal justice, informational justice, and returns process convenience as the fixed factors, and the following dependent variables: return satisfaction, positive WOM intentions, commitment, and corporate ethics.

Support was found for significant multivariate interaction effects of interpersonal justice X returns process convenience ($F = 4.85$, $p < .001$), but no support was found for significant multivariate interaction effects of informational justice X returns process convenience. There was also support found for individual significant interaction effects of interpersonal justice X returns process convenience on return satisfaction (H8a) ($F = 9.04$, $p < .001$), positive WOM intentions (H8b) ($F = 10.18$, $p < .001$), commitment (H8c) ($F = 19.01$, $p < .001$), and corporate ethics (H8d) ($F = 3.70$, $p = .027$). No significant interaction effect was found for informational justice X returns process convenience on any of the dependent variables.

Table E2-5: Multivariate analysis – study 3

	Multivariate Results		Univariate Results			
			Return Satisfaction	Positive WOM Intentions	Commitment	Corporate Ethics
	Wilks' λ	F	F	F	F	F
Fixed Factors						
Interpersonal Justice	.620	50.33**	154.96**	160.35**	121.97**	76.39**
Informational Justice	.945	4.77**	16.72**	3.01	7.28**	4.96*
Returns Convenience	.808	19.51**	78.04**	25.82**	23.47**	7.26**
Interactions						
INTER * INFO	.948	4.52**	6.18*	1.20	.61	.35
INTER * RETCON	.944	4.85**	9.04**	10.18**	19.01**	3.70*
INFO * RETCON	.998	.16	.47	.30	.06	.04

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

8. MANAGERIAL IMPLICATIONS

The findings from the studies support the direct hypothesized relationships (H1 & H2) that returns related interpersonal justice and informational justice have direct relationships with the dependent variables. With the growth of multichannel retailing and a greater number of channels for interaction between retailers and customers, it is becoming even more critical that retailers focus on the fairness with regard to how they treat customers during interactions and through the sharing of information.

Analysis of the interaction effects provides a greater understanding of where retailers should focus for an impact on their desired outcomes. There was support that individually both returns related interpersonal justice and information justice have a positive effect on return satisfaction (H1a & H2a). Interestingly, the significant interaction of interpersonal justice X informational justice on return satisfaction (H3a) suggests that when customers experience both interpersonal justice and informational justice within a returns experience that the effect on return satisfaction will be amplified. These results provide retailers with the support to invest in developing operational policies and procedures and training returns associates for a resulting higher level of both types of justice.

There was also support for a significant interaction effect of interpersonal justice X attributions of blame on positive WOM intentions (H4b). When attributions of blame are low, interpersonal justice has a stronger positive effect on positive WOM (Figure 2). This finding suggests that retailers should focus on reducing returns that customers blame them for, such as misshipments. Reducing returns seen as the fault of the retailer allows retailers to maximize the positive effect of fair customer treatment in returns on the customer's willingness to share

positive WOM. There has been research support that customers may accept a negative outcome as long as they are treated with fairness and respect (Ambrose et al. 2007; Turel et al. 2008). This finding also suggests that retailers should train returns associates to treat customers with extra politeness and respect, especially when the return was the fault of the retailer.

Analysis of the moderating effect of returns policy restrictiveness provided support for a significant interaction effect of interpersonal justice X return policy restrictiveness on corporate ethics (H6d). The positive effect of interpersonal justice in returns on corporate ethics was stronger for customers that assess the returns policy as less restrictive (Figure 2). Therefore, as retailers consider making changes to returns policy restrictiveness, it should be considered that having a less restrictive returns policy can provide a stronger effect for how treating customers fairly during the returns process relates to whether customers view them as ethical.

Finally, in considering analysis of the moderating effect of returns process convenience, support was found for significant interaction effects of interpersonal justice X returns process convenience on return satisfaction (H8a), positive WOM intentions (H8b), commitment (H8c), and corporate ethics (H8d). Customers place a high value on convenience and these results reveal that the degree to which retailers treat their customers with greater politeness and respect during the returns process will have a stronger effect on the outcome variables when retailers also provide a more convenient returns experience (Figure 2). Understanding how fair customer treatment interacts with returns convenience can result in customer that are more satisfied with returns, share positive WOM about the retailer with others, feel a greater sense of commitment to the retailer, and perceive the retailer as ethical.

Therefore the results of this research can be considered guidance for managers that invest resources in developing returns programs with a consideration for the treatment of customers and the way that information is conveyed during the returns process.

9. THEORETICAL IMPLICATIONS

Though there has been previous support for the relationship between justice and the outcome variables of focus, there has not been an examination of interpersonal and informational justice in a returns related context with these outcome variables. Previous research on retail returns has examined the effects of procedural justice on how customers perceive the fairness of returns policies and procedures and the related outcomes. The current research extends previous returns justice research to examine the effects of the fairness of retailer interactions with customers in a returns setting. As multichannel returns offerings become more prevalent and the complexity of managing interactions across channels grows, research which examines interactional justice helps to uncover the importance of focusing on establishing fairness of interactions across channels is needed.

As we examine the effects of both interpersonal and informational justice in this research, the results support that the effects of interpersonal justice are stronger than the effects of informational justice on the outcome variables. This highlights that customers value fair treatment by retailers even more than they value fairness of retailer explanations and information about policies and procedures. There is also support that the effects of interpersonal justice on the outcomes can be enhanced or diminished depending on some aspects of the customer returns experience. Results support that some of the individual effects of interpersonal justice may be heightened when the returns process is convenient, and, alternatively, be diminished when the

retailer is perceived to be at fault for the return, or when the returns policy is more restrictive. These results highlight the complexity of the effects of interpersonal justice.

There have also been calls for more supply chain management research focused on customer perceptions of supply chain policies and the current research meets this need. In today's competitive retailing environment it is critical for research to consider how supply chain policies and procedures relate to customer perceptions and outcomes. Supply chain has the potential to be a differentiator for retailers and this type of research can help in identifying those policies and procedures with the most potential for impact on customer outcomes.

10. FUTURE RESEARCH

The emergence of multichannel retailing and the increased options for customers to interact with retailers across multiple channels has elevated the importance of considering the fairness of retailer interactions across channels and the related impacts. Interpersonal justice and informational justice allow for examination of the fairness of interactions across channels. Future research on interpersonal justice and information justice within a multichannel retailing context should be conducted, and specifically in the context of retail returns.

11. CONCLUSIONS

The increasingly competitive retail landscape requires that retailers set themselves apart by providing service offerings that are valued by customers. A retailer's service offering must be compelling enough to attract and retain customers. Customers value being treated with fairness when interacting with retailers. Therefore, retailers need to invest resources into developing policies and procedures that ensure fairness of interactions across all channels. This research

supports the importance of investing in policies and procedures that enhance fairness of interactions for customers across retailer channels.

There are also aspects of the returns experience and process that can enhance the effect that fairness has on customer outcomes. Retailers need to drive towards increasing positive customer outcomes and a consideration for how all aspects of the returns experience and returns process enhances or detracts from effects on customer outcomes needs to be considered. As aspects of a retailer's returns experience potentially have a negative impact, then the retailer must stay agile enough to make the necessary changes to correct issues that detract from customer value.

APPENDICES

Appendix A: Study 1 Scenario Example

Base scenario

Imagine that you have been shopping online for a pair of jeans. You find the jeans and purchase them from the website of a major retailer that also has a store near your home.

(High attributions of blame)

When the jeans arrive later that week, you notice that the retailer sent you the wrong item. They sent you a much smaller size than you ordered. You look at the packing slip and see that you ordered the correct size, but they shipped the wrong size. Because of **their mistake, you decide to return the item**.

(Low interpersonal justice)

The next day, you go to the store to make the return. You go up to the returns desk and the returns associate seems **agitated** and asks how she can help you. You explain that you are making a return and the reason. She grabs the item out of your hand to inspect it. She then asks you **accusingly** if you have your receipt, which you do, so she scans the item.

< INSERT INFORMATIONAL JUSTICE MANIPULATION HERE> She makes no apology for the inconvenience of you having to make a return and she just yells "Next!" to the next customer.

(Low informational justice)

She notices that you purchased the jeans online and begins to work on the return. As she works behind the counter, she seems to be struggling to complete the return. She **doesn't** provide you with information about what is occurring. Finally, after you wait 5 minutes with **no feedback**, she looks up and tells you the return is complete.

Appendix B: Study 2 Scenario Example

Base scenario

Imagine that you have been shopping online for a pair of jeans. You find the jeans and purchase them from the website of a major retailer that also has a store near your home. When the jeans arrive later that week, you try on the jeans and they don't fit as you had hoped, so you decide to return them.

(High Returns Policy Restrictiveness)

You look online at the retailer's returns policy and it states that any product being returned must be in the original packaging and you **MUST have the original receipt for returns,** which seems strict.

(High interpersonal justice)

The next day, you go to the store to make the return. You go to the returns desk and the returns associate greets you with a smile and asks how she can help. You explain that you are making a return and the reason. She looks at you apologetically and says that she is sorry you had to take the time to do a return, but she is happy to help you. She kindly asks you if you have your receipt, which you do, so she scans the item.

< INSERT INFORMATIONAL JUSTICE MANIPULATION HERE>

She asks if there is anything else that she can help you with and tells you to have a great day.

(High informational justice)

She notices that you purchased the jeans online and begins to work on the return. As she works behind the counter, she seems to be struggling to complete the return. She looks up and **explains the entire process to you**. As she works through the steps, she **continually updates you on her progress**. Finally, after a few minutes of work and discussion, she looks up and tells you the return is complete.

Appendix C: Study 3 Scenario Example

Base scenario

Imagine that you have been shopping online for a pair of jeans. You find the jeans and purchase them from the website of a major retailer that also has a store near your home. When the jeans arrive later that week, you try on the jeans and they don't fit as you had hoped, so you decide to return them.

Returns Process Convenience

(Low Returns Process Convenience)

The next day, you go to the store to make the return. You eventually find the returns area in the back of the store but it takes a while to find it since it is **not clearly marked**. There is a **long wait** at the desk so the return might **take a while**. Imagine that the returns desk looks like the image below.

After waiting in line…

(Low interpersonal justice)

… you get to the returns desk and the returns associate seems agitated and asks how she can help you. You explain that you are making a return and the reason. She grabs the item out of your hand to inspect it. She then asks you accusingly if you have your receipt, which you do, so she scans the item.

< INSERT INFORMATIONAL JUSTICE MANIPULATION HERE>

She makes no apology for the inconvenience of you having to make a return and she just yells "Next!" to the next customer.

(Low informational justice)

She notices that you purchased the jeans online and begins to work on the return. As she works behind the counter, she seems to be struggling to complete the return. She doesn't provide you with information about what is occurring. Finally, after you wait 5 minutes with no feedback, she looks up and tells you the return is complete.

Appendix D: Construct Measurement Descriptive Statistics

Table E2-D1: Construct measurement descriptive statistics

Constructs and Measurement Items	Mean	Std. Dev.
Return Satisfaction (Cronbach's alpha = .876)[a]		
Please indicate your level of satisfaction with the following aspects of the **returns** experience:		
RETSAT1. General return instructions.	5.24	1.45
RETSAT2. The convenience of returning the product.	5.02	1.66
RETSAT3. The overall process of returning the product.	4.45	1.78
RETSAT4. The overall process of receiving credit for the returned merchandise.	4.83	1.65
Positive WOM Intentions (Cronbach's alpha = 0.971)[b]		
Please indicate your level of agreement with the following statements:		
PWOM1. I would recommend this retailer to friends.	4.44	1.66
PWOM2. I would say good things about this retailer to others.	4.41	1.68
PWOM3. I would encourage friends and relatives to shop with this retailer.	4.32	1.65
Commitment (Cronbach's alpha = 0.870) [c]		
Please indicate your level of agreement with the following statements:		
COMMIT1. If I needed to make this type of purchase again, I would change retailers for a small cost savings.(R)	3.59	1.58
COMMIT2. I want to continue dealing with this retailer.	4.48	1.59
COMMIT3. If this retailer sold other products I needed, I would buy them from this retailer.	4.67	1.54
COMMIT4. If other options were available, I would shop with another retailer.(R)	3.47	1.48
Corporate Ethics (Cronbach's alpha = 0.904)[d]		

Table E2-D1 (cont'd)

Please indicate your level of agreement with the following statements:		
ETHICS1. This provider is ethical.	4.89	1.27
ETHICS2. This retailer often engages in practices that I consider unethical.(R)	4.97	1.44
ETHICS3. This retailer has high ethical standards.	4.51	1.29
ETHICS4. I would consider this retailer to be an ethical company.	4.64	1.26
ETHICS5. This retailer adheres to an ethical code of conduct.	4.67	1.34
Interpersonal Justice (Cronbach's alpha = 0.962)[e]		
To what extent has the returns associate…		
INTERJUS1. treated you in a polite manner?	4.06	2.50
INTERJUS 2. treated you with dignity?	4.11	2.42
INTERJUS 3. treated you with respect?	4.10	2.44
INTERJUS 4. refrained from improper remarks or comments?	4.97	2.08
Informational Justice (Cronbach's alpha = 0.954) [e]		
To what extent has the returns associate…		
INFOJUS1. been candid in communications with you?	4.19	2.16
INFOJUS2. explained the returns procedures thoroughly?	4.19	2.33
INFOJUS3. given explanations regarding the returns procedures that are **reasonable**?	4.06	2.18
INFOJUS4. communicated details in a timely manner?	4.08	2.18
INFOJUS5. seemed to tailor communications to customers' specific needs?	3.70	2.14
Attributions of Blame (Cronbach's alpha = 0.907)[e]		
To what extent…		
ATTRIBU1. was the retailer responsible for my need to return this product?	4.39	2.56
ATTRIBU2. was the retailer responsible for the return that you experienced?	4.79	2.36

Table E2-D1 (cont'd)

ATTRIBU3. do you blame the retailer for this return?	4.02	2.52

[a] Sources: Adapted from Mollenkopf et al. 2007.

[b] Source: Adapted from Brady et al. 2012.

[c] Source: Adapted from Ambrose et al. 2007; Mowday et al. 1982.

[d] Sources: Adapted from Lagace et al. 1996.

[e] Sources: Adapted from Colquitt 2001; Bies and Moag 1986.

[f] Sources: Adapted from Bower and Maxham 2012.

Appendix E: Hypothesized paths testing

Table E2-E1: Hypothesized paths testing

Path	F	Note
H1a: Inter Justice → Return Satisfaction	171.32**	Supported
H1b: Inter Justice → Positive WOM Intent	217.79**	Supported
H1c: Inter Justice → Commitment	201.34**	Supported
H1d: Inter Justice → Corporate Ethics	167.87**	Supported
H2a: Info Justice → Return Satisfaction	8.22**	Supported
H2b: Info Justice → Positive WOM Intent	7.07**	Supported
H2c: Info Justice → Commitment	6.22*	Supported
H2d: Info Justice → Corporate Ethics	12.83**	Supported
H3a: Inter Justice X Info Justice → Return Satisfaction	4.33*	Supported
H3b: Inter Justice X Info Justice → Positive WOM Intent	.16	Not Supported
H3c: Inter Justice X Info Justice → Commitment	.00	Not Supported
H3d: Inter Justice X Info Justice → Corporate Ethics	.06	Not Supported
H4a: Inter Justice X Attribu of Blame → Return Satisfaction	.02	Not Supported
H4b: Inter Justice X Attribu of Blame → Positive WOM Intent	4.27*	Supported
H4c: Inter Justice X Attribu of Blame → Commitment	3.05	Not Supported
H4d: Inter Justice X Attribu of Blame → Corporate Ethics	.46	Not Supported
H5a: Info Justice X Attribu of Blame → Return Satisfaction	.05	Not Supported
H5b: Info Justice X Attribu of Blame → Positive WOM Intent	.00	Not Supported
H5c: Info Justice X Attribu of Blame → Commitment	.32	Not Supported
H5d: Info Justice X Attribu of Blame → Corporate Ethics	.12	Not Supported
H6a: Inter Justice X Restrictiveness → Return Satisfaction	.02	Not Supported
H6b: Inter Justice X Restrictiveness → Positive WOM Intent	1.22	Not Supported
H6c: Inter Justice X Restrictiveness → Commitment	2.42	Not Supported
H6d: Inter Justice X Restrictiveness → Corporate Ethics	4.09*	Supported
H7a: Info Justice X Restrictiveness → Return Satisfaction	.28	Not Supported
H7b: Info Justice X Restrictiveness → Positive WOM Intent	.69	Not Supported
H7c: Info Justice X Restrictiveness → Commitment	.00	Not Supported
H7d: Info Justice X Restrictiveness → Corporate Ethics	1.40	Not Supported
H8a: Inter Justice X Returns Conv → Return Satisfaction	9.04**	Supported
H8b: Inter Justice X Returns Conv → Positive WOM Intent	10.18**	Supported
H8c: Inter Justice X Returns Conv → Commitment	19.01**	Supported
H8d: Inter Justice X Returns Conv → Corporate Ethics	3.70*	Supported
H9a: Info Justice X Returns Conv → Return Satisfaction	.47	Not Supported
H9a: Info Justice X Returns Conv → Positive WOM Intent	.30	Not Supported
H9a: Info Justice X Returns Conv → Commitment	.06	Not Supported
H9a: Info Justice X Returns Conv → Corporate Ethics	.04	Not Supported

Appendix F: Studies 1-3: Plots of Interaction Effects

Figure E2-F1: Study 1: Interpersonal Justice X Attributions of Blame on Positive WOM Intentions

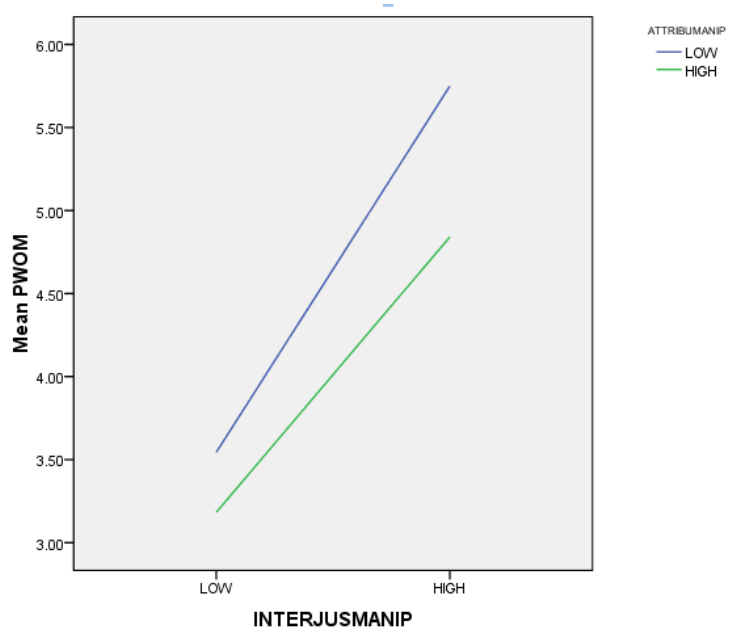


Figure E2-F2: Study 2: Interpersonal Justice X Restrictiveness on Ethics

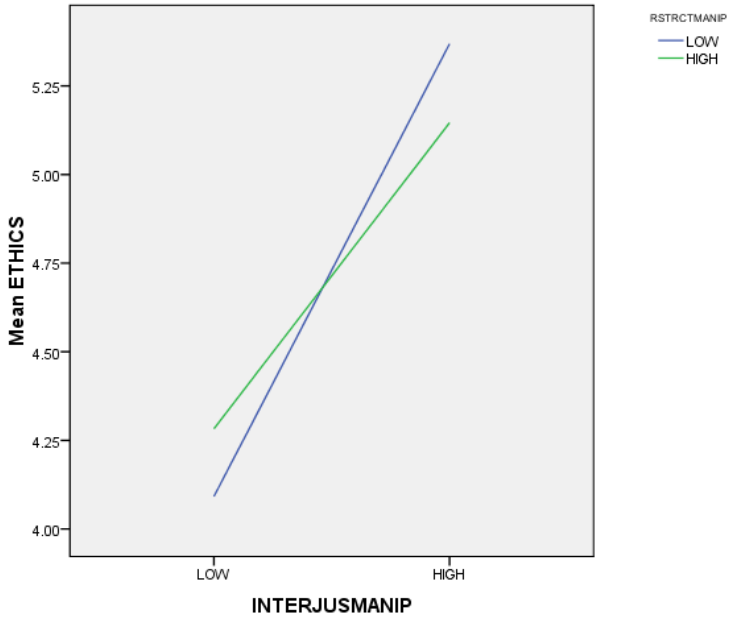


Figure E2-F3: Study 3: Interpersonal Justice X Returns Convenience on Returns Satisfaction

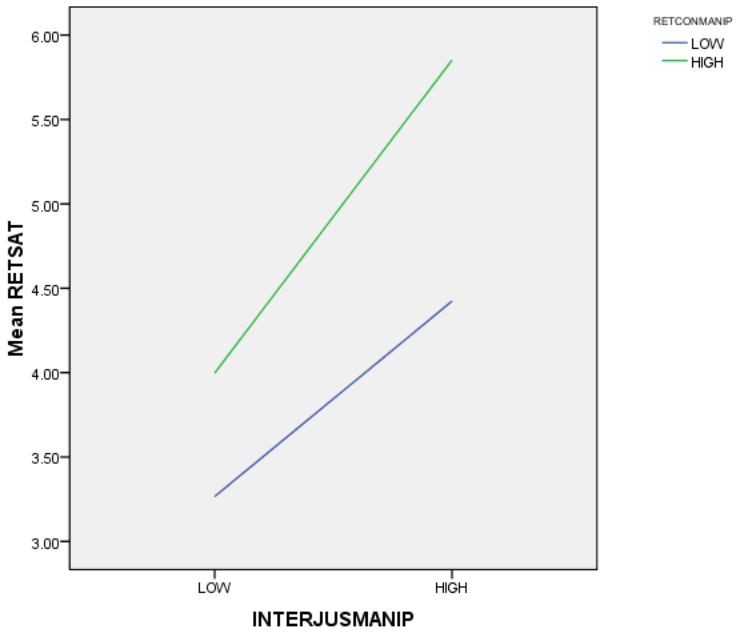


Figure E2-F4: Study 3: Interpersonal Justice X Returns Convenience on Positive WOM Intentions

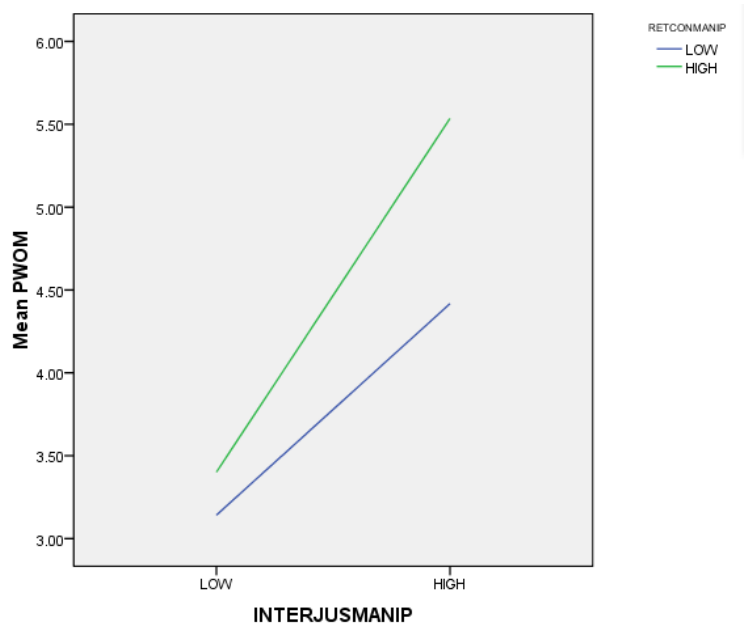


Figure E2-F5: Study 3: Interpersonal Justice X Returns Convenience on Commitment

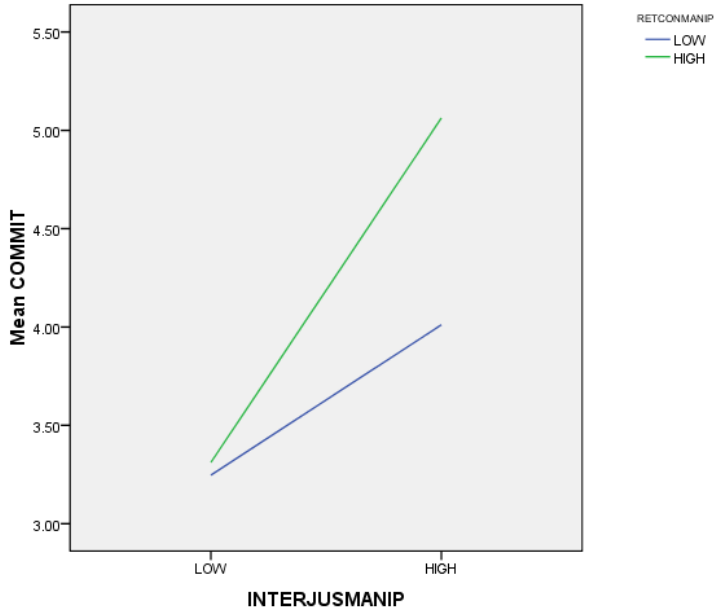
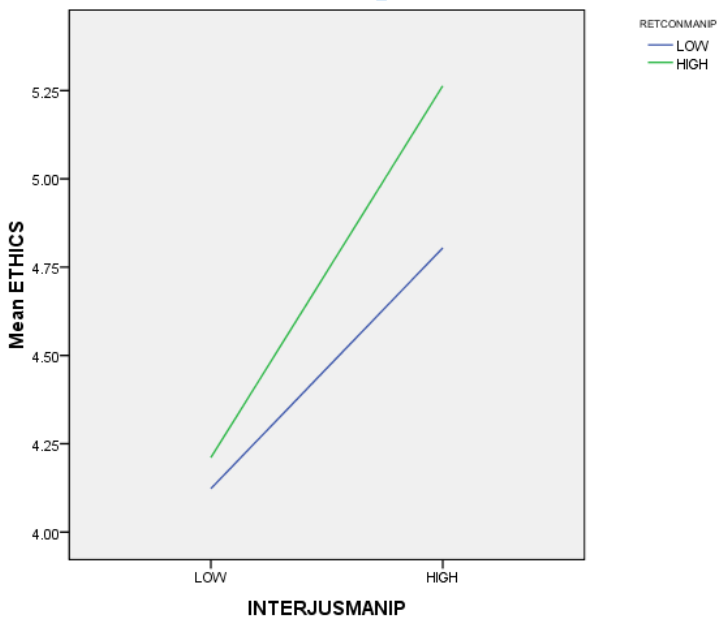


Figure E2-F6: Study 3: Interpersonal Justice X Returns Convenience on Corporate Ethics



REFERENCES

REFERENCES

Adams, J.S. 1965. Inequity in social exchange. In L. Berkowitz (Ed.), Advances in experimental social psychology, 2: 267-299). New York, NY: Academic Press.

Agatz, N.A.H., Fleischmann, M., van Nunen, J.A.E.E. 2008. "E-fulfillment and multi-channel distribution - A review." European Journal of Operational Research. 187(2): 339-356.

Ambrose, M., Hess, R.L. and Ganesan, S., 2007. "The relationship between justice and attitudes: An examination of justice effects on event and system-related attitudes." Organizational Behavior and Human Decision Processes 103(1): 21-36.

Bagozzi, R.P. and Yi, Y. 1988. "On the evaluation of structural equation models." Journal of the Academy of Marketing Science 16(1): 74-94.

Bechwati, N.N. and Siegal, W.S. 2005. "The impact of the prechoice process on product returns." Journal of Marketing Research 42 (3): 358–367.

Berman, J. 2016. "UPS Study Highlights Impact of Active Online Shoppers on Supply Chain." Supply Chain 24/7, June 09, 2016 http://www.supplychain247.com/article/ups_study_highlights_impact_of_active_online_shoppers_on_supply_chain?ajs_uid=5801H4438478D3Z

Bernon, M., Cullen, J., and Gorst, J. 2016. "Online retail returns management: integration within an omni-channel distribution context." International Journal of Physical Distribution & Logistics Management 46(6/7): 584-605.

Bies, R.J. and Moag, J.F. 1986. Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), Research on negotiations in organizations, 1: 43–55. Greenwich, CT: JAI Press.

Bines, J. 2017. "Top 10 retail predictions for 2017." Chain Store Age, February 23, 2017. http://www.chainstoreage.com/article/top-10-retail-predictions-01

Blattberg, R.C., Kim, B.D., and Neslin, S.A. 2008. Multichannel Customer Management. Database Marketing: Analyzing and Managing Customers, 635-674.

Blau, P. M. 1964. Exchange and power in social life. New York: JohnWiley & Sons.

Blodgett, J.G., Hill, D.J., and Tax, S.S. 1997. "The effects of distributive, procedural, and interactional justice on postcomplaint behavior." *Journal of Retailing* 73(2): 185-210.

Bower, A.B. and Maxham III, J.G. 2012. “Return shipping policies of online retailers: normative assumptions and the long-term consequences of fee and free returns.” Journal of Marketing, 76: 110-124.

Brady, M.K., Voorhees, C.M., and Busco, M.J. 2012.” Service sweethearting: its antecedents and customer consequences.” Journal of Marketing 76(2):81-98.

Brunk, K.H., 2010. “Exploring origins of ethical company/brand perceptions-A consumer perspective of corporate ethics.” *Journal of Business Research 63*(3): 255-262.

Chang, Y.-W. and Polonsky, M.J. 2012 “The influence of multiple types of service convenience on behavioral intentions: the mediating role of consumer satisfaction in a Taiwanese leisure setting.” International Journal of Hospitality Management 31(1): 107-118.

Colquitt, J.A. 2001. “On the dimensionality of organizational justice: a construct validation of a measure.” Journal of Applied Psychology 86(3): 386-400.

Colquitt, J.A., Conlon, D.E., Wesson, M.J., Porter, C.O.L.H., Ng, K.Y. 2001. “Justice at the millennium: a meta-analytic review of 25 years of organizational justice research.” Journal of Applied Psychology, 86(3): 425-445.

Colquitt, J.A., Scott, B.A., Rodell, J.B., Long, D.M., Zapata, C.P., and Conlon, D.E. 2013. “Justice at the millennium, a decade later: a meta-analytic test of social exchange and affect-based perspectives.” Journal of Applied Psychology, 98(2): 199-236.

Cropanzano, R., Bowen, D.E., and Gilliland, S.W. 2007. “The management of organizational justice.” Academy of Management Perspectives 21(4): 34-48.

Cropanzano, R. and Schminke, M. 2001. Using social justice to build effective work groups. In M. Turner (Ed.), Groups at work: Advances in theory and research (pp. 143-171). Hillsdale, NJ: Erlbaum.

Crosby, L.A., Evans, K.R., and Cowles, D. 1990. “Relationship quality in services selling: An interpersonal influence perspective.” Journal of Marketing, 54(3): 68–81.

Deutsch, M. 1975. “Equity, equality, and need: what determines which value will be used as the basis for distributive justice?” Journal of Social Issues, 31: 137-150.

Douglas, M. 2016. “Retail logistics: when fast isn’t fast enough.” Inbound Logistics, August 2016. http://www.inboundlogistics.com/cms/article/retail-logistics-when-fast-isnt-fast-enough/

Eckerd, S., Hill, J., Boyer, K.K., Donahue, K., and Ward, P.T. 2013. “The relative impact of attribute, severity, and timing of psychological contract breach on behavioural and attitudinal outcomes.” Journal of Operations Management 31: 567-578.

Ferguson, R.J., Paulin, M., and Bergeron, J. 2010. “Customer sociability and the total service experience: antecedents of positive word-of-mouth intentions.” Journal of Service Management 21(1): 25-44.

Fornell, C. and Larcker, D.F. 1981. “Evaluating structural equation models with unobservable variables and measurement error.” Journal of Marketing Research 18(1): 39-50.

Fugate, B.S., Thomas, R.W., Golicic, S.L., 2012, "The impact of coping with time pressure on boundary spanner collaborative behaviors." International Journal of Physical Distribution & Logistics Management, 42(7): 697-715.

Goodwin, C. and Ross, I. 1989. “Salient dimensions of perceived fairness in resolution of service complaints.” Journal of Consumer Satisfaction/Dissatisfaction and Complaining Behavior 2: 87-92.

Gooley, T. 2016. “Responding to the retail revolution.” DC Velocity, February 10, 2016. http://www.dcvelocity.com/articles/20160210-responding-to-the-retail-revolution/

Greenberg, J. 1990. “Employee theft as a reaction to underpayment inequity: the hidden cost of pay cuts.” Journal of Applied Psychology, 75: 561-568.

Griffis, S.E., Rao, S., Goldsby, T.J., and Niranjan, T.T. 2012. “The customer consequences of returns in online retailing: an empirical analysis.” Journal of Operations Management 30(4): 282-294.

Griffith, D.A., Harvey, M.G., Lusch, R.F. 2006. “Social exchange in supply chain relationships: The resulting benefits of procedural and distributive justice.” Journal of Operations Management, 24: 85-98.

Hair, J.F., Black, W.C., Anderson, R.E. and Tatham, R.L. 2006. Multivariate Data Analysis, 6th ed., Prentice-Hall, Upper Saddle River, NJ.

Hofer, A.R., Knemeyer, A.M., and Murphy, P.R. 2012. “The Roles of Procedural and Distributive Justice in Logistics Outsourcing Relationships.” Journal of Business Logistics, 33(3): 196-209.

Homans, G. 1961. Social behaviour: its elementary forms. London: Routedge & Kegan Paul.

Hosmer, L.T. and Kiewitz, C. 2005. “Organizational justice: a behavioral science concept with critical implications for business ethics and stakeholder theory.” Business Ethics Quarterly 15(1): 67-91.

HRC Advisory, 2015, “True Omnichannel Model Eludes 80 Percent of Retailers, Study Says.” Supply Chain Brain, September 18, 2015 http://www.supplychainbrain.com/content/index.php?id=5032&cHash=081010&tx_ttnews[tt_news]=34542

Hu, L.-T. and Bentler, P.M. 1995. “Evaluating Model Fit.” in Structural Equation Modeling: Concepts, Issues, and Applications, R. H. Hoyle ed., Thousand Oaks, CA: Sage Publications, 76-99.

Hübner, A., Wollenburg, J., Holzapfel, A. 2016. "Retail logistics in the transition from multi-channel to omni-channel." International Journal of Physical Distribution & Logistics Management, 46(6/7): 562-583.

Jones, C. 2015 “What do customers really say about your omnichannel supply chain performance.” DC Velocity, September 21, 2015. http://blogs.dcvelocity.com/bestpractices/2015/09/what-do-customers-really-say-about-your-omni-channel-supply-chain-performance.html

JDA, 2015. “Europeans Experience High Level of Problems with Their Online Retail Orders, Study Says.” SupplyChainBrain, September 11, 2015. http://www.supplychainbrain.com/content/index.php?id=5032&cHash=081010&tx_ttnews[tt_news]=34458

Katok, E. and Pavlov, V. 2013. “ Fairness in supply chain contracts: a laboratory study.” Journal of Operations Management, 31: 129-137.

Lagace, R.R., Dahlstrom, R. and Gassenheimer, J.B. 1991. “The relevance of ethical salesperson behavior on relationship quality: the pharmaceutical industry.” *Journal of Personal Selling & Sales Management 11*(4): 39-47.

Leventhal, G.S. 1976. The distribution of rewards and resources in groups and organizations. In L. Berkowitz & W. Walster (Eds.), Advances in experimental social psychology (9: 91-131). NewYork, NY: Academic Press.

Leventhal, G.S. 1980. What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.), Social exchange: Advances in theory and research (pp. 27–55). New York, NY: Plenum Press.

Leventhal, G.S., Karuza, J., and Fry, W.R. 1980. Beyond fairness: a theory of allocation preferences. In G. Mikula (Ed.), Justice and Social Interaction (pp. 167-218). NewYork: Springer-Verlag.

Liu, Y., Huang, Y., Luo, Y., and Zhao, Y. 2012. “How does justice matter in achieving buyer-supplier relationship performance?” Journal of Operations Management, 30: 355-367.

Martinez-Tur, V., Peiro, J.M., Ramos, J., and Moliner, C. 2006. “Justice perceptions as predictors of customer satisfaction: the impact of distributive, procedural, and interactional justice.”

Maxham III, J.G. and Netemeyer, R.G. 2002. “Modeling customer perceptions of complaint handling over time: the effects of perceived justice on satisfaction and intent.” Journal of Retailing, 78: 239-252.

Mollenkopf, D.A., Rabinovich, E., Laseter, T.M., and Boyer, K.K. 2007. “Managing internet product returns: a focus on effective service operations.” Decision Sciences 38(2): 215-250.

Mowday, R.T., Porter, L.W., and Steers, R.M., 1982. Employee-organization linkage. The psychology of commitment absenteism, and turn over_ Academic Press Inc. London.

Narasimhan, R., Narayanan, S., and Srinivasan, R. 2013. “An investigation of justice in supply chain relationships and their performance impact.” Journal of Operations Management, 31: 236-247.

Nguyen and Klaus 2013. “Retail fairness: exploring consumer perceptions of fairness towards retailers’ marketing tactics.” Journal of Retailing and Consumer Services 20(3): 311-324.

Ofek, E., Katona, Z., and Sarvary, M. 2011. ““Bricks and Clicks”: the impact of product returns on the strategies of multichannel retailers.” Marketing Science 30(1): 42-60.

Palmquist, M. 2015. “The unexpected benefits of product returns.” Strategy-Business.com, July 23. 2015.

Petersen, J.A. and Kumar, V. 2015. “Perceived risk, product returns, and optimal resource allocation: evidence from a field experiment.” Journal of Marketing Research 52(2): 268-285.

Pilling, B.K., Crosby, L.A. and Jackson, D.W. Jr. 1994. “Relational bonds in industrial exchange: an experimental test of the transaction cost economic framework.” Journal of Business Research 30(3): 237-251.

Planet Retail, 2014. “Retail sales worldwide from 2008 to 2018, by channel (in billion US dollars).”
www.statista.com/statistics/311300/global-retail-sales-by-channel/

PwC, 2013. “Demystifying the Online Shopper – 10 Myths of Multichannel Retailing.”, US Studio, New York, NY.

Rao, S., Griffis, S.E., and Goldsby, T.J. 2011. “Failure to Deliver? Linking Online Order Fulfillment Glitches With Future Purchase Behavior.” Journal of Operations Management 29(7–8):693–703.

Reichheld, F.F. and Schefter, P. 2000. “E-loyalty: your secret weapon on the web.” Harvard Business Review 78(4): 105-115.

Richey, R.G., Chen, H., Genchev, S.E., and Daugherty, P.J., 2005. “Developing effective reverse logistics programs.” Industrial Marketing Management 34(8): 830-840.

Seiders, K., Voss, G.B., Godfrey, A.L. and Grewal, D., 2007. SERVCON: development and validation of a multidimensional service convenience scale. *Journal of the Academy of Marketing Science*, *35*(1), pp.144-156.

Sindhav, B., Holland, J., Rodie, A.R., Adidam, P.T. and Pol, L.G. 2006. "The impact of perceived fairness on satisfaction: are airport security measures fair? Does it matter?" Journal of Marketing Theory and Practice *14*(4): 323-335.

Specter, 2016. "Retailers navigate the omni-challenge world." Logistics Management, September 1, 2016. http://www.logisticsmgmt.com/article/retailers_navigate_the_omni_challenge_world

Strang, R. 2016. "Omni-channel supply chains designed for a retail world without boundaries." Supply Chain 24/7, August 15, 2014. http://www.supplychain247.com/article/omni-channel_supply_chains_designed_for_a_retail_world_without_boundaries

Swagemakers, T. 2016. "Retail returns: an opportunity to drive revenue through reverse logistics." SupplyChainBrain, June 7, 2016. http://www.supplychainbrain.com/content/index.php?id=5032&cHash=081010&tx_ttnews[tt_news]=37799

Teo, T.S.H. and Lim, V.K.G. 2001. "The effects of perceived justice and satisfaction and behavioral intentions: the case of computer purchase." International Journal of Retail & Distribution Management 29(2): 109-124.

Thibaut, J.W. and Walker, L. 1975. Procedural justice: A psychological analysis. Hillsdale, NJ: Erlbaum.

Turel, O., Yuan, Y. and Connelly, C.E., 2008. In justice we trust: predicting user acceptance of e-customer services. *Journal of Management Information Systems*, *24*(4), pp.123-151.

Wood, S.L., 2001. "Remote purchase environments: The influence of return policy leniency on two-stage decision processes." *Journal of Marketing Research 38*(2): 157-169.

Yi, Y. and Gong, T. 2008. "The effects of customer justice perception and affect on customer citizenship behavior and customer dysfunctional behavior." Industrial Marketing Management 37(7): 767-783.

Zeithaml, V.A., Berry, L., and Parasuraman, A. 1996. "The Behavioral Consequences of Service Quality." Journal of Marketing 60(2): 31–46.

ESSAY 3

AN EXAMINATION OF HOW MULTICHANNEL SERVICE OFFERINGS RELATE TO RETAILER PERFORMANCE

1. INTRODUCTION

The retail industry is becoming increasingly competitive, and it is especially challenging for retailers to compete with online retail giant, Amazon. Amazon dominates by offering a tremendous assortment with fast and free shipping. In order to compete, brick and mortar retailers have expanded their online presence to remain competitive (Specter 2016). Retailers that operate both brick and mortar and online channels are considered multichannel retailers (Cao and Li 2015; Chatterjee 2010). Multichannel retailers might not be able to compete on service offerings, such as same day or next day delivery, but they do have some unique advantages over pure online retailers. Some advantages of multichannel retailers with a history of success in the brick and mortar channel are their market experience and distribution capability, existing supplier relationships, market power, and existing customer base (Ishfaq et al. 2016). Multichannel retailers also typically possess a network of brick and mortar stores that can be leveraged in providing customers with a unique set of service offerings that allow customers to interact across multiple channels (Ishfaq et al. 2016). Mobile technology and social media enable customers to use more than one channel throughout the retailing experience (O'Reilly 2015) and expectations are growing related to the flexibility to shop and purchase either online or in-store (Chatterjee 2010; Jones 2015). Many retailers are considering how to use their supply chain capabilities to meet customer needs by providing multichannel offerings.

There are some retailers who do not provide multichannel offerings because of the challenges involved in providing them. For example, only 30% of multichannel retailers allow customers to buy online and pick up in store and less than 40% of multichannel retailers allow for buying online and returning to the store (Hubner et al. 2016a). Retailers need to be strategic

in considering how to offset the challenges involved in developing multichannel offerings while considering potential benefits.

In the current research, we extend previous research by examining how multichannel service offerings relate to performance outcomes. Firms can use their resources to develop supply chain capabilities to support multichannel service offerings. We examine three specific multichannel service offerings: BOPS, ship from store, and return to store. These service offerings were selected as they relate to different aspects of the retail supply chain. BOPS and ship from store relate to order fulfillment and return to store relates to product returns. We examine how the three multichannel service offerings relate to retailer performance. We suggest that retailers that provide multichannel offerings have more options for servicing customers and they are better able to use their resources and leverage their network, which we expect will relate positively to performance. In order to test the relationships of interest, we utilize a secondary data methodology, using a large archival data cross-section of ecommerce retailers that matched the operationalization of the constructs of interest in this research (Rabinovich and Cheon 2011).

With the growth of multichannel retailing, firms need to focus investment in multichannel offerings for a positive impact on their performance, especially as it relates to the use of supply chain capabilities. Retail senior leaders suggest that supply chain is the key to satisfying multichannel customers (JDA 2015). This research strives to identify which multichannel service offerings will have a positive impact on retailer performance. In the next section, we present a literature review. The sections that follow include a review of our hypothesis development, research methodology, and results. Finally we present implications, future research, and conclusions.

2. LITERATURE REVIEW

2.1 Multichannel Retailing Overview

Through multichannel service offerings customers can use multiple channels during their retailer interactions. This allows customers to benefit from the positive attributes of different channels (Brynjolfsson et al. 2013; Chatterjee 2010; O'Reilly, 2015). Traditional brick-and-mortar retailers shifting to accommodate multichannel offerings are experiencing growing costs that can erode already slim margins and added complexity (Harrington 2017). The complexity of introducing multichannel offerings is a likely reason why some firms have not yet developed these offerings (DHL 2015).

2.2 Multichannel Retailing Challenges

One result of brick and mortar retailers expanding their online presence is the increased complexity of their distribution network (Hubner et al. 2016a; Ishfaq et al. 2016; Murfield et al. 2017). Introducing multichannel offerings requires the need to be able to forecast and fulfill demand across multiple channels, while managing differences in lead times and operating costs for each channel (Hubner et al. 2016a; Ishfaq et al. 2016). When the online and brick and mortar channel are not fully integrated, this can lead to inefficiencies when attempting to provide multichannel offerings (Gallino and Moreno 2014; Hubner et al. 2016a; Ishfaq et al. 2016; Murfield et al. 2017).

Providing multichannel offerings can be especially complex for retailers that traditionally used their distribution network to support a brick and mortar channel (Ames 2015). These retailers have further developed their online channels, and distribution operations to support online are very different (Ames 2015). One of the biggest challenges of fulfilling online orders

from a distribution center that traditionally supported brick and mortar stores is that picking and packing smaller orders to be shipped directly to customers requires different processes and technology (Ames 2015). As observed by Petersen (2015), it is challenging to support online distribution operations, but it is even more complex to support multichannel distribution operations.

Many multichannel service offerings rely on support from store operations (Gallino and Moreno 2014; RSR 2014), which can introduce challenges. These challenges can include increased complexity at the store, as store associates and store processes that are typically focused on selling now have an expanded role to support multichannel offerings (Gallino and Moreno 2014). Having store associates pick product for online orders is typically more costly than having this activity take place at a warehouse (Harrington 2017), since store associates are trained to sell rather than to perform warehousing activities (RSR 2014). In addition to challenges related to store associate training, store backrooms typically do not have the space, proper racking, or equipment to facilitate distribution operations (RSR 2014). Stores also do not typically have the technology or systems, such as WMS capabilities, for order filling and shipping that a typical DC has (Ames 2015). In fact, many stores use a paper based method for fulfilling customer orders (Ames 2015). Therefore, when store operations fulfill orders to support multichannel operations, there needs to be a consideration for these implications.

In addition to the challenges related to picking and shipping multichannel orders from distribution centers and stores, there are also challenges related to inventory visibility. Significant investment is needed for building inventory visibility to support multichannel offerings, in order to maintain accurate inventory across channels (Harrington 2017; Petersen 2015). Many multichannel retailers have separate inventory systems for their brick and mortar

and online channels, and, therefore, lack real-time visibility to item inventory across channels (Petersen 2015).

Lastly, it can be challenging for retailers implementing multichannel offerings to properly incentivize their associates. Retailers need to ensure that incentives are built so that departments are not motivated for optimizing one particular channel, but rather the overall success of the firm and that employees are striving for customer sales across all channels (DHL 2015). For example, managers for the online channel and managers for the brick and mortar channel should develop programs and receive incentives based on overall sales growth across all channels.

2.3 Multichannel Resource and Capability Needs

Though it can be complex and challenging for retailers to support multichannel service offerings, the retailers that have the necessary resources to support these offerings stand to reap the benefits. Retailers that have greater integration across their channels are more likely to be successful at introducing multichannel service offerings (Gallino and Moreno 2014; Ishfaq et al. 2016; Murfield et al. 2017). Hubner et al. (2016b) examined different strategies for multichannel fulfillment and developed a framework that highlights the challenges and opportunities of the strategies. Channel integration is challenging, because it can involve the integration of inventory systems, warehouses, marketing campaigns and pricing strategies (Gallino and Moreno 2014). It is essential for retailer competitiveness that processes are put in place and channels are integrated to support multichannel offerings.

Research has supported that retailers with a large infrastructure of retail outlets as a resource will have a benefit in multichannel retailing (Ishfaq et al. 2016). An outcome of introducing multichannel service offerings is that stores take on an extended role in distribution

(Ishfaq et al. 2016). As stores develop distribution capabilities and integration between store operations and distribution operations increases, retailers are able to break down previous silos in the organization (Randall et al. 2011).

Retailers also need to develop capabilities for real-time visibility of inventory across channels and visibility of order fulfillment status in order to support multichannel offerings (Hubner et al. 2016a; Petersen 2015; RSR 2014). For stores to handle the distribution operations that are needed to support multichannel offerings, there needs to be space in store backrooms for these operations (RSR 2014) and personnel allocated to these functions.

2.4 Multichannel Benefits

Some retailers use their stores as distribution points as a multichannel offering (Harrington 2017). Fulfilling online orders from store inventory allows for shorter lead times to consumers (Hubner et al. 2016a). Multichannel retailers that fulfill customer orders from stores can typically provide customers with delivery on the same day it is ordered, providing an advantage over those pure online retailers that do not have the capability to provide next day delivery (Hubner et al. 2016a). Using stores to fulfill online orders can result in a number of retailer benefits such as: increased online revenue; reduced last mile delivery costs; and increased customer satisfaction (Harrington 2017).

There are two options for using stores as distribution points for online orders. The first option, BOPS, involves the customer ordering online and then coming into the store to pick up their product. The second option, ship from store, involves the customer ordering online and the store shipping product directly to the customer from store inventory. One of the customer benefits of BOPS is that retailers typically offer this service for free, allowing the customer to

avoid a delivery charge (Ishfaq et al. 2016), which is expected to reflect favorably with customers. Retailers providing the BOPS option have the option of using store inventory to fulfill these orders or shipping product from a distribution center to the store along with store replenishment deliveries (Ishfaq et al. 2016). Providing this service offering also has the benefit of bringing the customer into the local store, creating the opportunity for additional sales (Hubner et al. 2016a; Ishfaq et al. 2016).

2.5 Multichannel Returns

In addition to competing based on order fulfillment service offerings, multichannel retailers can also differentiate themselves from a returns perspective. Online customers typically cannot touch and feel product prior to purchase which can increase customer uncertainty driving returns (Bernon et al. 2016). Therefore, in a multichannel environment, even online customers have the opportunity to inspect product visually in store prior to purchase, potentially affecting return rates. A survey of multichannel retailers shows that they expect that it will be a requirement in the future for multichannel retailers to allow for product returns in store regardless of purchase channel (Hubner et al. 2016b). Today, though, some multichannel retailers do not allow for in store returns of online purchases (Hubner et al. 2016b). Some of the challenges that keep retailers from implementing in store returns for online purchases are related to the effort involved in the returns process as well as intense IT requirements (Hubner et al. 2016b). Stores are likely to have higher labor costs and are expected to be less efficient in processing online returns than warehouse returns associates (Hubner et al. 2016b). Differing processes for returning products bought in store vs. online drives additional inefficiencies (Bernon et al. 2016). Inventory implications can also be a challenge for multichannel returns, since product can end up being returned to a location where it is not stocked in inventory (Bernon et al. 2016).

One of the resources that enables a store to be successful in providing in store returns, even for online orders, is a vast network of store locations (Bernon et al. 2016). More store locations increases the ease with which customers can return product (Bernon et al. 2016). Offering customers more options for returning product can increase convenience for the customer (Hubner et al. 2016b), which could drive business for the retailer. Customers that are able to return product purchased online to the store get the benefit of not having to pay for returns shipping. There are also benefits though for retailers that allow for store returns regardless of channel. Offering store returns has the benefit of bringing customers into the store for the return, enabling the retailer to gather information for returns avoidance efforts (Hubner et al. 2016b) as well as the chance to sell the customer an alternative product, potentially increasing satisfaction and driving sales (Hubner et al. 2016b).

3. HYPOTHESIS DEVELOPMENT

3.1 Multichannel Offerings Related to Performance

In the current research, we examine how each of three multichannel offerings of interest (BOPS, ship from store, and in store returns) relates to retailer performance. There has been support in previous research for the challenges and benefits related to a retailer providing multichannel offerings for customers (Murfield et al. 2017). Considering the challenges and benefits of multichannel offerings, we can examine how multichannel offerings relate to retailer performance. Retailer performance is a measure assigned to a retailer that weighs a combination of the retailer's sales, growth, and competitive position. The conceptual model for this research is presented in Figure 1.

There are benefits of multichannel offerings that may relate positively to retailer performance. Retailers that provide multichannel offerings report that extending these offerings has lead to increased sales, increased market share, improved profitability and improved customer loyalty (Ames 2015; DHL 2015). In order to positively impact retailer performance, firms can work to increase sales by providing customers with what they value. For example, customers value the benefits of multichannel offerings (Chatterjee 2010; Jones 2015), which could be a differentiator that drives more sales for these retailers compared with retailers that do not provide multichannel offerings. Cao and Li (2015) analyzed secondary data on US retailers and found support that integration of multiple channels is positively related to sales performance. Some of the reasons behind the relationship between integration and sales performance were the following: improved trust; increased customer loyalty; higher consumer conversion rates; and greater opportunities to cross-sell.

When considering BOPS and ship from store, these offerings are likely to be viewed favorably by customers, due to the potential for a short cycle time and specifically in the case of BOPS, customers avoid paying a delivery fee (Ishfaq et al. 2016). These benefits could potentially drive more customers to purchase from retailers providing multichannel offerings, leading to a positive performance impact. Enabling ship from store can allow stores to maximize margins which positively relates to performance, since this offering allows for inventory optimization, due to higher turnover rates, and greater potential for liquidating markdowns at a higher gross margin (DHL 2015; RSR 2014).

Alternatively the challenges related to developing and implementing multichannel offerings are likely to relate negatively to retailer performance. The complexity of the

distribution network for retailers providing multichannel offerings might negatively affect a firm's sales and competitive position, as competitors that do not provide multichannel offerings might have more streamlined processes. There is also potential for retailer inefficiencies due to integration challenges which may relate negatively to retailer performance.

There are both positive and negative aspects of retailer's providing multichannel offerings, though we identify more positives. We propose that retailers that develop multichannel capabilities are those that possess unique supply chain resources and capabilities, such as a unique store infrastructure, channel integration, and information systems. Therefore we posit that retailers that have developed multichannel capabilities of BOPS, ship from store, and in store returns, are expected to achieve superior performance based on RBV. Therefore we suggest that:

H1: Buy online pick up in store is positively related to retailer performance.

H2: Ship from Store is positively related to retailer performance.

H3: Return to Store is positively related to retailer performance.

4. RESEARCH METHODOLOGY

4.1 Data

To examine the effects of multichannel offerings on retailer performance, a large cross-sectional database of retailers' multichannel offerings and performance outcomes was analyzed. The Internet Retailer Top 500 Guide (IR 500) for 2016 was used as the sample frame for this research. The IR 500 is a comprehensive report of the trends and key players that shape the U.S.

ecommerce industry (Ali and Zaroban 2017). The database includes the top 500 retailers which had collective U.S. web sales of $333.24 billion in 2016, representing 84.4% of total U.S. ecommerce sales (digitalcommerce360.com). The IR 500 is published annually by Internet Retailer Magazine.

4.2 Measurement sources and scales

Data is collected for IR 500 by 18 full-time journalists and researchers, that regularly update, verify, and organize the data. We examine retailer performance as a dependent variable. The retailer performance measure was collected from IR 500 and is based on a proprietary scoring system that considers online sales, growth, and competitive position. Ratings for retailer performance for retailers in the IR500 range from 20 to 79.

We also examine three independent variables from IR 500 which are three measures of multichannel offerings: BOPS, ship from store, and return to store. All three of the independent variables are binary variables that are designated as either "Y" for yes or "N" for no. In order to reduce concerns related to endogeneity from omitted variable bias, we included several control variables. All control variables were collected from IR 500. The control variables include average ticket, product category (apparel, auto, book, computer, flower, food, hardware, health, house, jewelry, mass merchant, office, specialty, sport, and toys), and firm type (retailer, catalog, consumer brand manufacturer, and web). Average ticket is a rating for a retailer based on the retailer's average order value. Average ticket ranges from 10 to 99. Each of the merchandise category controls is binary and is equal to one for the retailer's primary merchandise categories. Each of the retailer type controls is binary and is equal to one for the representative retailer type. Controlling for average ticket, the merchandise category variables, and the retailer type

variables, allows for testing the relationship between the dependent and independent variables while holding the controls constant.

Of the 500 retailers, 17 were eliminated for missing data, and one was eliminated due to an error detected in the data, leaving us with a sample pool of 482. Of the 482 retailers in the sample pool, all data on the variables of interest were available. A summary of the measurements is in Table E3-1.

4.3 Analysis

The objectives of this research were to simultaneously assess the impact of each of the multichannel offerings (BOPS, ship from store, return to store) on store performance, therefore we test our hypotheses by estimating a general linear model using PROC REG routine in SAS version 9.4 (Table E3-2). Additional control variables were added in order to better isolate the effects of the main explanatory variables. The control variables include average ticket, product category (apparel, auto, book, computer, flower, food, hardware, health, house, jewelry, mass_mer, office, sport, toys), and firm type (catalog, consumer_brand_mfg, web). The following is the OLS regression equation[1].

$$RP = \beta_0 + \beta_1 BP + \beta_2 SS + \beta_3 RS + \beta_4 AT + \beta_5 AP + \beta_6 AU + \beta_7 BK + \beta_8 CP + \beta_9 FL + \beta_{10} FD + \beta_{11} HD + \beta_{12} HT + \beta_{13} HS + \beta_{14} JW + \beta_{15} MM + \beta_{16} OF + \beta_{17} SP + \beta_{18} TO + \beta_{19} CT + \beta_{20} CB + \beta_{21} WB + e_{RP}. \quad (1)$$

[1]RP = Retailer Performance, BP = Buy Online Pick Up In Store, SS = Ship from Store, RS = Return to Store, AT = Avg_Ticket, AP = Apparel, AU = Auto, BK = Book, CP = Computer, FL = Flower, FD = Food, HD = Hardware, HT = Health, HS = House, JW = Jewelry, MM = Mass_Mer, OF = Office, SP = Sport, TO = Toys, CT = Catalog, CB = Consume_BrandMFG, WB = Web.

Table E3-1: Measures, and their source, year, type, and description

Measure	Source	Year	Data Type	Measures
Buy Online / PU Store (BP)	IR 500	2015	Binary	Equals one if the retailer offers buy online/pick up in store.
Ship from Store (SS)	IR 500	2015	Binary	Equals one if the retailer offers ship from store.
Returns to Store (RS)	IR 500	2015	Binary	Equals one if the retailer offers in store returns.
Retailer Performance (RP)	IR 500	2015	Ordinal	20-79 rating of a retailer based on proprietary scoring system that considers online sales, growth and competitive position.
Avg_Ticket (AT)	IR 500	2015	Ordinal	10-99 rating of a retailer based on average order value in comparison to its most direct competitors.
Apparel (AP)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is apparel.
Auto (AU)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is auto.
Book (BK)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is books/music/video.
Computer(CP)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is computers/electronics.
Flower (FL)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is flowers/gifts.
Food (FD)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is food/drug.
Hardware (HD)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is hardware/home improvement.
Health (HT)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is health/beauty.
House (HS)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is housewares.
Jewelry (JW)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is jewelry.
Mass_Mer (MM)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is mass merchant.
Office (OF)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is office supplies.
Sport (SP)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is sporting goods.
Toys (TO)	IR 500	2015	Binary	Equals one if the retailer's primary merchandise category is toys/hobbies.
Catalog (CT)	IR 500	2015	Binary	Equals one if the retailer's type is Catalog/Call Center.
Consumer_Brand _Mfg (CB)	IR 500	2015	Binary	Equals one if the retailer's type is Consumer Brand Mfg.
Web (WB)	IR 500	2015	Binary	Equals one if the retailer's type is Online only

Table E3-2: OLS results

Independent variables	OLS
Constant	44.252**
Avg_Ticket	.671*
Apparel	3.02**
Auto	2.337
Book	-2.652
Computer	-5.229*
Flower	1.177
Food	1.717
Hardware	1.316
Health	1.346
House	-2.872
Jewelry	1.775
Mass_Mer	4.856*
Office	-5.185*
Sport	-1.575
Toys	-.540
Catalog	-.224
Consumer_Brand_Mfg	1.241
Web	1.083
BOPS	3.745*
Ship from Store	4.691*
In Store Returns	2.208
R^2	.144
F	

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

4.4 Results and Discussion

We tested the hypothesized relationships using OLS (Table E3-2). H1, which posited that BOPS is positively related to retailer performance was supported. H2, which proposed a positive and significant relationship between ship from store and retailer performance, was supported. H3, which suggested a positive and significant relationship between in store returns and retailer performance was not supported.

It is apparent that the two multichannel offerings for which there is support are related to customer order fulfillment. These results are further explained by RBV, which suggests that as firms possess resources that allow them to develop capabilities that are not easily duplicated by others that the firm will have enhanced performance (Bharadwaj 2000; Barney 1991). Customers increasingly expect the flexibility of multichannel offerings (Chatterjee 2010; Jones 2015) and firms respond by developing more multichannel offerings. Firms tend to devote more resources to forward logistics in general. Therefore, it may be that retailers that provide multichannel offerings are further along in establishing the resources and capabilities needed to support multichannel offerings related to forward logistics.

There was not support for a significant relationship between the returns to store service offering and store performance. Providing a return to store offering can introduce challenges, such as inventory synchronization problems between the online and brick and mortar channel, as well as process inefficiencies that take place when store associates handle online returns (Bernon et al. 2016; Hubner et al. 2016b). It is possible that the resources and capabilities needed to be successful in multichannel returns have not been established yet for some firms. Though, customers expect flexibility in returns channel and retailers may need to provide such offering

for competitiveness, the results do not support that providing these offerings positively relates to retailer performance.

4.5 Robustness Testing

Due to the potential for bias in OLS estimators when an important variable is omitted, we moved forward with using the instrumental variables (IV) method (Wooldridge2009). A series of two-stage least squares (2SLS) were performed for each of the endogenous estimators using the PROC REG procedure in SAS Version 9.4 with HC3 heteroskedastic-robust standard errors.

We separately estimated equations 2, 3, and 4 in which we individually regressed each of the endogenous predictors on all covariates. The equations[2] were:

$$BP = C_0 + C_1SS + C_2RS + C_3AT + C_4AP + C_5AU + C_6BK + C_7CP + C_8FL + C_9FD + C_{10}HD + C_{11}HT + C_{12}HS + C_{13}JW + C_{14}MM + C_{15}OF + C_{16}SP + C_{17}TO + C_{18}CT + C_{19}CB + C_{20}WB + u_{BP}. \quad (2)$$

$$SS = D_0 + D_1BP + D_2RS + D_3AT + D_4AP + D_5AU + D_6BK + D_7CP + D_8FL + D_9FD + D_{10}HD + D_{11}HT + D_{12}HS + D_{13}JW + D_{14}MM + D_{15}OF + D_{16}SP + D_{17}TO + D_{18}CT + D_{19}CB + D_{20}WB + u_{ss}. \quad (3)$$

$$RS = E_0 + E_1BP + E_2SS + E_3AT + E_4AP + E_5AU + E_6BK + E_7CP + E_8FL + E_9FD + E_{10}HD + E_{11}HT + E_{12}HS + E_{13}JW + E_{14}MM + E_{15}OF + E_{16}SP + E_{17}TO + E_{18}CT + E_{19}CB + E_{20}WB + u_{IR} \quad (4)$$

[2]RP = Retailer Performance, BP = Buy Online Pick Up In Store, SS = Ship from Store, RS = Return to Store, AT = Avg_Ticket, AP = Apparel, AU = Auto, BK = Book, CP = Computer, FL = Flower, FD = Food, HD = Hardware, HT = Health, HS = House, JW = Jewelry, MM = Mass_Mer, OF = Office, SP = Sport, TO = Toys, CT = Catalog, CB = Consume_BrandMFG, WB = Web.

We started by estimating Equation 2 for BOPS. All predictors were identified that had a statistically significant relationship with BOPS (Table E3-3). We next considered our OLS results and identified predictors that did not have a statistically significant relationship with retailer performance (Table E3-3). All predictors that met these two criteria were considered valid IV's based on Wooldridge (2009). We next conducted 2SLS for BOPS by estimating Equation 2 and saving the residuals for BOPS (u_{BP}). The residuals were then included in Equation 1 and the predictors that were considered valid IV's were removed. Since the 1st stage residuals were included, the parameter estimate for BOPS was the 2SLS estimate and the significance test for the 1st stage residuals represented the Hausman test for omitted variables bias (Wooldridge 2009). When the Hausman test is not significant, the OLS estimates are more efficient and should be used (Wooldridge 2009). The 2SLS results for BOPS can be found in Table E3-3. Results supported that the Hausman test is not significant and therefore OLS estimates should be used.

A similar approach was followed in performing 2SLS for ship from store and return to store. For ship from store, the 2SLS results can be found in Table E3-4 and for return to store the 2SLS results can be found in Table E3-5. The Hausman test was not significant for ship from store or return to store, providing further support that OLS estimates should be used.

Table E3-3: Two-stage least squares (2SLS) results for BOPS

(cells are shaded to identify potential valid instruments)

Parameter	1st Stage Equation	OLS	2SLS
Intercept	.218**	44.252**	45.398**
Avg_Ticket	-.005	.671*	.630*
Apparel	-.074*	3.02**	2.723*
Auto	.157*	2.337	3.177
Book	.002	-2.652	-2.654
Computer	.021	-5.229*	-5.080**
Flower	.052	1.177	1.195
Food	-.006	1.717	1.641
Hardware	.035	1.316	1.487
Health	-.075	1.346	1.134
House	-.070	-2.872	-3.231
Jewelry	.067	1.775	1.541
Mass_Mer	-.065	4.856*	4.466*
Office	-.012	-5.185*	-5.212*
Sport	.116*	-1.575	-.974
Toys	-.064	-.540	-1.012
Catalog	-.160**	-.224	
Consumer_Brand_Mfg	-.153**	1.241	
Web	-.175**	1.083	
BOPS		3.745*	-1.522
Ship from Store	.355**	4.691*	.355**
In Store Returns	.386**	2.208	.386**
Residual			5.268
R^2	.460	.144	.142

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

Table E3-4: Two-stage least squares (2SLS) results for Ship from Store

(cells are shaded to identify potential valid instruments)

Parameter	1st Stage Equation	OLS	2SLS
Intercept	.008	44.252**	43.962**
Avg_Ticket	.009	.671*	.769**
Apparel	.011	3.02**	3.299*
Auto	-.113*	2.337	
Book	-.041	-2.652	-3.043
Computer	.019	-5.229*	-4.899**
Flower	.097	1.177	2.063
Food	.106*	1.717	2.868
Hardware	.024	1.316	1.567
Health	-.029	1.346	1.323
House	-.003	-2.872	-2.834
Jewelry	-.052	1.775	1.541
Mass_Mer	.033	4.856*	5.161**
Office	.020	-5.185*	-4.919
Sport	-.069	-1.575	-2.189
Toys	.015	-.540	-.248
Catalog	-.086*	-.224	
Consumer_Brand_Mfg	-.068*	1.241	
Web	-.040	1.083	.972
BOPS	.199**	3.745*	5.874
Ship from Store		4.691*	-5.367
In Store Returns	.008	2.208	2.493
Residual			10.058
R^2	.187	.144	.142

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

Table E3-5: Two-stage least squares (2SLS) results for Return to Store

(cells are shaded to identify potential valid instruments)

Parameter	1st Stage Equation	OLS	2SLS
Intercept	.385**	44.252**	45.218**
Avg_Ticket	-.001	.671*	.660*
Apparel	.182**	3.02**	3.572**
Auto	.044	2.337	2.412
Book	-.001	-2.652	-2.684
Computer	-.085	-5.229*	-5.343**
Flower	-.097	1.177	.713
Food	-.146*	1.717	1.359
Hardware	-.015	1.316	1.251
Health	.038	1.346	1.648
House	.062	-2.872	-2.731
Jewelry	-.033	1.775	1.938
Mass_Mer	.029	4.856*	4.845
Office	-.049	-5.185*	-5.300
Sport	-.068	-1.575	-1.765
Toys	.102	-.540	-.448
Catalog	-.290**	-.224	
Consumer_Brand_Mfg	-.180**	1.241	
Web	-.366**	1.083	
BOPS	.469**	3.745*	4.773
Ship from Store	.018	4.691*	4.793*
In Store Returns		2.208	-.083
Residual			2.290
R^2	.510	.144	.142

* - denotes significant ($p<0.05$)
**- denotes significant ($p<0.01$)

5. MANAGERIAL IMPLICATIONS

Managers that are faced with the decision of how to approach the use of supply chain resources and capabilities in the development of multichannel offerings can consider the results of this research. Our research suggests that focusing resources on developing multichannel offerings to support fulfillment of customer orders is likely to result in a positive impact on retailer performance. Therefore firms that are hesitant to approach the development of these offerings due to the cost and complexity, should consider the potential benefits that can be achieved once the proper resources and strategy are in place to support multichannel offerings.

Based on our results managers should also consider that investing in multichannel offerings for returns might not be the best place to initiate a firms involvement in multichannel offerings. Providing in store returns regardless of purchase channel can be costly and challenging (Bernon et al. 2016; Hubner et al. 2016b) and firms might benefit from first establishing their multichannel offerings related to customer order fulfillment.

6. THEORETICAL IMPLICATIONS AND FUTURE RESEARCH

This research extends previous research on multichannel retailing, providing insight into the potential performance impacts of multichannel offerings. Results support that retailer fulfillment of demand from both store and warehouse inventory has a positive effect on retailer performance. When retailers provide the service offering of BOPS or ship from store, results support that performance will be greater. Performance was captured as a measure of sales, growth and competitive position, which are critical aspects of a retailer's ability to thrive in the current competitive environment.

Gallino et al. (2016) examined the effects of introducing a ship to store concept in which the customer can order online and have product shipped to the local store for pick up. They considered the effects of multichannel offerings on sales dispersion, or the level of concentration for how different products contribute to retailer sales (e.g. low sales dispersion means that a more concentrated group of products contributes the greatest percentage of retailer sales). Their results suggest that multichannel offerings results in a sales dispersion such that the lowest selling product increases at a higher rate resulting in more sales dispersion, and that retailers need to carry an estimated 2.7% more inventory to support the increased sales dispersion. Considering the results of our research, researchers can expect to experience greater performance when providing multichannel offerings, and this greater performance can offset some of the added expense of multichannel offerings, such as the need to carry more inventory.

Though we examined the effects of implementing three representative multichannel offerings, this research can provide the basis for future research where additional multichannel offerings are examined related to impact on retailer performance. It could also provide insight to consider how multichannel offerings relate to retailer performance for different types of retailers. It might be the case that some retailers are more successful at achieving positive performance impacts through multichannel offerings than other retailers.

7. CONCLUSIONS

There are still many retailers that have not developed multichannel offerings for their customers (Hubner et al. 2016a). The results of this research may provide guidance for retailers that are considering investment in developing multichannel offerings. Our results support that even though it is costly and complex to provide multichannel offerings (Hubner et al. 2016a; Ishfaq et al. 2016; Murfield et al. 2017), that developing service offerings to allow customers to buy

online and pick up in store, or to order product and have it shipped from store are likely to have a positive influence on retailer performance. As retailers make efforts to be competitive, it is critical that they consider how to invest in developing offerings that drive positive outcomes.

REFERENCES

REFERENCES

Ali, F. and Zaroban, S. 2017. "Amazon leads the new Top 500 rankings." Digital Commerce 360, May 2, 2017. https://www.digitalcommerce360.com/2017/05/02/amazons-dominance-in-u-s-online-retail/

Ames, B. 2015. "Pursuing the promise of omnichannel retailing." Supply Chain Quarterly, Quarter 4 2015. http://www.supplychainquarterly.com/topics/Strategy/20151228-pursuing-the-promise-of-omnichannel-retailing/

Barney, J. 1991. "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17: 1: 99-120.

Bharadwaj, A. 2000. ''A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation.'' *MIS Quarterly* 24(1):169–96.

Bernon, M., Cullen, J., and Gorst, J. 2016. "Online retail returns management: integration within an omni-channel distribution context." International Journal of Physical Distribution & Logistics Management 46(6/7): 584-605.

Brynjolfsson, E., Hu, Y.J., and Rahman, M.S. 2013. "Competing in the age of omni-channel Retailing." Sloan Management Review 54(4): 23-29.

Cao, L. and Li, L. 2015. "The Impact of Cross-Channel Integration on Retailers' Sales Growth." Journal of Retailing 91(2): 198-216.

Chatterjee, P., 2010. "Causes and consequences of 'order online pick up in-store'shopping behavior." *The International Review of Retail, Distribution and Consumer Research 20*(4): 431-448.

Daft, R. 1983. *Organization Theory and Design*, West Publications, New York, NY.

DHL. 2015. "Omni-channel logistics" http://www.dhl.com/content/dam/downloads/g0/about_us/logistics_insights/dhl_trendreport_omnichannel.pdf

JDA. 2015. "Global retail & consumer goods CEO survey: The omni-channel fullfillment imperative" https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwi0-4OZ8PrMAhUQSVIKHfxZBRMQFggfMAA&url=http%3A%2F%2Fbridgesgi.com%2Fwp-content%2Fuploads%2F2015%2F05%2FJDA-PWC-Executive-Summary_D.pdf&usg=AFQjCNEZnpD4PmG3ExzVWPndLTYtadF3Jg&bvm=bv.122676328,d.aXo

Jones, C. 2015 “What do customers really say about your omnichannel supply chain performance.” DC Velocity, September 21, 2015. http://blogs.dcvelocity.com/bestpractices/2015/09/what-do-customers-really-say-about-your-omni-channel-supply-chain-performance.html

Gallino, S. and Moreno, A. 2014. “Integration of online and offline channels in retail.” Management Science 60(6): 1434–1451.

Gallino, S., Moreno, A., and Stamatopoulos, I. 2016. “Channel integration, sales dispersion, and inventory management.” *Management Science*, Articles in Advance: 1-19.

Harrington, L. 2017. “Omni-channel retail: roadmap to profit.” Inbound Logistics, January 2017: 112-120.

Hubner, A., Holzapfel, A. and Kuhn, H. 2016. “Distribution systems in omni-channel retailing.” *Business Research*, *9*(2): 255-296.

Hubner, A., Wollenburg, J. and Holzapfel, A. 2016. “Retail logistics in the transition from multi-channel to omni-channel.” *International Journal of Physical Distribution & Logistics Management 46*(6/7): 562-583.

Ishfaq, R., Defee, C.C., Gibson, B.J. and Raja, U. 2016. “Realignment of the physical distribution process in omni-channel fulfillment.:” *International Journal of Physical Distribution & Logistics Management 46*(6/7): 543-561.

Kumar, V. and Venkatesan, R. 2005. “Who are multichannel shoppers and how do they perform? Correlates of multichannel shopping behavior.” Journal of Interactive Marketing 19(Spring): 44-61.

Murfield, M., Boone, C.A., Rutner, P., and Thomas, R. 2017. "Investigating logistics service quality in omni-channel retailing." International Journal of Physical Distribution & Logistics Management 47(4): 263-296.

Neslin, S.A., Grewal, D., Leghorn, R., Shankar, V., Teerling, M.L., Thomas, J.S., Veroef, P.C. 2006. “Challenges and opportunities in multichannel customer management.” Journal of Service Research 9(2): 95-112.

O’Reilly, J. 2015. “Channeling the brick and click dilemma.” Inbound Logistics, August, 21, 2015 http://www.inboundlogistics.com/cms/article/channeling-the-brick-and-click-dilemma/

Petersen, C. 2015. “Click and collect: A hat trick retailers can't pull off?” Retail Customer Experience December 28, 2015 https://www.retailcustomerexperience.com/blogs/click-and-collect-a-hat-trick-retailers-cant-pull-off/

Rabinovich, E. and Cheon, S. 2011. "Expanding horizons and deepening understanding via the use of secondary data sources." *Journal of Business Logistics 32*(4): 303-316.

Randall, W.S., Gibson, B.J., Defee, C.C. and Williams, B.D. 2011. "Retail supply chain management: key priorities and practices." The International Journal of Logistics Management 22(3): 390-402.

RSR 2014. "Retail analytics moves to the frontline." http://www.rsrresearch.com/research/retail-analytics-moves-to-the-frontline-benchmark-2014?EID=62961434&CID=9752609

Specter, 2016. "Retailers navigate the omni-challenge world." Logistics Management, September 1, 2016. http://www.logisticsmgmt.com/article/retailers_navigate_the_omni_challenge_world

Wooldridge, J.M. 2009. Introductory Econometrics: A modern approach. Canada: South-Western Cengage Learning.