

EXAMINING BUYER FIRM USAGE OF SUPPLIER
SUPPORT SERVICES

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SUPPORT SERVICES

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Abstract: Prior relationship marketing research has primarily focused on the importance of building strong relationships between suppliers and buyer firms and the positive financial outcomes associated with high quality buyer firm-supplier relationships. However, buyer firms with strong relationships often exhibit declining purchasing and extant literature offers little guidance for how suppliers should respond when a buyer firm exhibits declining purchasing, even though the relationship between the supplier and that buyer firm is strong. In such cases, I propose that suppliers can encourage buyer firms to utilize additional direct and indirect support services to increase buyer firm purchasing which, in turn, leads to increases in end user purchasing from the buyer firm and/or buyer firm concentration of purchasing with the supplier. Using buyer firm survey responses matched with archival data from a large industrial supplier, I find that, on average, buyer firm indirect and direct support service usage leads to increases in sales growth for the supplier. Prior support service literature indicates that the use of support services leads to positive financial outcomes, but this research suggests that the positive effect may be enhanced or diminished contingent on the buyer firm's capabilities and characteristics. This research contributes to support service literature by revealing that a buyer firm's utilization of supplier support services can lead to different financial outcomes for the supplier.

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CHAPTER I

INTRODUCTION

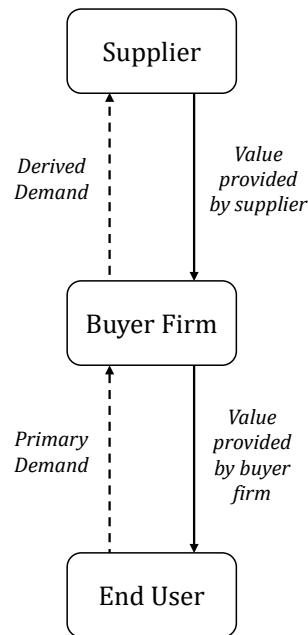
Value for end users in a channel environment is often created jointly by multiple upstream parties (Porter 1980; Chatain 2011). Manufacturers, wholesalers, and other suppliers often sell to intermediaries (referred to as buyer firms in this research), who then resell the product to the end user. Working together creates mutually beneficial outcomes for both buyer firms and suppliers (Jap 1999), as demand for B2B products is ultimately driven by end users (Lilien and Grewal 2012). Figure 1 depicts a simple channel relationship and the flow of demand.

However, if buyer firms are not serving the end users well, there will be a decrease in derived demand for the supplier, even if the supplier is offering a competitive core offering and seems to be doing everything right from their perspective. Today's suppliers are expanding outside of providing a competitive core offering to provide various ancillary support services to aid buyer firms in their downstream performance (Ulaga 2003; Day 1994). As suppliers deliver additional value to buyer firms via these support services, buyer firms are then better able to serve end users and create end user demand, which expands buyer firms' sales, thus increasing their purchasing and producing derived demand back upstream to the supplier (Bishop et al. 1984).

Prior relationship marketing literature has focused on how suppliers can facilitate relationships with buyer firms to grow sales and profit. By developing strong relationships and providing a competitive core offering, suppliers can provide value to buyer firms and enhance their downstream competitive advantage (Gupta and Zeithaml 2006). These strong relationships have been shown to increase sales (Homburg et al. 2014; Palmatier et al. 2007; Reynolds & Beatty 1999)

and the supplier's share of wallet (e.g., Palmatier et al. 2013; Ulaga and Eggert 2006; Cannon & Homburg 2001; Palmatier et al. 2008; Fang et al. 2008). The accepted idea in relationship marketing is that strong relationships build financial performance for suppliers; but practitioners have found that, in some cases, strong buyer firm relationships can exhibit lower profitability (Reinartz and Kumar 2003) as well as declining sales (Cortez and Johnston 2017) for the supplier. Past relationship marketing literature has also shown that close relationships may in fact be even more vulnerable to decline (Anderson and Jap 2005; Moorman et al. 1992) and thus it is important for the suppliers to act in order to protect the investments that they have put into the relationships with their buyer firms.

Figure 1. Vertical Channel Relationships



The relationship marketing literature has focused on the positive financial outcomes associated with strong buyer firm-supplier relationships (e.g., Palmatier et al. 2007; Zhang et al. 2016). However, in my sample, some of the buyer firms with high relationship quality with the supplier show trends of declining purchasing. Much of the literature focuses on how to improve the quality of the relationship and grow share of wallet, but it stops short in how to deal with declining purchases of buyer firms with high quality relationships. This is a prevalent problem in the channels domain as there is little direction for managers on how to handle these types of situations. From a

relationship marketing perspective, it seems as though the supplier has done all it can to improve sales by developing a high-quality relationship with the buyer firm; but something may be happening on the buyer firm's end that could be causing the decline in purchases. Buyer firm purchasing is a function of downstream derived demand (their sales to end users); thus, if purchasing is declining, then the buyer firm may not be maintaining its competitive advantage downstream (Lilien and Grewal 2012). If the buyer firm is not driving downstream sales to end users, it may negatively impact both the buyer firm and the supplier.

Another explanation of the decline in sales to the supplier may be due to buyer firm purchasing products from alternative suppliers (Verhoef 2003). Buyer firms typically purchase from several suppliers (Grewal et al. 2015), but their concentration of purchasing or the volume they purchase from each supplier may be different (Ulaga and Eggert 2006). The core offerings may be similar between suppliers and buyer-firms may have equally strong relationships with the suppliers they purchase from, but the buyer firms may receive different benefits from each supplier based off the support services they provide to the buyer firms (Ruiz-Martinez et al. 2018). For example, if a buyer firm perceives the market research support from Supplier B as more beneficial to its business than the market research support from Supplier A, the buyer firm may purchase more from Supplier B (Ulaga and Eggert 2006), even when the buyer firm's relationships with both suppliers are strong. Little is known about whether changes in end user purchasing, changes in buyer firm purchasing concentration, or both are to blame for the decline in sales to the supplier. Therefore, in this research I examine the effects of buyer firms' usage of supplier support services on the supplier's financial outcomes via both potential processes: (a) a buyer firm's ability to generate downstream demand from end users, and (b) a buyer firm's concentration of purchasing with the focal supplier.

Today's suppliers offer a core offering and support services to buyer firms (Tuli et al. 2007). In many industrial contexts, the supplier's core offerings are often very similar in terms of price and

products (Homburg et al. 2003; Anderson & Narus 1995), thus suppliers have begun to differentiate themselves by offering support in other ways: more salesperson interaction, improved delivery performance, continuous process innovation, marketing support, and additional information exchange (e.g., Ulaga 2003; Eggert et al. 2006, Homburg et al. 2014). These support services provide benefits outside the core offering and are usually intangible (Fang et al. 2008). Prior literature has shown that support services can build and develop relationships between suppliers and buyer firms (Palmatier et al. 2013; Ulaga and Eggert 2006), but it is unclear how the support services play a role once a high-quality relationship has been fostered, or if they can improve sales from buyer firms with declining purchasing.

I focus on direct support services that enhance the buyer firm's offering to end users (Grewal et al. 2015; Esper et al. 2010; Quinn 1999) and indirect support services that create end user preferences (Homburg et al. 2014; Ghosh and John 2009). *Direct support services* are focused directly on the buyer firm and their purpose is to improve the processes and functions of the buyer firm to better serve end users. Examples of direct support services include fleet management, marketing research, employee training, and business consulting services. *Indirect support services* also aid the buyer firm's business but are focused towards driving end user preferences through the cooperative efforts of the buyer firm and supplier. Similar to cobranded products (Ghosh and John 2009), indirect support services may showcase the logos of both channel members. Cobranded advertising and drop shipping are examples of indirect support services (Homburg et al. 2014).

Traditionally, suppliers offer the same support services to all buyer firms with little to no strategic targeting of the support services (Grewal et al. 2015) and thus it is the buyer firm's decision to use more or less of the supplier's support services. In this research, I posit that the effect of the buyer firm's usage of direct and indirect support services on the supplier's financial outcomes depends on the unique characteristics of the buyer firm. Prior literature has noted that the unique characteristics of buyer firms (e.g., buyer firm size) may impact the buyer firm's integration of and

perceived value gained from the supplier's support services (Homburg et al. 2014; Ulaga and Eggert 2006). Drawing from signaling theory (Heil and Robertson 1991; Connelly et al. 2011) and resource-based view of the firm (Wernerfelt 1984), I explore the conditions under which the buyer firm's usage of the supplier's direct and indirect support services are more or less impactful on buyer firm purchasing.

In this research, I expand upon prior relationship marketing literature to examine how a supplier can increase purchasing from its buyer firms once the supplier has achieved a strong relationship with the buyer firm. My focal research questions are:

- For buyer firms with a high-quality relationship with the supplier but whose purchasing is in decline, what effect does the buyer firm's utilization of indirect and direct supplier support services have on the supplier's buyer firm level sales growth?
- What are the underlying mechanisms driving these effects?
- How do characteristics and capabilities of buyer firms enhance or mitigate these effects?

I test my hypotheses using a dataset from a large industrial supplier, consisting of archival secondary data matched with survey data from several hundred buyer firms. I explore the effect of direct and indirect support services on the supplier's sales growth, while also examining conditions that enhance or mitigate the effect. I find that, on average, when buyer firms have a strong relationship with the focal supplier but exhibit a decline in purchasing, buyer firms' increased usage of training programs, market research, online support, and advertising leads to a positive increase in sales growth for the supplier. However, these effects can be more or less positive depending on the buyer firm's characteristics and capabilities.

My research makes several contributions to marketing channels, relationship marketing, and supplier support services literatures. First, I shed light on an unresearched area: How can suppliers utilize support services to enhance sales to buyer firms with which they have strong relationships yet declining sales growth? Prior relationship marketing literature focuses on how suppliers should build

strong relationships with buyer firms to increase purchases from the supplier, but it does not address the instances where the buyer firm's purchasing is in decline even though the relationship is strong (Cortez and Johnston 2017). Suppliers devote time and money into building relationships with buyer firms and thus are invested in maintaining purchases from the buyer firm (Trahms et al. 2013). This research demonstrates how direct and indirect supplier support services reach beyond the development of relationship building to drive buyer firm purchasing.

Prior organizational buying literature has highlighted the importance of the supplier's provision of these support services (e.g., Mathieu 2001; Ulaga and Eggert 2006) but has not focused on individual buyer firms' usage of the unique services and their impact on buyer firm purchasing. I find that, on average, a buyer firm's usage of direct and indirect support services offered by a supplier can positively impact buyer firm purchasing, however this positive effect is enhanced or diminished depending on the characteristics of the buyer firm. For example, findings from my study indicate that when larger buyer firms make use of additional advertising services, end users are more likely to perceive a fit between the upstream partners and are more likely to develop preferences for the supplier's products, resulting in a larger growth in sales for the supplier. On the other hand, the positive effect of market research usage is mitigated when the buyer firm is large. Larger buyer firms are less likely to integrate the supplier's support into their businesses because they already have access to greater resources and perceive less value in such services. Suppliers can therefore utilize information about buyer firm characteristics to strategically target direct and indirect support services.

Third, under these conditions (i.e., when buyer firms with strong relationships exhibit sales decline), I shed light on the underlying mechanisms through which a buyer firm's usage of supplier indirect and direct support services impacts the supplier's sales growth. I theorize that support services can impact the extent to which end users purchase from the buyer firm, thereby affecting the supplier's sales via derived demand, and/or the buyer firm's decision to concentrate its purchasing with the supplier.

Finally, I contribute to marketing theory by integrating two theoretical perspectives together, resource-based view of the firm and signaling theory, to examine the moderating effects of buyer firm characteristics. Prior support service literature has noted that the capabilities and characteristics of buyer firms not only impact the buyer firm's integration of the supplier's support services (Raddats and Easingwood 2010) but may also act as signals to other members in the marketing channel about the credibility and fit of the buyer firm-supplier partnership (Eggert et al. 2017). To understand how the supplier can utilize support services to increase sales from buyer firms with declining sales and strong relationships, I build a theoretical framework that links buyers' usage of support services to (a) end user purchasing and (b) buyer firm concentration of purchasing with the supplier, contingent on pertinent characteristics of those buyer firms.

CHAPTER II

LITERATURE REVIEW

I begin by providing an overview of the marketing channels, relationship marketing, and supplier support services literatures and demonstrate how the domains overlap.

Marketing Channels

Vertical channels exist to create value for end users. Members within these channels include suppliers, manufacturers, retailers, wholesalers, and end users (Porter 1980). In my data context, the buyer firms are retailers and customers of a focal supplier. When suppliers and buyer firms work together to create value for end users, the outcomes benefit both parties (Jap 1999).

The value created for the end users generates sales and primary demand for the buyer firm which then travels back upstream to the supplier in form of derived demand (Bishop et al. 1984). Buyer firms may adjust the concentration of their purchasing, or the amount the buyer firm purchases from one supplier compared to other suppliers, depending on several factors. The benefits provided to buyer firms from a supplier can cause buyer firms to switch suppliers, purchase from additional suppliers, or reduce the number of suppliers they source from (Kekre et al. 1995).

Suppliers can provide value directly to buyer firms (their direct customers) or to end users (their indirect customers) (Homburg et al. 2014). Direct strategies are also known as push strategies where the supplier attempts to push value downstream through buyer firms (Gilliland 2004; Desai 2000) by aiding the buyer firms in serving end users through support services. Indirect end user techniques are known as pull strategies where the supplier attempts to drive downstream demand

by creating end user preferences using personal selling and advertising (Desai 2000; Gerstner and Hess 1995). Both strategies require the supplier to showcase how the product or service provides value to the buyer firms and end users (Hillebrand and Biemans 2011).

Each member of the channel affects the performance of other members and the entire channel (Mentzer et al. 2001) and thus it is imperative that each channel member understands the needs of the other players in the channel (Hillebrand and Biemans 2011). Suppliers “must understand not only the cost and revenue dynamics of its immediate target buyer firms, but also the cost and revenue dynamics facing the buyers’ buyers, from whose demand the demand of the immediate market is derived” (Narver and Slater 1990, p.21). Many suppliers and buyer firms have developed deep relationships to streamline processes (Cannon and Perreault 1999; Scheer et al. 2010), improve communication (Mitrega and Katrichis 2010; Palmatier et al. 2013), and provide better value for end users (Palmatier et al. 2007).

Relationship Marketing

Relationship marketing refers to the establishment, development, and maintenance of successful relational exchanges between different partners and stakeholders (Dwyer et al. 1987; Morgan and Hunt 1994). By continuously improving the relationship with buyer firms, suppliers should see increased sales (Palmatier et al. 2013; Palmatier et al. 2008; Palmatier et al. 2007) and win more business from their competition resulting in a larger share of wallet (Palmatier et al. 2008; Ulaga and Eggert 2006). High levels of commitment (e.g., Morgan and Hunt 1994; Gundlach et al. 1995), trust (e.g., Morgan and Hunt 1994; Weitz and Jap 1995), dependence (e.g., Kumar et al. 1995; Narayandas and Rangan 2004), satisfaction (e.g., Bolton 1998; Cannon and Perreault 1999), and relational norms (e.g., Dwyer et al. 1987; Jap and Ganesan 2000) are indicators of strong relationships. Relationship quality, a higher order construct, is another key variable in relationship marketing and is comprised of trust, commitment, and satisfaction measures (Kumar et al. 1995; Walter et al. 2003; Mitrega and Katrichis 2010). Table 1 showcases prior relationship marketing literature.

Early relationship marketing literature examined buyer firm-supplier relationships at different stages of the relationship (Dwyer et al. 1987). As relationships develop, they move through different states, but there is little agreement on the number of stages in a typical relationship (Zhang et al. 2016). Recent work in relationship marketing has taken on a dynamic approach to examine buyer firm-supplier relationships. Channel partners may move into advanced relationship states as the velocity of the relationship grows (Palmatier et al. 2013), while others may revert to transactional states due to betrayal (Zhang et al. 2016) or disconfirmations (Harmeling et al. 2015).

High levels of trust, commitment, satisfaction, dependence, and relational norms have been shown to be key in the development of successful relationships (e.g., Morgan and Hunt 1994; Scheer et al. 2010; Mangus et al. 2020). Channel members are likely to foster strong relationships when partners invest in one another's business (Walter et al. 2003; Palmatier et al. 2013), have similar goals (Jap and Anderson 2007), and communicate well with one another (Cannon and Perreault 1999). Prior literature has primarily focused on the positive outcomes associated with strong relationships such as increased sales (Palmatier et al. 2013; Mangus et al. 2020), higher loyalty and retention (Bolton 1998; Scheer et al. 2010), lower conflict between partners (Kumar et al. 1995; Jap and Ganesan 2000), and enhanced relationship value (Palmatier et al. 2007). However, deep buyer firm-supplier relationships can also lead to negative consequences such as opportunistic behaviors (Wuyts and Geyskens 2005; Mitreęga and Zolkiewski 2012) and corruption (Forkmann et al. 2022). Strong buyer firm-supplier relationships can influence which supplier the buyer firm purchases from as well as the volume they purchase from each supplier (Ulaga and Eggert 2006). However other factors, such as the provision of supplementary services or discounts from the supplier, also play a key role in buyer firm purchasing (Anderson and Narus 1995).

Table 1. Review of Relationship Marketing Literature

Study	Key Relationship Marketing Constructs					Role of Relationship Marketing Constructs		Key Findings
	Commitment	Dependence	Norms	Satisfaction	Trust	Independent Variable	Dependent Variable	
Frazier (1983)		✓		✓		✓	✓	The authors develop a framework for exchange behaviors between organizations.
Dwyer et al. (1987)	✓	✓	✓			✓		Relationships between buyers and sellers move through four different stages through which norms are created and dependence increases.
Krapfel et al. (1991)		✓	✓				✓	Relationship value and interest commonality are operationalized to develop schemas of relationship types.
Heide and John (1992)			✓				✓	Norms play an important role in developing efficient relationships.
Morgan and Hunt (1994)	✓				✓	✓	✓	Commitment and trust are key mediators in developing successful relationships.
Gundlach et al. (1995)	✓		✓			✓	✓	The presence of norms and partner credibility can drive commitment intentions. The greater the future commitment intentions, the lower the risk of opportunistic behaviors from partners.
Kumar et al. (1995)	✓	✓			✓		✓	High levels of interdependence asymmetry lead to decreases in trust and commitment towards channel partners while conflict increases.
Weitz and Jap (1995)	✓	✓	✓		✓	✓	✓	Norms, trust, commitment, and dependence are key constructs in relationship marketing management.
Doney and Cannon (1997)					✓	✓	✓	The buyer firm's trust in the supplier and salesperson are driven by different characteristics of the supplier, the salesperson, and the buyer-supplier relationship.
Bolton (1998)				✓		✓		Buyer firms that are satisfied with the supplier are likely to continue the relationship and not defect.
Cannon and Perreault (1999)			✓	✓		✓	✓	Information exchange, operational linkages, legal bonds, cooperation, and relationship-specific adaptations by buyers and seller are identified as dimensions to characterize buyer-seller relationships. The satisfaction and evaluations of supplier performance vary across different relationships.
Jap (1999)			✓		✓	✓		Behaviors of the buyer-seller dyad are driven by relational and environmental factors.

Study	Key Relationship Marketing Constructs					Role of Relationship Marketing Constructs		Key Findings
	Commitment	Dependence	Norms	Satisfaction	Trust	Independent Variable	Dependent Variable	
Gruen et al. (2000)	✓	✓				✓	✓	The positive effect of relationship building activities and efforts on relationship behaviors is mediated by commitment.
Ian and Ganesan (2000)	✓	✓	✓	✓	✓	✓	✓	Relational norms increase the buyer firm's perception of the supplier's commitment to the relationship which can ultimately lead to improved evaluation of the supplier's performance, higher levels of satisfaction with the relationship, and lower conflict levels.
Tellefsen (2002)	✓			✓			✓	Suppliers who are able to satisfy personal and organizational needs will lead to increased commitment from purchasing managers thus leading to stronger bonds between the supplier and purchasing manager.
Rokkan et al. (2003)			✓				✓	Relationships with higher levels of relational norms bond relationship partners and reduce opportunistic actions.
Scheer et al. (2003)			✓		✓		✓	In Dutch and US markets, the firm's perception of negative inequity can lead to higher hostility and lower trust between buyers and sellers.
Walter et al. (2003)	✓			✓	✓		✓	Direct (i.e., safeguarding) and indirect functions of the supplier (i.e., innovation development) drive relationship quality.
Narayandas and Rangan (2004)	✓	✓			✓		✓	Weak firms can be successful in long term relationships because initial power asymmetries can be lowered by developing trust with the other dyad partner, which in turn leads to higher levels of commitment to the relationship.
Gustafsson et al. (2005)	✓	✓		✓	✓	✓		Satisfaction, affective commitment (trust), and calculative commitment (dependence) drive retention in buyer-seller relationships.
Wuyts and Geyskens (2005)					✓	✓		The effect of trust and working with a close partner is U-shaped. Relationship trust can protect partners from opportunism up to a certain point.
Andersen and Kumar (2006)	✓				✓		✓	Emotions can play a large role in developing trust and commitment in buyer-seller relationships.

Study	Key Relationship Marketing Constructs					Role of Relationship Marketing Constructs		Key Findings
	Commitment	Dependence	Norms	Satisfaction	Trust	Independent Variable	Dependent Variable	
Palmatier et al. (2006)	✓	✓		✓	✓	✓	✓	Relationship marketing is more effective when the relationships are critical to buyers. Performance measures are influenced most by relationship quality and least by commitment.
Jap and Anderson (2007)		✓	✓	✓	✓	✓		Norms and goal congruence are important in the build-up phase of relationships and then fade. There is no difference between trust and dependence in the build-up and mature phase.
Mouzas et al. (2007)		✓			✓	✓		Trust and dependence are more applicable to inter-personal than inter-organizational relationships.
Palmatier et al. (2007)	✓	✓	✓		✓	✓	✓	As relationships develop, managers may want to shift their resources away from relationship building to specific value creation activities in order to create value and drive sales.
Palmatier et al. (2008)		✓	✓		✓	✓	✓	Relational norms, salesperson competence, and product dependence impacts the buyer's relationship orientation. The effectiveness of the relationship marketing activities on the buyer's trust and exchange efficiency are moderated by the buyer firm's relationship orientation.
Davis-Sramek et al. (2009)	✓	✓		✓		✓	✓	Satisfaction is driven by technical and relational service quality which in turn positively effects affective and calculative commitment.
Aurier and N'Goala (2010)	✓			✓	✓	✓	✓	The effect of service quality evaluations on patronage behaviors is mediated by relationship quality and value.
Mitreġa and Katrichis (2010)		✓		✓	✓	✓	✓	Communication and relationship investments positively affected relationship quality and dependence.
Scheer et al. (2010)		✓				✓	✓	Supplier capabilities increase cost and benefit based dependence which in turn drives buyer firm loyalty behaviors.
Grace and Weaven (2011)				✓			✓	Social, emotional, quality, and monetary value positively influence relationship satisfaction.
Mitreġa and Zolkiewski (2012)		✓				✓		The authors explore the negative consequences of deep buyer-supplier relationships.
Palmatier et al. (2013)	✓				✓	✓	✓	Trust, communication, and investment capabilities are important drivers of commitment velocity, but the effects of trust and communication diminish as the relationship ages.

Study	Key Relationship Marketing Constructs					Role of Relationship Marketing Constructs		Key Findings
	Commitment	Dependence	Norms	Satisfaction	Trust	Independent Variable	Dependent Variable	
Vidal (2014)		✓			✓	✓		High levels of trust and dependence decrease the likelihood of retaliation against suppliers. The positive influence of anger on retaliation likelihood is positively moderated by trust, but negatively moderated by dependence.
Harmeling et al. (2015)			✓		✓	✓		The effect of product and relational disconfirmation effects on retention, relationship velocity, gratitude, and betrayal are explored.
Zhang et al. (2016)	✓	✓	✓		✓		✓	Four buyer-supplier relationship states are identified based off levels of commitment, trust, dependence and relational norms. The authors also explore the migration of firms between the relationship states.
Leonidou et al. (2018)	✓		✓	✓	✓	✓	✓	The authors explore the dynamic phenomenon of betrayal through a system of phases.
Murphy and Sashi (2018)				✓			✓	The mode of communication (face to face, digital or impersonal) impacts satisfaction through interactivity dimensions.
Steinhoff et al. (2019)	✓				✓	✓	✓	The authors propose a theory of online relationship marketing and discuss future ideas for research.
Mangus et al. (2020)					✓		✓	Market turbulence moderates the effect of business and personal trust on relationship performance.
Padgett et al. (2020)	✓	✓			✓	✓	✓	The type of dependence in a relationship is determined by the amount of trust in the partnership as well as the type of commitment within the relationship.
Yang et al. (2021)		✓		✓	✓	✓	✓	Trust and dependence congruency positively affect relational behaviors and satisfaction.
Forkmann et al. (2022)					✓	✓		Interorganizational trust, intraorganizational trust, and interpersonal trust can result in deviant behaviors which can lead to boundary spanner corruption in buyer-seller relationships.

Developing a strong relationship with buyer firms is one way to increase the perceived value of the supplier's core offering (Ulaga and Eggert 2006) and it has been a dominant focus in organizational buying literature for several decades. Suppliers invest in relationship marketing efforts to reach a "communal" stage, a mature and committed relational state with buyer firms (Zhang et al. 2016), but there is little direction on what actions a manager can take to further improve sales once this stage has been achieved. A key question that remains unanswered in prior relationship marketing literature is: once a strong relationship has been developed, what should the supplier do next? Relationship marketing literature has paid little attention to the different activities a supplier can implement to continue to grow sales and value when they have achieved a strong relationship with a buyer firm.

Both channel partners put forth time and resources into the development of high-quality relationships (Sheer et al. 2010; Palmatier et al. 2007). While positive financial outcomes are common for suppliers with buyer firm strong relationships (Palmatier et al. 2006; Palmatier et al. 2013), there are instances where the buyer firms exhibit declining purchasing from the supplier even though the parties have a strong relationship (Cortez and Johnston 2017). Suppliers tend to focus on buyer firms with positive sales growth (Grewal et al. 2015), but those buyer firms with declining sales growth are also important. Suppliers will want to take actions to protect their investments and attempt to change such buyer firms' purchasing habits. In this research, I focus on the support services offered by the supplier and posit that they operate beyond relationship development and can enhance buyer firm purchasing when a high-quality buyer firm-supplier relationship has been established, yet the buyer firm's purchasing from the supplier is declining.

Supplier Support Services

"Suppliers are increasingly expected to [create] value with and for their buyers, thereby moving beyond standard cost and quality improvements to provide unique collaborative solutions. The change in the B2B marketplace has been dramatic in recent years, with even traditional distributors

and component suppliers seeking to understand and provide solutions to [buyer firm] problems” (Lilien 2016, p. 548-549). Suppliers have begun to offer different support services outside of the normal core offering to provide solutions to issues faced by buyer firms (Bitner et al. 2008), but some support services reach beyond the buyer firm to influence end users as well (Eggert et al. 2017; Homburg et al. 2014).

Supplier Support Services in Solutions Literature. The solutions literature has received a lot of focus by academics and practitioners over the past few decades as buyer firm power has grown, buyer firm process outsourcing has increased, and suppliers are viewing buyer firms as collaborative partners in marketing channels (Grewal et al. 2015). Solutions are created to meet the needs of the buyer firm and are made up of two components: the supplier’s core offering and ancillary support services (Tuli et al. 2007; Sawhney 2006). In this research, I focus on two specific types of supplier support services: the supplier’s direct and indirect support services.

Direct and indirect support services may help the buyer firm achieve better outcomes for its business, but they can also lead to positive financial outcomes for the supplier. The direct support services aim to improve the buyer firm’s business knowledge and processes, while the indirect support services are primarily focused on creating end user preferences that may drive sales for the supplier as well as the buyer firm (Homburg et al. 2014).

Trends in Supplier Support Service Literature. Table 2 highlights past literature on supplier support services. Prior literature has examined the impact of supplier support services on supplier relational (i.e., relationship value), strategic (i.e., differentiation strategy), and financial (i.e., bankruptcy likelihood) outcomes. The dominant perspective in this literature stream views support services in terms of the supplier’s offering. Prior literature has focused on the optimal number of support services that a supplier should offer (e.g., Brax and Visintin 2017) and the impact of offering different categories of support services (e.g., Mathieu 2001; Ulaga and Eggert 2006). This research is the first to examine the utilization of the support services from the buyer firm’s perspective.

Table 2. Review of Supplier Support Services

Study	Type of Research		Support Service Perspective		Outcome Variable			Key Findings
	Conceptual	Empirical	Offered by Supplier	Utilized by Buyer Firm	Relational	Strategic	Financial	
Morris and Davis (1992)		✓	✓				✓	The way a firm defines, measures, and manages customer service impacts the performance of the company.
Samli et al. (1992)	✓		✓		✓		✓	Services must be included in for a successful proactive marketing strategy to work. The services provided by the firm can provide a competitive advantage.
Boyt and Harvey (1997)		✓	✓				✓	Suppliers need to classify and position their support services based off the needs of the market segment.
Matthyssens and Vandenbempt (1998)		✓	✓				✓	Explicit service quality, proactive solutions, and the timely design of new services were identified as key success factors in the management and marketing of industrial services.
Mathieu (2001)		✓	✓		✓			Support services offered by suppliers were categorized as those that support the product and those that support the actions of the buyer firm.
Mills and Ungson (2001)	✓		✓				✓	Support services should be differentiated by whether or not the recipient is internal or external to the firm.
Simpson et al. (2001)	✓		✓		✓			Suppliers are able to create value for their customers through market-oriented behaviors.
Homburg et al. (2003)		✓	✓		✓		✓	The corporate culture and human resource management of a firm are necessary for the success of a service-oriented implementation strategy and organizational performance.
Oliva and Kallenberg (2003)	✓		✓				✓	Firms incorporate services into their core offering through various stages in which new challenges occur.
Ulaga (2003)		✓	✓		✓			Firms can choose to invest in, maintain, or leave a relationship with a supplier by comparing the activities a supplier uses to drive value in the relationship.
Tukker (2004)	✓		✓				✓	Support services can be differentiated by their economic and environmental potential for the firm and supplier.
Brady et al. (2005)	✓							Suppliers need to develop or acquire new capabilities when shifting to a service-centric focus.
Davies et al. (2006)	✓		✓				✓	Firms are beginning to offer integrated solutions for their customers, but their success depends on how efficiently the firm can develop the support services.
Eggert et al. (2006)		✓	✓		✓			The relationship life cycle plays an important role in the value created in buyer-seller relationships.

Study	Type of Research		Support Service Perspective		Outcome Variable			Key Findings
	Conceptual	Empirical	Offered by Supplier	Utilized by Buyer Firm	Relational	Strategic	Financial	
Ulaga and Eggert (2006)		✓	✓		✓		✓	Suppliers can differentiate themselves from their competition through relational benefits or costs in order to maintain key supplier status with their customers.
Antioco et al. (2008)		✓	✓				✓	Services that support the client's actions create service volume while services that support the supplier's product generates additional product sales.
Gebauer (2008)	✓		✓			✓		Cognitive biases impact managerial motivations to exploit customer support service opportunities.
Kowalkowski et al. (2009)	✓		✓		✓		✓	The authors develop a typology for industrial services based on the focus and scope of the support service.
Gebauer et al. (2010a)		✓	✓			✓		Service strategies correspond with organizational design factors and the authors propose four different configurations of firms.
Gebauer et al. (2010b)		✓	✓			✓		Changes to a firm's service strategy follow distinct patterns that are related to the firms organizational design.
Raddats and Easingwood (2010)	✓		✓				✓	The authors develop a typology for service strategies and investigate the growth strategies and resources of firms that lead to competitive advantages.
Meier et al. (2011)	✓		✓			✓		The general approach of industrial product-service systems is proposed and defined.
Raddats (2011)		✓	✓			✓		The industrial services of product-centric businesses are linked to the service strategy and market differentiation of the firm. The services can be categorized as discrete, product lifecycle, and output-based services.
Ulaga and Reinartz (2011)		✓	✓			✓	✓	The unique resources and capabilities of a manufacturer can impact its market position for both cost and differentiation leadership.
O'Cass and Ngo (2012)		✓	✓		✓		✓	The relationship between a firm's market orientation and value creation is mediated by product innovation capability and marketing capability.
Kohtamäki et al. (2013)		✓	✓				✓	The authors demonstrate a nonlinear effect of the service offering on sales growth which is positively moderated by the network capabilities of the firm.
Baines and Lightfoot (2014)		✓	✓		✓	✓		Six unique practices and technologies were found: facilities and their location, micro-vertical integration and supplier relationships, information and communication technologies, performance measurement and value demonstration, people deployment and their skills, and business processes and customer relationships.
Eggert et al. (2014)		✓	✓				✓	Services supporting client actions (SSC) directly affect revenue and profit streams while service supporting products (SSP) impact the financial performance of the firm indirectly through the SSCs.

Study	Type of Research		Support Service Perspective		Outcome Variable			Key Findings
	Conceptual	Empirical	Offered by Supplier	Utilized by Buyer Firm	Relational	Strategic	Financial	
Homburg et al. (2014)	✓		✓			✓	✓	Three types of indirect customer marketing strategies are identified: direct customer downstream support, cooperative indirect customer marketing, and independent indirect customer marketing. The type of strategies used by the firm is dependent on value-chain and supplier-related moderators.
Cusumano et al. (2015)	✓		✓			✓		The authors propose three categories of product-related service: smoothing , adapting, and substitution.
Steiner et al. (2016)		✓	✓				✓	Suppliers create customized service packages for firms to ease negotiations, but buyers are willing to pay more for separate service elements than they are for bundled service packages.
Benedettini et al. (2017)		✓	✓			✓	✓	The number of services offered by a firm is significantly related to the bankruptcy likelihood of a firm only when complemented by specific firm characteristics.
Brax and Visintin (2017)		✓	✓					A framework is developed to compare different clusters of industrial, service-based models. Three different approaches of servitization are highlighted as well: end-state models, gradual transition models, and stepwise progression models.
Eggert et al. (2017)		✓	✓				✓	External service outsourcing leads to a more favorable financial outcomes than internal service outsourcing, but this effect is contingent on the service's reliance on technology, the outsourcing partner, and the strategic outsourcing intention.
Partnanen et al. (2017)		✓	✓					A mutli-dimensional scale is developed to measure the scope of a firm's industrial service offering.
Ruiz-Martinez et al. (2018)		✓	✓		✓			The core axis, information and communication technologies axis, and the access axis were revealed as axes of value creation.
Current Study		✓	✓	✓			✓	Both indirect and direct support services can drive buyer firm purchasing, but certain buyer firm characteristics can enhance or diminish the effect.

Prior literature has categorized the supplier support services in numerous ways based off when the service is offered (e.g., Morris and Davis 1992; Raddats 2011), the complexity of the support service (e.g. Boyt and Harvey 1997), which function of the buyer firm the service is supporting (e.g., Kotler 1994; Homburg et al. 2003; Gebauer et al. 2008), whether the support service is process- or product-oriented (e.g., Mathieu 2001; Oliva and Kallenberg 2003; Tukker 2004), and who are the direct and indirect targets of the support service (e.g., Mills and Ungson 2001; Homburg et al. 2014; Eggert et al. 2017). There is a large amount of overlap between the different categories of support services and little agreement on where specific support services fit. For example, training support services are considered to be post-sale services by Morris and Davis (1992), services supporting the client's actions by Mathieu (2001), operational services by Brady et al. (2005), customer support services by Gebauer et al. (2008), and implementation support services by Brax and Visintin (2017). Table 3 showcases the different categorizations of supplier support services studied in prior literature.

Supplier Support Service Categorizations. One of the first categorizations of supplier support services was by Morris and Davis (1992) and Samli et al. (1991). They categorized the support services into pre- and post-sale services. Presale services included assessing the needs, expectations, and requirements of the market while post sale services included technical assistance and warranties. However, other support services were categorized by the lifecycle of the product. Certain support services such as design and engineering were offered early on in the product lifecycle (Raddats 2011), while others such as recycling or disposal were offered at the end of the product's lifecycle (Ulaga and Reinartz 2011; Benedettini et al. 2017; Brax and Visintin 2017).

The complexity of the support service is another key factor of differentiation of supplier support services in prior literature. Boyt and Harvey (1997) categorized supplier services into elementary, intermediate, and intricate services. Baines and Lightfoot (2014) followed a similar categorization schema and separated the services into base, intermediate, and advanced services. Examples of the less complex services include the provision of spare parts and telephone services, and the more complex services include consultancy services and customer support agreements (Boyt and Harvey 1997; Baines and Lightfoot 2014).

In order to differentiate supplier support services further, prior literature has also sorted the support services based off the area of the buyer firm that is being supported. The specialized support services help the buyer firms with maintenance, financial, operational, training, production, procurement, and consulting support. Supplier support services such as janitorial services (Kotler 1994), preventative maintenance (Gebauer et al. 2010a; Partanen et al. 2016; Brax and Visintin 2017), installation services (Homburg et al. 2003; Kohtamäki et al. 2013; Brax and Visintin 2017), repair services (Gebauer et al. 2010b; Kohtamäki et al. 2013; Partanen et al. 2017), training (Brady et al. 2005; Benedettini et al. 2017; Brax and Visintin 2017), IT services (Davies et al. 2006), and spare parts and accessories (Benedettini et al. 2017) are all considered maintenance and operational support services. Financial support services include accounting services (Mills and Ungson 2001; Eggert et al. 2017), insurance (Homburg et al. 2003; Benedettini et al. 2017), financing support (Brax and Visintin 2017), leasing (Mills and Ungson 2001; Eggert et al. 2017), and other general financial services (Brady et al. 2005; Partanen et al. 2017).

Suppliers also offer support to the buyer firm's production processes. Benedettini et al. (2017) discussed the offering of product design and development support services. Some suppliers also offer prototyping (Partanen et al 2017; Benedettini et al. 2017) and perform feasibility studies to aid buyer firms (Homburg et al. 2003; Kohtamäki et al. 2013; Partanen et al. 2017). Gebauer et al. (2010a) discussed on the construction services offered by suppliers, but hardware and software production services are also available (Brax and Visintin 2017). Suppliers provide resources to the procurement processes of buyer firms, as well through purchasing and vendor management (Benedettini et al. 2017) and electronic ordering processes (Homburg et al. 2003).

Table 3. Categorizations of Supplier Offered Support Services

Study	Supplier Support Services	
<p>Morris & Davis (1992) Samli et al. (1992)</p>	<p><i>Presale Services</i></p> <p>Assist international financing Assess market's needs, requirements and expectations Help buyer develop just-in-time systems Electronic data interchange Plan materials requisition</p>	<p><i>Postsale Services</i></p> <p>Train users in operation and maintenance Ensure easy access to maintenance, parts, and repairs Provide set-up technical assistance Provide buyer with warranties Maintain just-in-time system</p>
	<p>Kotler (1994)</p>	<p><i>Business Advisor Services</i></p> <p>Legal services Accounting services Advertising services Management consulting</p>
<p>Boyt & Harvey (1997)</p>		<p><i>Elementary Services</i></p> <p>Gas/electric utilities Telephone services</p>
	<p><i>Intermediate Services</i></p> <p>Equipment repair Equipment leasing Transportation</p>	
<p>Mathieu (2001) Antioico et al. (2008) Eggert et al. (2014) Steiner et al. (2016)</p>	<p><i>Services Supporting the Products</i></p> <p>Customer services/hotline Product documentation Product repair and spare parts delivery Product recycling and dismantling Maintenance services Machine status monitoring Warranty extension Installation services Service hotline Standard software and machine training Product updates and upgrades</p>	<p><i>Services Supporting the Client's Actions</i></p> <p>Customized software and machine training Consulting Financing services/leasing Research and development Virtual machine 3D CAD data of the machine Feasibility studies Solutions to integrate machine into existing facility Marketplace for free machine capacity</p>
	<p>Mills & Ungson (2001) Eggert et al. (2017)</p>	<p><i>Internal Services</i></p> <p>Human resource management Information systems management Legal support Accounting services Financial services</p>
<p>Simpson et al. (2001)</p>		<p><i>Product/Quality/Price Factors</i></p> <p>Competitive pricing Innovative, technologically advanced design New/improvement of product life cycle Product line availability</p>
	<p><i>Service and Support Factors</i></p> <p>Strong promotional support Training Technical support Technological interfacing</p>	

Study	Supplier Support Services		
<p>Homburg et al. (2003)</p>	<p>Services for Technical Security and Optimization</p> <p>Assembly, installation, and implementation Technical support for similar products Dismantling, recycling, and disposal Inspection/maintenance Adaptation of the product to specific customer needs</p> <p>Services Supporting the Processes of Cooperation</p> <p>Consignment storage Just-in-time delivery Project management /prime contractorship Electronic ordering/order processing</p> <p>Services for Training and Further Consulting</p> <p>Business training Seminars, lectures, and events for customers Feasibility studies/problem analysis Cooperation/support in research and development</p>	<p>Information and Consulting Services</p> <p>Personal consulting/sales force visits Product demonstration/sample delivery Cost-benefit-calculation, visualization of benefits Customer magazine Written information material/documentation Technical user training Website with product information</p> <p>Services in the Business-Related Field</p> <p>Procurement aid Sales aid, advertising, and marketing support Insurance services Rent/mediation of machinery/tools Business consulting Financial aid (e.g., mediation of loans, leasing) Rent/mediation of personnel</p>	
	<p>Oliva & Kallenberg (2003)</p>	<p>Product-Oriented Services</p> <p><i>Basic Installed Base Services</i></p> <p>Documentation Transport to client Installation/commissioning Product-oriented training Help Desk Inspection/diagnosis Repairs/spare parts Product updates and upgrades Recycling/machine brokering Refurbishing</p> <p><i>Maintenance Services</i></p> <p>Preventative maintenance Condition monitoring Spare parts management Full maintenance contracts</p>	<p>End-user's Process-Oriented Services</p> <p><i>Professional Services</i></p> <p>Process-oriented engineering Process-oriented research and development Spare parts management Process-oriented training Business-oriented training Process-oriented consulting Business-oriented consulting</p> <p><i>Operational Services</i></p> <p>Managing maintenance functions Managing operations</p>
		<p>Ulag (2003)</p> <p>Eggert et al. (2006)</p> <p>Ulag & Eggert (2006)</p>	<p>Service Support</p> <p>Product-related services Customer information Outsourcing of activities</p> <p>Supplier Know-How</p> <p>Knowledge of supply market Improvement of existing products Development of new products</p> <p>Personal Interaction</p> <p>Communication Problem solving Mutual goals</p> <p>Process Costs</p> <p>Inventory management Order-handling Incoming inspections Manufacturing</p>

Study	Supplier Support Services	
Tukker (2004) Meier et al. (2011)	<p align="center"><i>Product-Oriented Services</i></p> Product related service Advice and consultancy	<p align="center"><i>User-Oriented Services</i></p> Product lease Product renting or sharing Product pooling
	<p align="center"><i>Result-Oriented Services</i></p> Activity management Pay per service unit	
Brady et al. (2005) Davies et al. (2006)	<p align="center"><i>Systems Integration</i></p> IT system integration Logistic integration	<p align="center"><i>Operational Services</i></p> Upgrades and maintenance Training IT services
	<p align="center"><i>Vendor Financing</i></p> Financial services Revenue sharing	<p align="center"><i>Business Consultancy</i></p> Consulting services
Gebauer et al. (2008)	<p align="center"><i>Customer Support Services</i></p> Logistic services Business consulting Extensive training Services for managing the customers' installed basw Optimization of operating processes Service level agreements Personnel hiring	<p align="center"><i>Customer Service</i></p> Order taking Billing and payment services <p align="center"><i>Product-Related Services</i></p> Transportation services Product-related training Documentation services Inspection/repair
Kowalkowski et al. (2009)	<p align="center"><i>Unbundled Services</i></p> <p align="center"><i>Product-Orientated</i></p> Maintenance and spare parts Refurbishment Safety inspection Customer training	<p align="center"><i>Bundled Services</i></p> <p align="center"><i>Product-Orientated</i></p> Preventative maintenance contracts Spare parts and apparatus agreements <p align="center"><i>Process-Orientated</i></p> Life-cycle services Short/long term rental agreements Transportation management Support contracts Reliability-centered maintenance
	<p align="center"><i>Process-Orientated</i></p> Technical support and consulting Performance upgrade Performance audit Operational services	
Gebauer et al. (2010a, 2010b)	<p align="center"><i>Customer Services</i></p> Information services Basic advice services Documentation Transport to client Installation/commissioning	<p align="center"><i>Basic Service for the Installed Base</i></p> Product-oriented training Help desk Inspection services Diagnosis services Repair services
	<p align="center"><i>Maintenance Services</i></p> Preventative maintenance Full maintenance contracts Annual maintenance activities Service-level agreements on maintenance Process optimization through continuous maintenance <p align="center"><i>Operational Services</i></p> Managing the whole maintenance function Operating the product Managing spare parts logistics Operating repair teams for customers Managing the training and personnel development	<p align="center"><i>Research and Development-Oriented Services</i></p> Process design Process-oriented engineering Development services Construction (design) services Business consulting in product and process development

Study	Supplier Support Services	
Raddats & Easingwood (2010)	<i>Operations Services</i>	<i>Product-Attached Services</i>
	<i>Vendor-Agnostic</i>	Installation
	Systems integration	Training
	Technical consultancy	Support
	Network deployment	Maintenance
	<i>Own Products</i>	Logistics/delivery
	Managed services	Repairs/spare parts
	Consultative selling	Technical help desk
	Asset availability	
Raddats (2011)	<i>Product Lifecycle Services</i>	<i>Discrete Services</i>
	Maintenance	E-trading
	Repair and overhaul	Logistics
	Systems Integration	Quality and safety
	Logistics Support	Transaction management
	Training/education	Technical services
	Design and engineering	Expert services
	Plant upgrade and life extension	<i>Output-Based Solutions</i>
	Technical support	Complex projects
	Consulting services	Availability contracting
	Asset lifecycle services	Systems integration
	Information management	Network rollout
	Operational support	Business process outsourcing
	Testing and design validation	Application services
	Product retro-fitting	
	Turnkey solutions	
	Infrastructure maintenance	
	Installation and commissioning	
	Financial services	
Ulaga and Reinzartz (2011)	<i>Services Oriented Toward the Supplier's Good</i>	<i>Services Oriented Toward the Customer Process</i>
	<i>Product-Life Cycle Services</i>	<i>Process Support Services</i>
	Delivery of materials	Energy efficiency audits for commercial buildings
	Inspections of machinery	Logistics consulting for material-handling processes
	Recycling services	Fleet management
	<i>Asset Efficiency Services</i>	Supply management
	Remote monitoring of equipment and machinery	
	Software customization	
Kohtamäki et al. (2013)	<i>Customer Services</i>	<i>Research and Development Services</i>
	Product demonstrations	Research service
	Customer seminars	Prototype design and development service
	Technical user training	Feasibility studies
	Written information material	Problem analyses
	Customer consulting and support by phone	Analysis of a product's manufacturability
	<i>Maintenance Services</i>	
	Installation service	
	Repair service	
	Product upgrading service	
	Maintenance	

Study	Supplier Support Services	
Baines & Lightfoot (2014)	<i>Base Services</i>	<i>Intermediate Services</i>
	Product/equipment provision Spare part provision Warranty	Scheduled maintenance Technical help-desk Repair/overhaul services Delivery to site Operator training Condition monitoring In-field service
	<i>Advanced Services</i>	
Homburg et al. (2014)	<i>Direct Customer Downstream Support</i>	<i>Independent Indirect Customer Marketing</i>
	Market research Training Consulting Process Optimization	Advertising Educational/technical services Rebates Online brand communication
	<i>Cooperative Indirect Customer Marketing</i>	
Cusumano et al. (2015)	<i>Product Adapting</i>	<i>Product Smoothing</i>
	Customization of new features Training or consulting to introduce new uses Integration of core product with other products or solutions	Financing Warranty/insurance Maintenance/repair Technical support Training in basic use
	<i>Product Replacement/Substituting</i>	
Benedettini et al. (2017)	<i>Trading and Distribution Services</i>	<i>Logistic Services</i>
	Trading/import Retailing/direct selling Sales of used assets Distribution	Inventory management, control, and planning Logistics, transportation, and trucking Order fulfillment, packing, and shipping Warehousing
	<i>Procurement and Purchasing Services</i>	<i>Maintenance and Support Services</i>
	Procurement Purchasing Vendor management services Sourcing services	Spare parts and accessories Technical and operational support Maintenance, repair, and calibration Product related training/education
	<i>Certification and Testing Services</i>	<i>Design and Development Services</i>
	Quality assurance Inspection/auditing Certification/testing Commissioning	Design and development Engineering/reengineering Prototyping Research services
	<i>Consultancy Services</i>	<i>General Outsourcing Services</i>
	Business advisory services Process optimization Professional training/education Consultancy/problem analysis	Real estate management (operation/control/oversight) IT outsourcing Data collection and processing Project management
	<i>Financial Services</i>	<i>Renewal and Upgrade Services</i>
	Leasing/rental Financing Insurance Extended warranty	Product modification/conversion Product enhancement/improvement Refurbishing, retrofitting, and reconditioning Product upgrade and renewal
<i>End-of-Life Services</i>	<i>Installation and Implementation Services</i>	
Decommissioning/de-installation Collection Remanufacturing Dismantling, recycling, and disposal	Installation Configuration Implementation Integration of products into the customers' systems	
<i>System Integration</i>		
Integrated solutions System integration		

Study	Supplier Support Services	
Brax & Visintin (2017)	<i>Production</i>	<i>Implementation</i>
	Product design Hardware production Software production	Installation services System engineering services Field engineering services
	<i>Business Analysis</i>	Training
	Business consulting	<i>Operation</i>
	<i>Solution Design</i>	System operation
	Technical environment analysis	System-enabled process management
	System requirement specification	<i>Support</i>
	Maintenance plan	Maintenance
	Customer training	On-field support
	Functional/technical design	Remote support
	<i>Supply Network Design</i>	Spare and consumables provision
<i>Other</i>	<i>Disposal</i>	
Financing	Collecting and transportation	
Pricing and payments	Brokering re-sales	
	Recycling	
Partanen et al. (2017)	<i>Technical and Optimization Services</i>	<i>Research and Development Services</i>
	Installation services	Prototype design and development service
	Just-in-time systems	Feasibility studies
	Spare parts	Analysis of a product's manufacturability
	Delivery services	Product tailoring service
	Technical support for similar products	Problem analyses
	Repair service	Research services
	Recycling	<i>Business Services</i>
	Electronic ordering system	Procurement services
	Product upgrading service	Performance services
	Maintenance	Warehousing services for other manufacturer's products
	Warranty	Mediation of products
	<i>Product Information Sharing Services</i>	Project management
	Product demonstration	Service for operating the product sold for the customer
	Customer seminars	Service for operating customer's process
	Documentation services	Consulting service
	Technical user training	Mediation of personnel
Written information material (magazine)	Financing services	
Customer consulting and support by phone	Insurance services	
Cost-benefit calculation		

Supplier services can also be tailored to help the buyer firm improve their business and train their employees. Many suppliers offer to conduct customer training (Partanen et al. 2017; Brax and Visintin 2017) and product demonstrations (Gebauer et al. 2010a; Kohtamäki et al. 2013) at buyer firm employees to improve the employees' knowledge of the products. Some suppliers will take the training a step further and offer testing and certifications as a form of support to buyer firms (Benedettini 2017). Other suppliers provide information through written trainings (Homburg et al. 2003; Kohtamäki et al. 2013). General business consulting services are provided by many suppliers (Brady et al. 2005; Davies et al. 2006; Partanen et al. 2017), but other suppliers offer consulting on specific departments such as legal (Kotler 1994; Mills and Ungson 2001), general (Kotler 1994) or specialized management (Simpson et al. 2001), and process development (Gebauer et al. 2010a) within the buyer firm.

The most prevalent categorization of supplier support services distinguishes between the services that support the supplier's product and those that support the buyer firm's processes or actions (e.g., Mathieu et al. 2001; Tukker 2004; Cusumano et al. 2015). Product focused services enable the buyer firm to better understand, use, maintain, and manage the supplier's products.

These services are not typically customized to specific buyer firms as the supplier may sell many of the same products to numerous firms (Mathieu 2001). Suppliers offer maintenance services (Mathieu 2001; Raddats 2011), monitoring services (Oliva and Kallenberg 2003; Ulaga and Reinartz 2011), installation (Mathieu 2001; Raddats and Easingwood 2010), inspections (Gebauer et al. 2008; Kowalkowski et al. 2009), technical product support (Simpson et al. 2001; Homburg et al. 2003; Cusumano et al. 2015), documentation services (Gebauer et al. 2008), product training (Raddats and Easingwood 2010; Cusumano et al. 2015), and recycling/disposal services (Oliva and Kallenberg 2003; Ulaga and Reinartz 2011) as product related services.

Unlike product-oriented supplier support services, process-oriented services are focused on buyer firm activities and processes and are customized to fit their specific needs (Mathieu 2001).

Compared to product-oriented support services, the process-oriented support services are

more complex (Eggert et al. 2014). The goal of process-oriented support services is to provide resources to buyer firms to enable them to better serve end users (Antioco et al. 2008). Suppliers offer support services to improve the buyer firm's distribution and delivery processes (Simpson et al. 2001; Ulaga 2003; Kowalkowski et al. 2009), research and development (Mathieu 2001; Oliva and Kallenberg 2003), employee training (Mathieu 2001), order taking processes (Gebauer et al. 2008; Raddats 2011), advertising (Simpson et al. 2001), management functions (Oliva and Kallenberg 2003), order handling (Ulaga 2003), hiring (Gebauer et al. 2008), systems integration (Raddats and Easingwood 2010; Raddats 2011), and help with energy efficiency audits (Ulaga and Reinartz 2011).

The final categorization type differentiates the supplier's support service by the party it aims to impact, either directly or indirectly. Prior literature has primarily focused on the influence of support services on the buyer firm-supplier dyad (e.g., Boyt and Harvey 1997; Simpson et al. 2001). Even though the end users are key drivers of demand for the buyer firm and supplier (Bishop et al. 1984), only a few articles have mentioned the impact a supplier's support services has on them (Mills and Ungson 2001; Eggert et al. 2017; Homburg et al. 2014). Mills and Ungson (2001) differentiates support services into internal and external services. Internal services address the needs of employees within the buyer firm and include human resource management and accounting, while external services address the needs of the buyer firm's customers and includes services such as leasing and rental services (Mills and Ungson 2001; Eggert et al. 2017). Focusing specifically on marketing activities provided by the supplier, Homburg et al. (2014) identifies three types of supplier support services: direct customer downstream support, cooperative indirect customer marketing, and independent indirect customer marketing. Direct customer downstream support services are targeted at buyer firms and include market research, training and consulting, cooperative indirect support services require the buyer firm and supplier to work together to better serve the end users through ingredient branding or co-development of products, and independent indirect customer marketing involves the supplier directly interacting with end users to create preferences and drive downstream demand through advertising and brand communication (Homburg et al. 2014).

Following a similar categorization scheme, I contribute to prior support service literature by examining

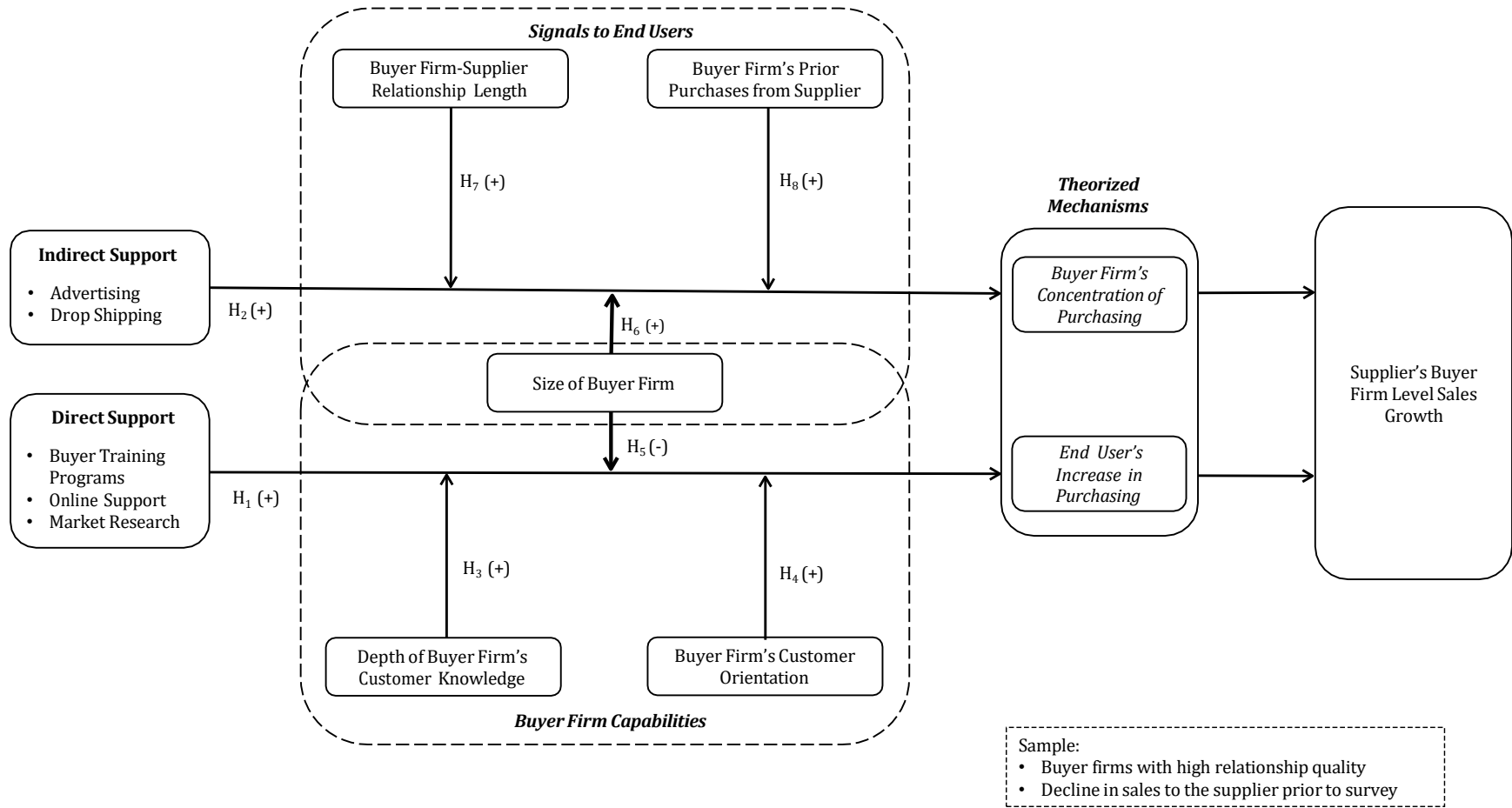
how the buyer firm's use of direct and indirect support services can drive buyer firm purchasing, specifically in instances when the buyer firm-supplier relationship is strong, yet the buyer firm's purchases from the supplier are declining. Drawing from organizational buying and marketing channel literature, I theorize that the effect of buyer firm usage of direct and indirect supplier support services on a supplier's firm level sales growth are driven by the end user's increase in purchasing and the buyer firm's concentration of purchasing, but the effects are contingent on buyer firm characteristics.

CHAPTER III

HYPOTHESIS DEVELOPMENT

Suppliers invest a lot of time and resources into developing deep relationships with buyer firms (Palmatier et al. 2013). When the supplier fosters a strong relationship with a buyer firm, but sales begin to decline, the supplier is therefore motivated to protect its investments. I first draw from the supplier support service literature and marketing channels literature to theorize the effect of increased usage of direct and indirect support services on the supplier's buyer firm level sales growth in instances of high relationship quality between the buyer firm and supplier, yet declining buyer firm purchasing (Figure 2). Buyer firms are all unique and therefore the support services may not provide the same level of sales growth for the supplier. Therefore, I also examine buyer firm characteristics that moderate the effect of direct and indirect support services. I ground the conceptualization in signaling theory (Heil and Robertson 1991; Connelly et al. 2011) and resource-based view of the firm (Wernerfelt 1984; Das and Teng 2000), arguing that the characteristics and capabilities of the buyer firm act as signals to end users and impact the integration of the supplier's support.

Figure 2. Conceptual Model



Effects of Direct Support Services on Supplier Sales Growth

The usage of direct and indirect support services by buyer firms can influence supplier sales through changes in end user purchasing and/or buyer firm purchasing concentration (Lilien 2016; Verhoef 2003) when the relationship quality between the buyer firm and supplier is high, yet the buyer firm is purchasing less from the supplier. Direct support services support the actions and activities of buyer firms (Homburg et al. 2014). In this research, I focus on three unique direct support services from prior literature that are offered by the focal supplier: buyer training programs (Simpson et al. 2001), online support (Homburg et al. 2003), and market research (Homburg et al. 2014). *Buyer training programs* are informational sessions about products held by the supplier for a buyer firm. *Online support* is a supplier's provision of website support and website content leasing for buyer firms. Channel, industry, and vendor specific marketing materials are provided by suppliers to buyer firms through the *market research* support service.

Effects of direct support services on end user's increase in purchasing. Buyer firms may utilize more of a specific direct support service in order to perform activities or processes better or more efficiently (Smith and Owens 1995). However, each buyer firm may have a greater or lesser need for the direct support services due to that buyer firm's current capabilities and resources (Josefy et al. 2015; Wernerfelt 1984). Buyer firms that utilize the direct support services assimilate the supplier's service into their offering (Mathieu 2001). The firms may integrate a supplier's support service to improve their current capabilities or allow the supplier to fully take over that function (Boyt and Harvey 1997; Homburg et al. 2003). When the buyer firm can make use of the supplier's direct support services and devote their resources elsewhere, the buyer firm is then able to focus and develop their other capabilities (Davies et al. 2006), ultimately enhancing their offering to end users (Desai 2000). If a buyer firm can provide a more competitive offering to end users, the end users may purchase additional products from that buyer firm, which in turn increases demand for the buyer firm (Bishop et al. 1984). The buyer firm will then need additional products from the supplier to keep up with the downstream demand, leading to positive sales growth for the supplier in instances when the buyer firm-supplier relationship quality is high, but the buyer firm is exhibiting a previous decline in sales.

Effects of direct support services on buyer firm's concentration in purchasing. One type of direct support service is the supplier's marketing research support (Partanen et al. 2017; Benedettini et al. 2017). This service provides the buyer firm with information about trends impacting upstream and downstream channel partners (Homburg et al. 2014). The buyer firm may focus less on their own marketing research capabilities and become reliant on the market knowledge provided by the supplier. As buyer firms utilize additional support services from that supplier, they become locked into working with the main supplier due to the increased switching costs of changing to another supplier (Homburg et al. 2014; Eggert et al. 2017). Buyer firms may want to avoid becoming too reliant on one supplier (Scheer et al. 2010), but if the increased usage of the supplier's support services continues to lower costs and produce more efficient processes for the buyer firm, the buyer firm may still concentrate more of their purchasing to the main supplier over its competitors (Ulaga and Eggert 2006) growing the share of wallet for that supplier. When the supplier has developed a high quality relationship with the buyer firm, but the supplier's sales to the buyer firm are declining, I hypothesize:

H₁: Increased usage of the supplier's direct support services, (a) buyer training programs, (b) online support, and (c) market research, by the buyer firm will lead to a *more positive (less negative)* growth in supplier's buyer firm level sales.

Effects of Indirect Support Services on Supplier Sales Growth

Indirect support services may help the buyer firm provide a better offering, but the supplier can also use them to create end user preferences for their products (Homburg et al. 2014). In this research, I draw from prior literature and focus on the extent to which the supplier's buyer firms make use of two different indirect support services offered by the focal supplier, advertising and drop shipping, in instances where the supplier is selling less to the buyer firm even though the buyer firm-supplier relationship quality is high. The *advertising* support service provides the buyer firm with co-branded marketing materials and media that are targeted to end users. The advertising media showcases the buyer firm and supplier together by displaying either the logos of both companies (i.e., ISBM and Dell logos on product advertisements) or by showcasing the buyer firm advertising the supplier's products (i.e., Home Depot advertising DeWalt power tools). In this context, *drop shipping* is the direct shipment of products from the supplier to the end user with the logos of the buyer firm and supplier on the shipping material.

Effects of indirect support services on end user's increase in purchasing. When buyer firm's utilize additional indirect support services from suppliers, end users see the logos of both the supplier and buyer firm more often and associate them together (Bengtsson and Servais 2005). In this research, the supplier is perceived to have strong brand strength due to their large size, which may spillover to the buyer firm when a symbolic partnership is showcased through the indirect support services (Simonin and Ruth 1998). The quality of the buyer firm's offering in the mind of the end user will be enhanced (Park et al. 1996; James 2005) ultimately leading to increased end user purchasing when the buyer firm relationship quality with the supplier is high, yet the buyer firm has decreased sales to the supplier.

Effects of indirect support services on buyer firm's concentration in purchasing. As buyer firm's use more of the indirect support services, the buyer firm may decide to adjust how much they purchase from other suppliers. The end users may begin to consider the buyer firm as an important source for the supplier's products or begin to prefer the focal supplier's products over other supplier's products when purchasing from the buyer firm (Homburg et al. 2014). The buyer firms may then need to respond to the end users demand by purchasing additional products from the supplier and decrease the amount they purchase from other suppliers (Kekre et al. 1995), thus increasing the share of wallet for the focal supplier. Other suppliers may also be discouraged from competing for the buyer firm's business if they perceive strong relationship between the buyer firm and supplier (Ulaga and Eggert 2006) and see the symbolic partnership created through the buyer firm's usage of indirect support services (Erevelles et al. 2008). The buyer firm-supplier partnership creates barriers for other suppliers to compete for the buyer firm's business (Wilson et al. 1995). The buyer firm may be forced to concentrate their purchasing to the main supplier in such cases. I therefore hypothesize that in instances of high buyer firm-supplier relationship quality, yet declining buyer firm purchases to the supplier:

H₂: Increased usage of the supplier's indirect support services, (a) marketing media and (b) drop shipping, by the buyer firm will lead to a *more positive (less negative)* growth in supplier's buyer firm level sales.

Moderators of Direct Support Services: Buyer Firm Capabilities

Direct support services provide customized solutions to buyer firms (Homburg et al.

2014). These services are integrated by buyer firms and can replace the current capabilities of the buyer firm,

add new resources, or be used to complement the processes of the buyer firm (Mathieu 2001). The resource-based view of the firm indicates that each buyer firm has unique resources and capabilities that gives them a competitive advantage (Wernerfelt 1984), but the buyer firms should be open to pooling and utilizing the resources of others to further enhance their market position (Das and Teng 2000). For the combination of resources from different channels members to be effective, the capabilities and resources must be aligned appropriately (Ketchen et al. 2007). Therefore, the incorporation of the direct support services depends on whether the buyer firm's resources allow the integration of the supplier's support services. The characteristics of the buyer firm play a large role on the type and number of capabilities available (Wernerfelt 1984). Drawing from resource-based view, I examine three different buyer firm capabilities that influence the buyer firm's integration of direct support services: the buyer firm size (Josefy et al. 2015), the buyer firm's customer orientation (Deshpandé et al. 1993), and the buyer firm's market knowledge (Zahra et al. 2000).

Depth of buyer firm's market knowledge. By gathering knowledge about downstream end users, buyer firms gain the ability to understand and respond to their needs (Zahra et al. 2000). The depth of the buyer firm's market knowledge is defined as the "the level of sophistication and complexity of a firm's knowledge of its customers" (De Luca and Atuahene-Gima 2007, p.98). Deep knowledge of end users allows buyer firm's find links between diverse knowledge bases and determine how they may work together (Huber 1991; Zahra et al. 2000). The advanced knowledge of the end users gives the buyer firms a better understanding of how best to utilize the direct support service from the supplier to improve their capabilities and offering to their customers (Mowery et al. 1996). For example, buyer firms may utilize product design and development as a form of the supplier's direct support services (Simpson et al. 2001; Ulaga 2003). As buyer firm use more of the product design and development service, the buyer firm can use its deep knowledge of the market needs to guide the development and create products that end users will want. The enhanced offering can lead to increased sales for the buyer firm as end users purchase more (Lilien 2016). The buyer firm will then purchase additional products from the supplier, leading to an increase in purchasing from the supplier when the supplier has developed a high-quality relationship with the buyer firm. I hypothesize:

H₃: As a buyer firm's depth of market knowledge increases, additional usage of the supplier's (a) buyer training programs, (b) online support, and (c) market research by the buyer firm has a *more positive (less negative)* effect on the supplier's buyer firm level sales growth.

Buyer firm's customer orientation. *Buyer firm customer orientation* is defined as "the set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise" (Deshpandé et al. 1993, p.27). When a buyer firm is customer oriented, the capabilities and resource the firm are focused on the end users and satisfying their needs (Brady and Cronin 2001). The buyer firm will look for channel partners that also place importance on the end user and have resources available to further enhance the buyer firm's offering (Shah and Swaminathan 2008; Kohtamäki et al. 2013). The increased usage of direct support services provides the buyer firm with access to capabilities that the buyer firm may not have or improved versions of the buyer firm's current capabilities (Quinn 1999). The highly customer-oriented buyer firm's mission to satisfy the end user can be supported through the usage of the supplier's capabilities (Matheiu 2001) and therefore the buyer firm may be more willing to integrate the supplier's direct support services into its current processes. The concentration of purchasing from the buyer firm may shift in favor of the focal supplier in response to the supplier's support of the buyer firm's customer focused initiatives through the direct support services and end user demand may increase due to the superior offering of the buyer firm. I therefore hypothesize when the buyer firm has a decline in purchasing from the supplier, but a high-quality relationship with the supplier:

H₄: As a buyer firm's customer orientation increases, additional usage of the supplier's (a) buyer training programs, (b) online support, and (c) market research by the buyer firm has a *more positive (less negative)* effect on the supplier's buyer firm level sales growth.

Buyer firm size. The *buyer firm size*, represents the ability to acquire, integrate, and retain resources and several differences exist between large and small buyer firms in regard to the availability and flexibility of resources (Josefy et al. 2015). As a buyer firm uses more of the supplier's direct support services, the buyer firm continually incorporates them into its current capabilities. The integration of the direct support services will be easier for smaller firms because they lack the bureaucracy and formalized procedures of large firms (Lavie 2006). Large buyer firms also have access to a greater pool of resources (Kale et al. 2002), whereas small buyer firms are more susceptible resource constraints (Lin et al. 2007). The direct support services may fill a hole in

the offering of small firms allowing them to greatly improve their offering to end users, while the direct support services may complement or overlap with the capabilities of large firms leading to an incremental improvement of the offering provided to end users. For example, supplier's offer online support as a type of direct support service (Homburg et al. 2003). Small firms may rely on the firm to create and develop the website, whereas large firms may utilize the supplier's product information to use on their current site. Additional usage of direct support services improves the downstream offering for large and small buyer firms thus increasing end user purchasing. All else equal, large buyer firms are less dependent on their partners for resources than small buyer firms and are less likely to be locked into working with the supplier (Lavie 2006), while small buyer firms may perceive even more value from the direct support services and concentrate their purchasing to the focal supplier. Therefore, in instances of high buyer firm-supplier relationship quality and decreasing sales to the supplier, I hypothesize,

H₅: As the size of a buyer firm increases, increased usage of the supplier's (a) buyer training programs, (b) online support, and (c) market research by the buyer firm has a *less positive (more negative)* effect on the supplier's buyer firm level sales growth.

Moderators of Indirect Support Services: Signals to End Users

In this research, indirect support services include the logos for the supplier and buyer on promotional or shipping materials, indicating a symbolic brand partnership (Simonin and Ruth 1998) between channel partners. However, the effectiveness of the buyer firm-supplier partnership through indirect support services is dependent on other information available to downstream channel members (Gammoh et al. 2006). End users may search for additional signals (Dawar and Parker 1994) that showcase the credibility of the partnership (Rao et al. 1999) as well as the similarity of the channel members (Sénéchal et al. 2014) to go along with the dual branding shown in the supplier's indirect support services. Signaling theory indicates that the observability, relevance, and consistency of signals increases their effectiveness (Connelly et al. 2011). Observable signals are visible and clear to the receivers (Heil and Robertson 1991; Lampel and Shamsie 2000) while the relevance is how closely the signal relates to the unobservable quality that the receiver is interested in (Connelly et al. 2011). When multiple, similar signals are received, the signal is consistent (Heil and Robertson 1991; Chung and Kalnins 2001), thus increasing the strength and impact of the signal. Drawing from signaling theory, I examine three

different buyer firm capabilities that influence the creation of end user's preferences through indirect support services: buyer firm size (Decker and Baade 2016), buyer firm-supplier relationship length (Srinivasan and Brush 2006), and the buyer firm's prior purchases from the supplier (Nielsen 2007).

Fit signals: buyer firm size. Buyer firm characteristics act as signals and are used by the end users to assess the value and fit of the cooperation between the buyer firm and supplier (Decker and Baade 2016). If the organizational characteristics (i.e., product line, firm age, industry scope, and firm size) of the partners are perceived as similar and seem to fit well together (Decker and Baade 2016), end users have more positive attitudes towards the partnership (Sénéchal et al. 2014) and perceive less risk when purchasing the supplier's products from the buyer firm (Bengtsson and Servais 2005).

Drawing from prior literature, I focus on *buyer firm size* as a signal to end users of fit between the channel partners in the cooperative partnership (Decker and Baade 2016). In this context, the supplier is large. If the buyer firm is comparable in size to the focal supplier, it will be perceived to be an equal party in the partnership by end users (Rao and Ruekert 1994; Swaminathan et al. 2015) leading to favorable evaluations of the channel partners and less perceived risk associated with purchasing from the buyer firm. However, smaller firms may be perceived as dissimilar which can lead to less favorable assessments of the fit between the buyer firm and supplier (Decker and Baade 2016). For example, an end user may be more receptive to the buyer firm's usage of advertising media from the buyer firm promoting the supplier's brand when the buyer firm and supplier are perceived to be alike.

When buyer firms have similar organizational characteristics to suppliers, the end user will favorably perceive the partnership (James 2005) when the buyer firm uses additional indirect support services. The enhanced association between the buyer firm and supplier in the end user's mind can result in the buyer firm being perceived as higher quality due to the supplier's brand strength (Park et al. 1996). thus, increasing the end user's preferences for the supplier's products. The buyer firm may choose to direct more of its purchasing to the preferred supplier rather than its competitors as end users may associate the buyer firm as a key source of the supplier's products, leading to a larger share of wallet for the preferred supplier. When there is high quality

relationship between the buyer firm and supplier yet declining buyer firm purchases, I hypothesize:

H₆: As the size of the buyer firm increases, additional usage of the supplier's (a) advertising and (b) drop shipping by the buyer firm has a *more positive (less negative)* effect on the supplier's buyer firm level sales growth.

Credibility signals: relationship length and buyer firm prior purchasing. I first focus on the moderating effects of two buyer firm characteristics drawn from signaling theory that act as relationship credibility signals to end users: the *buyer firm-supplier relationship length*, or the length of time the buyer firm has been purchasing from the supplier, and the *buyer firm's prior purchases from the supplier*, or the volume of the buyer firm's previous purchases to the supplier. In this context, when buyer firms have had long relationships with suppliers, it is likely that the end user has been exposed to the supplier's products at the buyer firm's retail locations for a long period of time and may be used to seeing them when purchasing from buyer firm. Likewise, if the buyer firm purchases large volumes of products from the supplier, the supplier may have a larger presence in the buyer firm as its products may take up a large amount of the shelf space in the store (Chu and Keh 2006). As end users see repeated, consistent occurrences of the partnership through the buyer firm's usage of indirect support services and are used to seeing the supplier's products being sold in the buyer firm, the partnership of the buyer firm and supplier becomes stronger and more established in the mind of the end user (Grossman 1997). End users will consider the buyer firm to be a key source of the supplier's products and ask for the supplier's products when purchasing from the buyer firm.

Buyer firms may utilize drop shipping as a form of the supplier's indirect support services (Benedettini et al. 2017). Drop shipping allows the supplier to ship the product directly to the end user (Ayanso et al. 2006). In some cases, the drop shipping material contains only the supplier's or buyer firm's logo, but in this research context, the logos of both the buyer firm and supplier are present on the shipping materials. The presence of the supplier's products within the buyer firm are consistent with the joint presentation of logos of the drop shipped product providing confirmation of the credibility of the partnership between the buyer firm and supplier.

Therefore, when end users see the logos of the buyer firm and supplier together on the shipping materials and has seen repeated signs of prior history between the parties within the buyer firm, a synergy of

consistent signals is created thus strengthening the association of the partnership in the mind of the end user (Park et al. 1996). When purchasing from the buyer firm, the end user will perceive the supplier's products to be greater quality due to the strong partnership between the buyer firm and supplier (Connelly et al. 2011), thus creating preferences and demand the supplier's products when purchasing from the buyer firm. Holding all else constant, the enhanced demand leads to increased end user purchasing which positively impacts the supplier's sales growth. In response to the increased demand for the supplier's products, the buyer firm may also concentrate its purchasing to the focal supplier that is preferred by end users instead of others. Therefore, when a supplier has a high-quality relationship with the buyer firm, but the buyer firm exhibits declining sales to the supplier, I hypothesize:

H₇: As the length of the buyer firm-supplier relationship increases, additional usage of the supplier's (a) advertising and (b) drop shipping by the buyer firm has a *more positive (less negative)* effect on the supplier's buyer firm level sales growth.

H₈: As the prior purchases from the buyer firm to the supplier increase, additional usage of the supplier's (a) advertising and (b) drop shipping by the buyer firm has a *more positive (less negative)* effect on the supplier's buyer firm level sales growth.

CHAPTER IV

METHODOLOGY

The dataset is composed of buyer firms who are customers of a large industrial wholesaler located in the United States. By collecting data from a single supplier and its buyer firms, the core offering is held constant, with the assumption that the core offering provided to buyer firms will be relatively similar across firms. This supplier serves a large number of retail firms in different industries and does not sell directly to end users. I use a combination of survey and archival data for this research.

Sample Selection

To fill the research gap of actions suppliers can take to drive sales once they have a high-quality relationship with the buyer firm, survey measures are utilized to identify these firms. I examine relationship quality (*RelQual*) using a one item measure (Wong and Sohal 2002). The analysis is limited to buyer firms who have high relationship quality (6 or 7) based off survey responses. I focus the sample further by looking at firms who have the high relationship quality, but a decline in purchases from the supplier. The decline in sales (*BuyerFirmSales*) is measured as the year over year change in sales prior to the survey. This data was not sampled during COVID-influenced years. The sample was limited to those buyer firms who had a negative change in sales as well as high relationship quality. The final sample consists of 204 buyer firms.

Measures

When appropriate, I utilized published scales and selected measures from secondary data to closely match the conceptual definitions of my constructs. Details of the measures are in Table 4 and descriptive statistics are in Table 5. The variables from the buyer firm survey were matched with the corresponding data from the supplier's database to conduct my analysis. The variables drawn from the supplier's archive were scaled for confidentiality purposes and regressors were standardized for ease of interpretation of results.

Variables from the supplier database. The indirect and direct support service measurements are drawn from the supplier's database. Advertising (*Advertising*), marketing research (*MarketResearch*), online support (*OnlineSupport*), and buyer training programs (*BuyerTraining*) are measured by examining percent change in the utilization of the support service from time $t-12$ to time t . Drop shipping (*DropShip*) is measured as the percent of items drop shipped during time

t . The dependent variable, supplier's buyer firm level sales growth (*SuppSalesGrowth*) is measured as the change in monthly sales from time $t-12$ to t . The sales growth for the buyer firm can be positive or negative. The moderating variables from the supplier database are time invariant. The buyer firm's prior purchases from the supplier (*PriorPurch*) is measured as the percent of the supplier's total sales for the year prior to the survey that came from that buyer firm. Buyer firm-supplier relationship length (*RelLength*) is measured as the count of years that the buyer firm has purchased from the supplier.

Variables from the buyer firm survey. The moderating variables from the survey are also time invariant. The size of the buyer firm (*FirmSize*) is the total number of employees within the firm. The depth of the buyer firm's customer knowledge (*FirmCustKnow*) is measured using a two-item scale adapted from Zahra et al. (2000). The respondents were asked to report the depth of the buyer firm's knowledge about its customers as the individual buyers may over- or underreport their own personal knowledge (Connelly et al. 2012). The buyer firm's customer orientation (*FirmCustOrient*) is measured using an adapted four-item scale from Jaworski and Kohli (1993).

Table 4. Constructs and Measurement

Variable	Definition	Source (Scale)	Measurement
Relationship Quality (RelQual)	Buyer firm's perceived quality of the relationship with the supplier.	Firm Survey (7-point. Low; High)	Please evaluate the relationship between [this supplier] and your company. ____ quality relationship between [this supplier] and our company.
Buyer Firm Sales (BuyerFirmSales)	The change in buyer firm year over year purchases prior to the survey.	Supplier database	$(\text{Buyer Firm Purchases}_{t-1} - \text{Buyer Firm Purchases}_{t-2}) / \text{Buyer Firm Purchases}_{t-2}$ for each buyer firm.
Advertising (Advertising)	Marketing materials provided by the supplier targeted to end users.	Supplier database	$(\text{Advertising Expense}_t - \text{Advertising Expense}_{t-12}) / \text{Advertising Expense}_{t-12}$ for each buyer firm.
Drop Shipping (DropShip)	Direct shipment of products from supplier to end user.	Supplier database	$\text{Number of items drop shipped}_t / \text{Total number of items ordered}_t$ by each buyer firm.
Buyer Training Programs (BuyerTraining)	Informational sessions for the buyer firm provided by the supplier.	Supplier database	$(\text{Buyer Training Expense}_t - \text{Buyer Training Expense}_{t-12}) / \text{Buyer Training Expense}_{t-12}$ for each buyer firm.
Online Support (OnlineSupport)	Website support and website content leasing provided by the supplier.	Supplier database	$(\text{Online Support Expense}_t - \text{Online Support Expense}_{t-12}) / \text{Online Support}_{t-12}$ for each buyer firm.
Market Research (MarketResearch)	Channel, industry, and vendor specific marketing materials provided by suppliers.	Supplier database	$(\text{Market Research Expense}_t - \text{Market Research Expense}_{t-12}) / \text{Market Research Expense}_{t-12}$ for each buyer firm.
Buyer Firm's Prior Purchases from Supplier (PriorPurch)	The volume of buyer firm's previous purchases from the supplier.	Supplier database	$\text{Sales}_{it-12} / \text{Total Sales to supplier}_{t-12}$
Buyer Firm-Supplier Relationship Length (RelLength)	The length of time the firm and supplier have engaged in exchange.	Supplier database	Count of years transacted with the supplier.

Buyer Firm Size (FirmSize)	The size of the buyer firm.	Firm Survey (Select one)	What is the total number of employees in your company (including all locations)? (1) 1-19, (2) 20-99, (3) 100-499, (4) 500-999, (5) 1000-4999, (6) 5000+
Depth Buyer Firm's Customer Knowledge (FirmCustKnow)	The degree to which the buyer is knowledgeable of its customers' behaviors.	Firm survey (7-point. Bipolar scale)	Compared to your major competitors, your company's knowledge about your ... shallow/deep ... basic/advanced
Buyer Firm's Customer Orientation (FirmCustOrient)	The buyer firm's set of beliefs that puts the customer's interest first, while not excluding those of all other stakeholders such as owners, managers, and employees, in order to develop a long-term profitable enterprise.	Firm survey (7-point. Not at all accurate; entirely accurate)	How accurate are the following statements about your company? We regularly meet with customers to learn their needs. We systematically process and analyze customer information. We regularly study our customers' needs for new product or service development. We have regular meetings to discuss customer needs.
Supplier's Buyer Firm Level Sales Growth (SuppSalesGrowth)	Buyer firm's change in purchases from the supplier after support services are provided.	Supplier database	$(Sales_t - Sales_{t-12}) / Sales_{t-12}$ for each buye firm.

Correcting for endogeneity

To control for endogeneity, I use a fixed effects model for analysis. Potential threats to internal validity will be ameliorated by using a fixed effects model (Keller et al. 2020; Rocklage and Fazio 2020). Unobserved product factors such as product category may impact downstream demand and sales to the supplier. Therefore, I specify a product fixed effect to account for the number of products purchased and rule them out as an alternative explanation. I also include a monthly fixed effect to account for any seasonality factors that may confound my results. To test the hypotheses, I specify the following fixed effect model:

$$(1) \text{ SuppSalesGrowth}_{it} = \beta_0 + \sum_{m=1}^2 \beta_{0+m} \text{ IndirectSupportServices}_{it,m} + \sum_{n=1}^3 \beta_{2+n} \text{ DirectSupportServices}_{it,n} + \sum_{m=1}^2 \beta_{5+m} \text{ IndirectSupportServices}_{it,m} * \text{PriorPurch}_i + \sum_{m=1}^2 \beta_{7+m} \text{ IndirectSupportServices}_{it,m} * \text{RelLength}_i + \sum_{m=1}^2 \beta_{9+m} \text{ IndirectSupportServices}_{it,m} * \text{FirmSize}_i + \sum_{n=1}^3 \beta_{11+n} \text{ DirectSupportServices}_{it,n} * \text{FirmSize}_i + \sum_{n=1}^3 \beta_{14+n} \text{ DirectSupportServices}_{it,n} * \text{FirmCustOrient}_i + \sum_{n=1}^3 \beta_{17+n} \text{ DirectSupportServices}_{it,n} * \text{FirmCustKnow}_i + \beta_{21} \text{ Controls}_i + v_1 + v_2 + \varepsilon_{it}$$

where $\text{IndirectSupportServices}_{it,m}$ represents the m th element of the vector $\text{IndirectSupportServices}_{it}$ and $\text{DirectSupportServices}_{it,n}$ represents the n th element of the vector $\text{DirectSupportServices}_{it}$, i indexes the buyer firms, t indexes months, and v_1 , and v_2 represent the product and monthly fixed effects. The elements of the vector $\text{IndirectSupportServices}_{it}$ represent the advertising and drop shipping support services and the elements of the vector $\text{DirectSupportServices}_{it}$ represent buyer training programs, online support, and market research support services. The estimation results for Equation 1 are reported in Table 6.

Results

The simple effects of buyer training programs ($\alpha = .234, p < .01$), online support ($\alpha = .145, p < .01$), and market research ($\alpha = .383, p < .01$) as direct support services on the supplier's buyer firm level sales growth are all positive and significant thus supporting H1. The simple effect of the indirect support service, advertising, on the supplier's buyer firm level sales growth is positive and significant ($\alpha = .442, p < .01$), but the effect of the drop shipping support service was negative and not significant ($\alpha = -.021, p > .10$) thus only H2a is supported. When the buyer firm has declining purchases to the supplier, yet the relationship quality between the buyer firm and supplier is high, the results indicate that on average, that as buyer firms use more of the indirect and direct support services, the supplier's sales will grow. The significant interactions for the direct support services are depicted in Figure 3 and the significant interactions for the indirect support services are depicted in Figure 4.

Direct Support Service Interactions. The hypothesized interaction of the depth of buyer firm customer knowledge and market research was positive and significant ($\alpha = .041, p < .05$) providing support for H3c, while the interaction with online support was positive but not significant ($\alpha = .009, p > .10$) rejecting H3b. H3a is also rejected as the interaction between buyer training and the depth of the buyer firm's customer knowledge was negative ($\alpha = -.044, p < .05$). The effects of buyer training programs ($\alpha = -.045, p < .05$)

Table 5. Summary Statistics

Variables	1	2	3	4	5	6	7	8	9	10	11
1. SuppSalesGrowth	1										
2. Advertising	.65 *	1									
3. DropShip	.01	.07 *	1								
4. BuyerTraining	.42 *	.27 *	.03	1							
5. OnlineSupport	.26 *	.19 *	.02	.11 *	1						
6. MarketResearch	.62 *	.45 *	-.04	.27 *	.07 *	1					
7. PriorPurch	-.04	-.05 *	-.04	-.08 *	.02	-.02	1				
8. RelLength	-.01	-.01	-.02	.02	.01	.05	.00	1			
9. FirmSize	-.01	-.05 *	.00	-.05	-.01	-.01	-.11 *	.14 *	1		
10. FirmCustOrient	.01	.02	-.03	.00	.00	.02	.12 *	.01	.08*	1	
11. FirmCustKnow	.02	.01	-.02	.03	-.01	.03	.01	.02	.08*	.39 *	1
<i>Mean</i>	.06	.91	1.25	.14	.40	.08	.16	21.71	2.27	5.48	5.99
<i>Std Dev</i>	1.04	2.45	8.16	1.35	2.30	1.52	.23	6.39	1.39	1.32	.95

Note: Observations = 1,920; * p < .05

and online support ($\alpha = -.017, p > .10$) on the supplier's buyer firm level sales growth were negatively moderated by the buyer firm's customer orientation, rejecting H_{4a} and H_{4b}. Consistent with H_{4c}, the buyer firm's customer orientation positively moderates the effect of the market research direct support service ($\alpha = .057, p < .01$). The moderating effect of buyer firm size is negative and significant for online support ($\alpha = -.045, p < .01$) and market research ($\alpha = -.053, p < .01$) supporting H_{5b} and H_{5c}, but not for buyer training programs ($\alpha = -.025, p > .10$), thus H_{5a} is rejected.

Indirect Support Service Interactions. Consistent with H₆, the interactions of the indirect support services, advertising ($\alpha = .090, p < .05$) and drop shipping ($\alpha = .047, p < .01$), with firm size are positive and significant. In support of H_{7a}, the effect of the advertising support service on the supplier's buyer firm level sales growth is positively moderated by relationship length ($\alpha = .034, p < .05$). The hypothesized interaction of relationship length and the drop shipping support service was not significant ($\alpha = .001, p > .10$), thus H_{7b} is not supported. The effect of advertising and the buyer firm's prior purchasing was hypothesized to be positive, but a significant negative interaction was found ($\alpha = -.112, p < .01$), rejecting H_{8a}. H_{8b} is also rejected as the interaction between prior purchasing and drop shipping was not significant ($\alpha = .016, p > .10$).

Table 6. Study Results

Variables	Supplier's Buyer Firm Level			Estimate	(SE)
	Hypotheses	Supported	Sales Growth		
<i>Direct Support Services</i>					
BuyerTraining	H _{1a}	✓		.234 *	(.018)
OnlineSupport	H _{1b}	✓		.145 *	(.017)
MarketResearch	H _{1c}	✓		.383 *	(.019)
BuyerTraining × FirmCustKnow	H _{3a}			-.044 *	(.021)
OnlineSupport × FirmCustKnow	H _{3b}			.009	(.018)
MarketResearch × FirmCustKnow	H _{3c}	✓		.042 *	(.020)
BuyerTraining × FirmCustOrient	H _{4a}			-.045 *	(.018)
OnlineSupport × FirmCustOrient	H _{4b}			-.017	(.018)
MarketResearch × FirmCustOrient	H _{4c}	✓		.057 *	(.020)
BuyerTraining × FirmSize	H _{5a}			-.025	(.015)
OnlineSupport × FirmSize	H _{5b}	✓		-.045 *	(.016)
MarketResearch × FirmSize	H _{5c}	✓		-.053 *	(.020)
<i>Indirect Support Services</i>					
Advertising	H _{2a}	✓		.442 *	(.021)
DropShip	H _{2b}			-.021	(.019)
Advertising × FirmSize	H _{6a}	✓		.090 *	(.019)
DropShip × FirmSize	H _{6b}	✓		.047 *	(.017)
Advertising × RelLength	H _{7a}	✓		.034 *	(.017)
DropShip × RelLength	H _{7b}			.001	(.018)
Advertising × PriorPurch	H _{8a}			-.112 *	(.027)
DropShip × PriorPurch	H _{8b}			.016	(.064)
Intercept				.098 *	(.049)
<i>Model features</i>					
Endogeneity corrections				Yes	

Note: All regressors are standardized. Observations = 1,920; * p < .05

Figure 3. Direct Support Service Interaction Plots

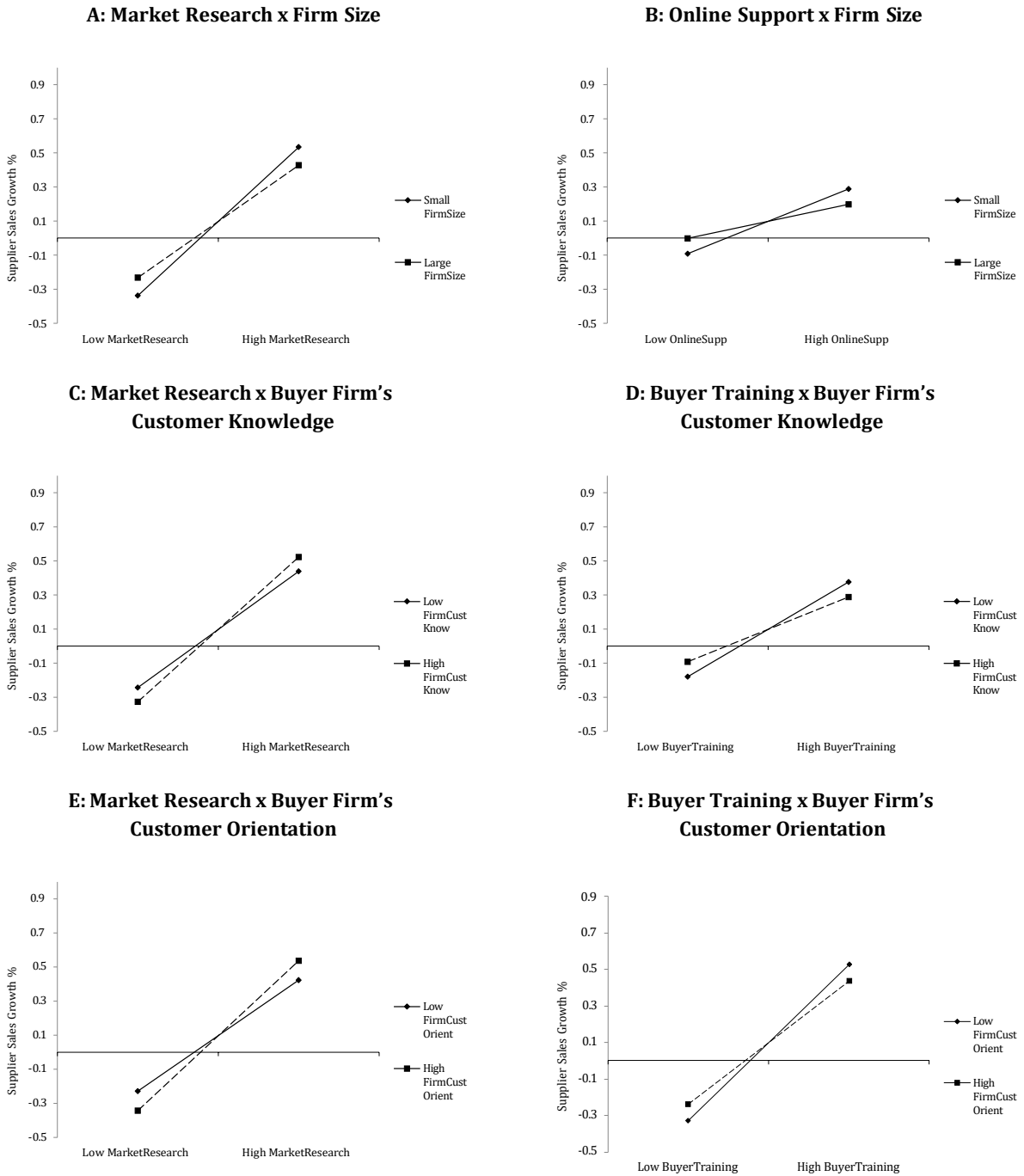
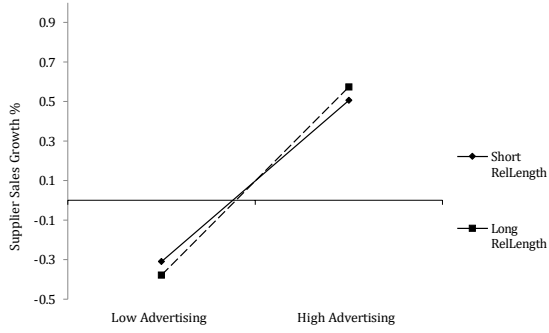
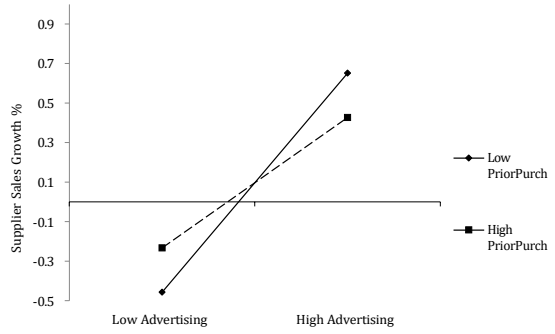


Figure 4. Indirect Support Service Interaction Plots

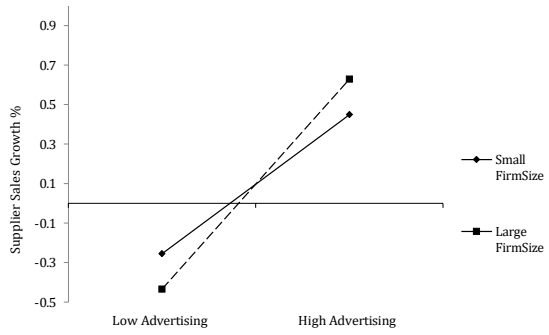
A: Advertising x Relationship Length



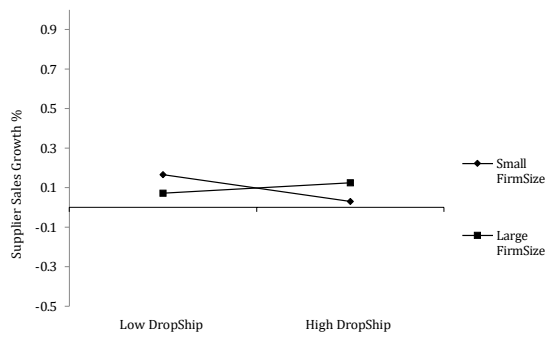
B: Advertising x Buyer Firm's Prior Purchases



C: Advertising x Firm Size



D: Drop Shipping x Firm Size



CHAPTER V

GENERAL DISCUSSION

Today's suppliers are offering ancillary services to buyer firms to create competitive advantages, differentiate themselves from their competitors, or develop relationships with buyer firms (Ulaga and Eggert 2006). Suppliers offer basic support services such as providing spare parts and warranties (Bain and Lightfoot 2014) or intricate services such as consulting (Boyt and Harvey 1997), while other suppliers differentiate their support services by whether the support service relates to the supplier's product (e.g., installation services) or the buyer firm's actions (e.g., human resources) (Mathieu 2001). The offering of supplier support services has been positively related to the supplier's sales (Homburg et al. 2014), however the usage of the support services had not been previously explored. By combining survey and archival data from the buyer firms of a large, industrial supplier, I advance this discussion by investigating the impact of buyer firm usage of indirect and direct support services on the supplier's financial outcomes when there is a high-quality relationship between the buyer firm and supplier, yet the buyer firm is exhibiting declining sales. I find evidence that on average, increased usage of buyer training programs, online support, market research, and advertising by buyer firms leads to positive sales growth for the supplier. I also examine the influence of buyer firm characteristics and capabilities that determine whether the direct and indirect support services are more or less positively related to the supplier's sales growth. This research offers important implications for theory and managerial practice.

Theoretical Implications

I contribute to marketing channels, relationship marketing, and supplier support service literature in several ways. First, I expand relationship marketing to explore how a supplier can drive sales from buyer firms that they have a high relationship quality with, yet the buyer firm is exhibiting declining sales from that supplier. By integrating supplier support service and marketing channels literatures, I theorize that the direct and indirect support services can lead to supplier's sales growth through increases in end user purchasing or the concentration of buyer firm purchasing when there is a decline in buyer firm purchasing, yet high relationship quality between the buyer firm and supplier. I also build on the limited research that examines the actions suppliers take to step out of the background to drive downstream demand and influence end user preferences (e.g., Homburg et al. 2014; Ghosh and John 2009).

Prior literature has examined the impact that the supplier's offering support services has on supplier's financial, relational, and strategic outcomes, but this research provides the only investigation of the impact of the buyer firm's usage of the support services. On average, increased usage of direct and indirect support services by the buyer firm leads to positive sales growth at the buyer firm level for the supplier when the buyer firm had declining sales and high relationship quality with the supplier. However, this positive effect can be enhanced or diminished by the capabilities and characteristics of the buyer firm (Figure 2). For indirect support services, the buyer firm's characteristics act as signals to end users about the credibility and fit of the buyer firm-supplier partnership. On the other hand, the capabilities of the buyer firm can impact the buyer firm's integration or acceptance of the supplier's direct support services into their offering. It is imperative for suppliers to understand how buyer firm usage of the supplier's support services impacts the individual buyer firms as well as other downstream channel members (Hillebrand and Biemans 2011), yet only a few articles have explored the implications of the supplier's support services outside of the buyer firm-supplier dyad (i.e., Homburg et al. 2014). When the buyer firm-supplier relationship quality is high, yet the buyer firm is purchasing less from the supplier, I theorize that buyer firm usage of direct and indirect support services can positively impact sales growth for the supplier through increases in end user purchasing and/or buyer firm concentration of purchasing. For example, indirect support services create end

user preferences for the supplier's products leading to more sales upstream, but buyer firms may also shift their purchasing to specific suppliers to accommodate end user demand for the supplier's products within their stores. On the other hand, direct support services provide resources to buyer firms that are invaluable, and the buyer firm may increase the volume they purchase from suppliers that provide them with the resources they need. However, the supplier's direct support service can also create better offerings for end users, creating additional downstream sales. Future research should include both mechanisms to explore the implications of buyer firm usage of supplier support services on the entire marketing channel.

Prior support service literature that has focused on the buyer firm-supplier dyad has highlighted the important role of buyer firm's characteristics and capabilities in the integration of supplier support services (e.g., Brax and Visintin 2017; Kohtamäki et al. 2013). However, when the marketing channel is expanded to include end users, other authors utilize signaling theory to explore the impact of supplier support services (e.g., Eggert et al. 2017). I build upon prior literature and integrate the two theory bases, resource-based view of the firm and signaling theory, to examine the moderating effects of buyer firm characteristics. Buyer firm characteristics have been examined using signaling theory or resource based view of the firm in prior support service literature, but this is the first study to combine the theories together and showcase the impact of buyer firm characteristics for multiple channel members. Buyer firm characteristics are visible to both suppliers and end users but may mean different things to the different channel partners. I highlight how buyer firm characteristics can provide suppliers with insight into the capabilities and resources available to buyer firms but can also provide end users with details about the relationship between a buyer firm and supplier. For suppliers, buyer firm characteristics can provide insight into the resources and capabilities of the buyer firm as well as the likelihood of integration of the supplier's support services into their core offering. On the other hand, end users can utilize information from buyer firm's characteristics to determine the fit and credibility of a partnership between a supplier and buyer firm. For example, large buyer firm size is an indicator to suppliers of vast resources available to the buyer firm (Josefy et al. 2015) which may inhibit the buyer firm's integration of the supplier's support services, thus a less positive effect of increased direct support service usage on supplier sales growth occurs. End users utilize the large buyer firm size as a

form of information to evaluate similarity between the buyer firm and supplier (Sénéchal et al. 2014), leading to more positive sales growth for the supplier when the buyer firm utilizes additional indirect support services.

I also expand upon support services literature by examining the effects of changes in buyer firm usage of direct and indirect support services on supplier financial outcomes. Supplier support services are unique in various ways: their complexity (Boyt and Harvey 1997), the aspect of the buyer firm's business they support (Gebauer et al. 2010a), when they are offered (Morris and Davis 1992), and whether the target of the service is end users or the buyer firm (Mills and Ungson 2001; Homburg et al. 2014). There is little agreement in prior literature of the best way to differentiate the individual support services, therefore it may be beneficial to examine each support service on its own. As shown in my research, the usage of the unique indirect and direct support services produced differential effects on the supplier's buyer firm level sales growth when the supplier had a high-quality relationship with the buyer firm, yet the buyer firm was purchasing less from the supplier. Increased usage of buyer training, online support, and market research by the buyer firm all positively influenced supplier's sales growth, but their magnitudes varied. The characteristics of the buyer firms did not uniformly moderate the effects as originally hypothesized, providing additional evidence for an individual examination of the support services. For example, the buyer firm's knowledge of end users was theorized to enhance the positive effect of the usage of all direct support services on supplier's sales growth, but support was only found for the market research support service. When the buyer firm is using more buyer training programs and has a high level of knowledge about end users, a negative interaction effect is found. The findings from my research call for a more nuanced examination of supplier support services.

Managerial Implications

The findings from my study highlight the importance of support services and indicate that in instances of high buyer firm-supplier relationship quality yet declining buyer firm sales, as buyer firms use more direct and indirect supplier support services, sales growth for the supplier becomes positive. However, the supplier may want to be strategic and target its support service offerings to the right buyer firms as buyer

firm characteristics can influence the magnitude of the positive financial impact of supplier support service usage for the supplier. It is also imperative that the supplier understand why/how its sales from the buyer firms are increasing. The overall value pie could be increasing for the channel due to end user demand or the supplier's slice of the value pie could be growing due to the buyer firm's concentration of purchasing.

For direct support services, the supplier may want to target market research and online support to smaller firms as they lack the formality and structure of large firms and are able to integrate the services easier. Small firms lack resources and may rely heavily on support from the focal supplier which can ultimately lead to less purchasing from other suppliers who do not provide the same value to end users. Buyer firms with a deep understanding of end users are better able to integrate market research into their current capabilities to provide the best offering to end users. Buyer firms that are highly customer oriented will prefer to purchase from suppliers who can support their goals, which can be done through the direct support service market research. For indirect support services, suppliers may encourage buyer firms that are comparable in size to utilize advertising and drop shipping support services. End users have a more favorable perception of the partnership shown on packing or advertising materials when the firms are perceived to be equal, leading to increased demand for the supplier's products. The research also suggests that when buyer firms and supplier engage in long relationships. The end users will be familiar with the partnership and perceive the cobranding on advertising media as a consistent signal, strengthening the association between the buyer firm and supplier. When the buyer firm had declining purchases yet high relationship quality with the supplier, increased usage of individual direct and indirect support services by the buyer firm produced unique results which will be discussed in the following sections.

Market research. When the supplier has a high-quality relationship with the buyer firm, yet the sales to the buyer firm are declining, a one standard deviation increase in the buyer firm's usage of market research leads to a 38% increase in the supplier's buyer firm level sales growth on average. When the buyer firm has a high level of customer knowledge (Figure 3, Panel C) and is highly customer oriented (Figure 3, Panel E), the utilization of market research leads to a higher sales growth for the supplier as the firm integrates the support service easier. Buyer firms that are highly customer oriented and increase their usage of the

supplier's market research support, supplier's sales growth increased 44% compared to 33% for buyer firms that were less focused on their customers.² These buyer firms can use the market knowledge provided by the supplier to further enhance their understanding of the end users and the market and improve their offerings to their customers. For buyer firms with great depth of customer knowledge, supplier's sales growth increased 43% whereas the supplier's sales growth for buyer firms with less depth was an increase of 34%. Buyer firms with greater depth of customer knowledge are better able to integrate and utilize the supplier's market knowledge into what they already know. Suppliers will want to target their market research support service to buyer firms who are highly customer oriented and have a deep knowledge of end users.

It is more difficult for large firms to integrate market research (Figure 3, Panel A) and they also have additional resources that small buyer firms do not, so they will be less reliant on the supplier for market channel knowledge and perceive less value in the market research support offered by the suppliers. For large buyer firms, the supplier's sales growth increased 33% when additional market research support was utilized by the buyer firm. However, smaller buyer firms increased supplier's sales growth by 42% when market research support usage increased and thus suppliers should target this indirect support service towards smaller buyer firms.

Online support. On average, a one standard deviation increase in the buyer firm's usage of online support led to a 14.5% increase in the supplier's buyer firm level sales growth when the buyer firm is purchasing less from the supplier even though the buyer firm-supplier relationship quality is high. Similar to market research, large firms may not integrate online support (Figure 3, Panel B) into their offering due to the access they have to resources, thus decreasing the positive effect of the direct support services on the supplier's sales growth. Small buyer firms with increasing usage of online support led to larger increases

² High levels of the buyer firm characteristics (i.e., large buyer firms, long relationship buyer firm-supplier relationship) are one standard deviation above the mean while low levels of the buyer firm characteristic moderators (i.e., small buyer firms, short buyer firm-supplier relationship) are one standard deviation below the mean.

in supplier sales growth, 19%, than larger buyer firms, 10% which is consistent with the hypothesized negative interaction effect. For suppliers, these findings indicate that targeting online support at smaller firms will yield larger increases in sales growth.

The interactions of online support usage with the buyer firm's customer knowledge and buyer firm's customer orientation were not significant and require further study. In today's digital world, an online presence may be necessary for buyer firms regardless of their customer orientation and knowledge of end users indicating a possible explanation to the ambiguous results found in my study. The online support service entailed website as well as product information leasing for the buyer firm's current website. Additional research is needed to parcel out the specific aspect of the online support service that was utilized by each buyer firm.

Buyer training programs. On average, a one standard deviation increase in buyer firm usage of buyer training programs led to a 23% increase in the supplier's buyer firm level sales growth when there is a high quality relationship between the supplier and buyer firm, yet declining purchasing from the buyer firm. The sign of the interaction of buyer firm size and the usage of buyer support services was negative and consistent with my theorization, however it was not significant. One possible explanation for this effect may be due in part to the fact that employees within smaller buyer firms have multiple roles (Josefy et al. 2015) and the buyer training programs offered by the supplier may distract them from more important aspects of their job. Additional research is necessary to explore the relationship between the buyer firm size and increased usage of buyer training programs.

However, the positive effect of buyer training program usage as a direct support service is mitigated in instances of high customer knowledge (Figure 3, Panel D) and high customer orientation (Figure 3, Panel F) indicating that the buyer firm's capabilities may have different effects on the unique direct support services than originally hypothesized. An increase in buyer training program utilization along with high levels of customer orientation or high levels of customer knowledge led to a 19% increase the supplier's sales growth. Buyer firms with low levels of customer knowledge or low levels of customer

orientation partnered with additional buyer training program utilization both led to a sales growth increase of 28%. Buyer firms that are very knowledgeable about and oriented towards their customers may not find the buyer trainings helpful and/or potentially distracting if the information that they are being provided does not help them provide better value to end users. The negative interactions may be due to the buyer firm shifting their purchasing to suppliers who provide support services that align more closely to the buyer firm's mission to satisfy the end users and provide the support they require. Buyer firms with lower levels of customer knowledge and customer orientation are likely to push products to end users rather than understanding the needs of the end users. They may perceive greater benefit from the product information provided during buyer training programs, leading to the larger increase in supplier sales growth. Suppliers will want to deter highly knowledgeable and highly customer-oriented buyer firms from utilizing the buyer training programs, as it could lead to lower sales from those buyer firms.

Advertising. Buyer firm size acts as a signal of fit between channel partners and enhances the positive effect of the advertising support service (Figure 4, Panel C) on supplier's sales growth. In instances of high buyer firm-supplier relationship quality yet declining purchases from the buyer firm, a one standard deviation increase in the buyer firm's usage of advertising led to a 44% increase in the supplier's buyer firm level sales growth on average. When the buyer firm is also large, the supplier's sales growth increased from 44% to 63%, while the sales growth for small firms increased slightly to 45%. The length of the relationship between the buyer firm and supplier (Figure 4, Panel A) enhance the positive effect of the usage of advertising services on the supplier's financial outcomes as they provide additional, consistent signals to the end users thus strengthening the perception of the partnership from the advertising support. Long buyer firm- supplier relationships and increased buyer firm usage of advertising led to an overall increase of 48% for the supplier's sales growth, while buyer firms with shorter relationships with the supplier increased to 41% sales growth.

Contrary to the hypothesized positive moderating effect, buyer firms that increased their usage of advertising and purchased a large volume from the supplier in the past saw less of an increase in sales growth, 33%, than those who had purchased a lower volume from the supplier, 55%. The buyer firm's prior

purchasing from the supplier (Figure 4, Panel B) mitigated the positive effect of the advertising support indicating that if a buyer firm's sales make up a significant percent of the supplier's sales and they utilize more advertising services, their sales growth will be lower on average than buyer whose sales make up less of the supplier's total sales. To gain higher levels of sales growth from buyer firms, the supplier will want to identify buyer firms that are comparable in size and those with who they have a long-standing relationship.

While the advertising support may create end user preferences and drive end user purchasing, the buyer firm may want to avoid becoming more reliant on the supplier. The buyer firms may take actions to diversify their purchasing to other suppliers to avoid high levels of dependence on one supplier. Suppliers may want to target the advertising at buyer firms who do not have a history of purchasing large volumes from them.

Drop shipping. Buyer firm usage of drop shipping was the only support service that yielded a negative main effect on the supplier's sales growth; however, it was not significant. Shipping materials contain information that does not have to do with the supplier or buyer firm such as shipping labels and hazardous material stickers, which create noise and may distract end users from acknowledging the logos of the channel members and leading to the nonsignificant effect. The end users may also be more focused on the product that is being shipped and less on the packaging the product is shipped in, resulting in the nonsignificant effects for the simple effect of increased drop shipping utilization, the interaction of drop shipping usage and buyer firm-supplier relationship length, and the interaction of the buyer firm's prior purchases from the supplier and drop shipping usage.

Interestingly, when buyer firms are exhibiting declining purchasing even though they have a high relationship quality with the supplier, the interaction of the buyer firm size and drop shipping usage was positive and significant indicating that the end user views the buyer firm- supplier partnership as credible when the buyer firm is comparable in size to the supplier, (Figure 4, Panel D). This enhances the association of the supplier and buyer firm in the mind of the end user and leads to increased end user preferences for the supplier's products. When drop shipping usage increased and the buyer firm was large, the supplier's sales growth increase was 3%.

However, an increase of drop shipping for smaller firms resulted in a 7% decrease in sales growth. The effect of a buyer firm's usage of drop shipping support is still unclear and should be examined further.

Limitations and Future Research

This research has several limitations that suggest directions for potential future research. In instances of high buyer firm-supplier relationship quality, yet declining buyer firm purchasing, the effect of increased usage of supplier's direct and indirect support services by the buyer firm on the supplier's sales growth are theorized to operate through one of two mechanisms: increased end user purchasing or concentration of the buyer firm's purchasing. Future research can examine these mechanisms to determine whether they work independently or in tandem. The mechanisms may also work against one another thus potentially explaining some of the opposite effects found in this research, such as the negative interaction of the use of advertising and the buyer firm's prior purchasing from the supplier. While the advertisements may drive end user preferences and downstream demand to positively impact the supplier's sales, buyer firms that already purchase a large volume from the supplier may try to avoid becoming too reliant on the focal supplier. To counteract this dependence and avoid opportunistic behaviors (Mitreğa and Katrichis 2012), the buyer firm may try to diversify its purchasing and source more of its products from other suppliers. From the end user perspective, it is important to understand whether the indirect support services are creating preferences for the supplier's products and whether the buyer firm's offering is perceived to be better when the supplier's direct support services are used. Future research can capture data from each level of the marketing channel to fully capture the effect of the supplier's support services.

This research focused on buyer firms with high relationship quality with the supplier and declining sales. However, future research may also explore whether the effect of buyer firm usage of indirect and direct support services on supplier sales growth operates through the same mechanisms when the buyer firm-supplier relationship quality is high and increasing sales to the supplier. Suppliers tend to focus on buyer firms that are profitable to them (Grewal et al. 2015), but suppliers may want to understand how the buyer firm is performing downstream and what is driving the positive changes in buyer firm purchasing.

There may be actions suppliers can take to add fuel to the fire and further enhance the positive sales growth they are already receiving from these buyer firms.

The focus of this research was the buyer firm's usage of support services from one supplier. Future research can explore when buyer firms utilize support services from multiple suppliers. Suppliers may expect to see an increase in purchasing from the buyer firm when they utilize support services (Ulaga and Eggert 2006), however this may not hold if the buyer firm has a number of sources of support. Additional research can also examine the buyer firm's perceptions about the indirect and direct support services. If the support services are perceived as helpful and aid a buyer firm in achieving its goals, the buyer firms may use more and be more willing to integrate them into its current offering. On the other hand, if the buyer firm is dissatisfied with the support from the supplier, they are likely to stop utilizing the support service and possibly decrease its purchasing from that supplier as well (Harmeling et al. 2015).

Buyer training programs had negative interaction effects with the buyer firm's customer orientation and the depth of the buyer firm's customer knowledge. Highly customer oriented and highly knowledgeable buyer firms will benefit from information that is relevant and useful to them. While buyer training programs provide useful details about the supplier's products, the information may not give additional insight into how the product can satisfy the end user's needs or add to the current knowledge of the buyer firm. Supplier support services are complex and unique, partially explaining the numerous categorizations in prior literature (e.g., Morris and Davis 1992; Homburg et al. 2003; Benedettini et al. 2017). Future research can take a more nuanced and focused look at other individual support services to understand when each is more or less beneficial to the financial outcomes for both the buyer firm and the supplier. This research focused on five support services offered by the focal supplier: advertising, drop shipping, buyer training programs, online support, and market research. These support services represent a very small sample of support services that suppliers offer (see Table 3). Future research should examine a supplier's complete portfolio of support services to obtain a more complete understanding of the buyer firms' usage of them. Buyer firms tend to utilize multiple support services (Grewal et al. 2015), so another avenue for future research is the examination of different combinations of support services used by buyer firms and their impact on the

supplier's sales.

In this research, I focused on the support services of one supplier, but buyer firms may utilize support from more than one supplier (Grewal et al. 2015). Future research may examine when it is beneficial for the buyer firm to utilize support from numerous suppliers or from one supplier. It may not be advantageous for a supplier to offer a complete set of support services to buyer firms if they do not have the resources to do so (Davies et al. 2006). Indirect and direct support services can be costly for the supplier to provide and for the buyer firm to use (Steiner et al. 2016). Many of the support services are customized to the needs of the buyer firm and the industry (Mathieu 2001) and require the supplier to invest time and resources. Therefore, suppliers may enter collaborative partnerships with other suppliers to create solutions for buyer firms. Another avenue of potential future research may explore when suppliers should offer total solutions or partner with other suppliers to provide solutions for the needs of buyer firms.

Finally, the findings from my research indicates that increased usage of direct and indirect support services leads to positive sales growth for the supplier. However, at a certain point, utilizing too much of the supplier's direct or indirect support services may no longer benefit or potentially harm the buyer firm's downstream performance, thus impacting their purchasing from the supplier. Future research can explore when suppliers should manage the type and amount of support services utilized by buyer firms. Suppliers may need to determine the customer lifetime value of a buyer firm (Berger and Nasr 1998; Gupta et al. 2006), before encouraging the buyer firms to increase their usage of the support services or limiting the buyer firm's allotment of support services.

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