

PERFORMANCE IMPACT OF DISTRIBUTION EXPANSION:
A REVIEW AND RESEARCH AGENDA

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ABSTRACT

The emergence of new technologies, shifting consumer needs and growth in competition have made the expansion of distribution a business imperative for many firms. In this chapter, we review the empirical marketing literature on the performance consequences of distribution expansion and offer an agenda for future research. In doing so, we consider two dimensions of distribution expansion – increases in the intensity of distribution in extant channels and the addition of a new distribution channel. Further, we organize our review of the literature around three approaches towards measuring organizational performance – factual measures of operational performance, perceptual measures of performance and factual, forward-looking measures of firm value. We note some common patterns as well as variations in the distribution expansion – firm performance relationship, across the dimensions of distribution expansion and types of performance measures. These insights form the basis for our agenda for future research on this increasingly important substantive topic.

KEYWORDS: Distribution Channels, Retailing, Distribution Intensity, Multiple Channels, Organizational Performance, Performance Metrics

INTRODUCTION

Shifting consumer needs, increased competition and the emergence of new technologies have both stimulated and facilitated the expansion of distribution by upstream firms (Neslin et al. 2006; Rangaswamy and van Bruggen 2005; Watson et al. 2015). In many situations, distribution expansion has occurred in the form of the addition of new channels of distribution (Ganesan et al. 2009). Distribution expansion has also taken the form of increases in the number of intermediaries and the extent of product availability in extant distribution channels (Palmatier et al. 2014). Indeed, conceptualizations of distribution expansion (e.g., Frazier 1999; Homburg et al. 2014; van Bruggen et al. 2010) incorporate increases in intensity of distribution within a channel (e.g., Fein and Anderson 1997; Frazier and Lassar 1996) and increases in the number of distribution channels used (e.g., Jindal et al. 2007).

Given the strategic importance and growing frequency of distribution expansion decisions, it is important to understand how they impact the performance of firms making these decisions. In this chapter, we undertake an integrative review of the empirical marketing literature on the effect of distribution expansion (in terms of increases in distribution intensity and/or the addition of new channels) on organizational performance and put forward a research agenda.¹

This chapter is organized as follows. We start with considering different conceptualizations of performance. We then review the empirical marketing literature on the

¹ Recent conceptualizations of distribution expansion (e.g., Homburg et al. 2014; van Bruggen et al. 2010) have focused on distribution intensity within extant channels and the addition of new channels. Therefore, in reviewing the literature on the performance consequences of distribution expansion, we did not include studies that focused on distribution expansion through entry into new geographic territories.

impact of one or both types of distribution expansion on three types of performance measures. We conclude with an agenda for future research on the performance impact of distribution expansion.

ORGANIZATIONAL PERFORMANCE

Organizational performance is a construct that has been viewed in many ways in distribution channels contexts such as manufacturer-reseller relationships (Kumar et al. 1992), retailing (Ailawadi et al. 2004) and franchising (Kacker et al. 2016). In their review of the measurement of organizational performance, Richard et al. (2009) as well as Katsikeas et al. (2016) note the widespread use of multiple approaches and present a typology of different types of performance measures. Gielens and Geyskens (2012) draw on the work of Richard et al. (2009) to advance their typology of three broad categories of performance measures in distribution channels research: (i) factual measures of operational performance, (ii) perceptual measures of performance and (iii) factual measures of firm value. We rely on this typology to organize our review of the literature on the impact of distribution expansion on performance.

DISTRIBUTION EXPANSION AND FACTUAL OPERATIONAL PERFORMANCE MEASURES

Extant research (Table 1) has looked at the impact of both types of distribution expansion on factual measures of operational performance. Such measures have been observed to be more accurate than perceptual measures (Ailawadi et al. 2004) and encompass a wide range of performance metrics (e.g., market share, sales, profits).

Insert Table 1 about here

One of the more widely studied relationships in this category is that between distribution intensity and market share. Farris et al. (1989) find a convex relationship between distribution intensity and market share (based on units sold) for consumer packaged goods (tortilla chips and instant coffee) in the U.S. They explain this by noting that greater distribution intensity leads to higher time and place utility and, therefore, higher perceived value for consumers. Reibstein and Farris (1995) identify other studies that examined similar relationships in different product categories/contexts as well as analyse data from IRI's Info Supermarket Review – they find widespread support for a positive convex relationship between distribution intensity and market share. Bucklin et al. (2008) expand the study of the distribution intensity-market share relationship to consumer durables (cars) and also find a positive distribution intensity-market share relationship.

Other studies in the marketing literature also reveal a positive and complex relationship between distribution intensity and market share as well as examine factors that moderate this relationship. Bronnenberg et al. (2008) find that the strength of the positive relationship between distribution intensity and market share for a brand varies based on the growth stage of the product category for the brand. Krider et al. (2008) find that the nature of the positive relationship between distribution intensity and market share changes as a category matures, with demand leading distribution coverage in the initial stages of category development and greater distribution coverage facilitating defence of market share as a category matures. Wilbur and Farris (2014) study 37 packaged goods categories, find support for the positive and convex relationship between retail distribution intensity and market share, and identify additional moderators of this relationship (e.g., the size of revenues in a category, the extent of market share concentration in a category).

In sum, there are a fairly large number of studies on the relationship between distribution intensity and market share. Most of these studies find a positive but complex relationship between the two constructs for packaged and durable goods – the complexity is reflected in the nonlinearity (typically convexity) and the circular, reinforcing nature of the relationship. Furthermore, the literature indicates that the strength of the relationship is moderated by the product type and category as well as the stage of growth of the category.

The positive relationship between distribution intensity and performance is also observed in research in marketing that focuses on firm-level, sales-based measures of operational performance. Pancras et al. (2012) show the positive impact of an increase in distribution intensity (in terms of the number of stores in a market) on overall sales at a retail chain. They note that this impact is influenced by how an increase in distribution intensity is implemented (in terms of the location of new stores) – they find a significant decay in cannibalization when distance between stores is increased. However, results differ when the unit of analysis for sales performance is the individual store (rather than the overall chain) – Nishida’s (2017) explanation of sales performance at the outlet level is that there is a trade-off between the sales-enhancing repetition effect and the cannibalization effect of increased distribution intensity.

Deleersnyder et al. (2002) and Biyalogorsky and Naik (2003) find that the cannibalization effects associated with distribution expansion are not very strong when the expansion takes the form of the addition of an online channel by a firm with extant physical channels. The flipped scenario – the addition of a physical store channel by a firm with direct channels (e.g., online, catalog) – is studied by Avery et al. (2012), Pauwels and Neslin (2015) and Wang and Goldfarb (2016). They find that the impact of the addition of the physical store channel on sales in the direct channel depends on the type of direct channel (Avery et al., 2012; Pauwels and Neslin, 2015), the time horizon for assessing performance impact

(Avery et al., 2012) and the strength of the firm's presence in a location (Wang and Goldfarb, 2016). Overall, neither set of the above-mentioned studies (on the addition of an online channel or of a physical store) finds overwhelming evidence for a broad cannibalization effect of channel addition – when such an effect exists, its presence is contingent on specific factors or variables. Additionally, there are conditions shown for the addition of a new channel to lead to an increase in sales in the extant channel (e.g., Avery et al., 2012; Wang and Goldfarb, 2016). There is fairly broad empirical support for the addition of a new channel to lead to an increase in overall sales for the combined channels of a firm.

Extant research in marketing has also examined the effects of channel addition on other factual measures of operational performance. Chu et al. (2007) use structural modeling and policy simulations to find that personal computer manufacturer profits increased in four out of the six channel addition simulations examined by them. Käuferle and Reinartz (2014) use a sales-based performance measure that controls for firm size – employee productivity (measured as the average yearly sales volume per employee). They evaluate the effects of both an increase in distribution intensity and the number of channels on employee productivity and conclude that greater market coverage does not always translate into improved organizational performance – they identify specific types of firms for which such a strategy is beneficial.

The results in the studies discussed in this section suggest that while distribution expansion (whether in the form of additional channels or greater distribution intensity) generally positively impacts performance (in terms of market share and sales), such effects may be contingent on other variables for alternate factual operational measures of performance (e.g., dealer profits, sales per employee). To our knowledge, there is a paucity of studies that specifically look at the effects of channel addition on market share – this is

surprising given the large number of studies on the distribution intensity-market share relationship and reflects a potential opportunity for future research.

DISTRIBUTION EXPANSION AND PERCEPTUAL PERFORMANCE MEASURES

Gielens and Geyskens (2012) note that perceptual performance measures have a number of advantages relative to factual measures of operational performance – they facilitate the measurement of performance as a multifaceted construct, can have a forward-looking focus and can be designed to relate to specific events.

Extant research on the performance impact of distribution expansion includes a number of studies that have used perceptual performance measures (Table 2)

Insert Table 2 about here

A few studies look at the performance impact of strategies that reflect increases in both distribution intensity and the number of channels. In one of the earliest studies of multiple dimensions of distribution expansion, Easingwood and Storey (1996) study the financial products industry in the UK to examine the effect of the number of channels (and the intensity with which they are used) on three perceptual measures of performance and find support for a positive relationship for two out of three performance measures. A similar empirical relationship is found when the order of considering distribution intensity and number of channels is flipped – Wallace et al. (2009) show that distribution intensity (manifest in the construct of Market Coverage) positively impacts Assessed Firm Performance and that this relationship is moderated by the number of channels used. More recently, Sa Vinhas and Heide (2014) also find support for a positive relationship between the extent of competition between and manufacturer and its distributors and customer satisfaction

– their conceptualization of competition accommodates the use of multiple channels (dual distribution) as well as the intensity with which these channels are used. This finding can be attributed to the greater intra-brand competition present in intensive, multiple channel distribution systems.

There are other studies that focus on the implications of channel addition (as the only form of distribution expansion) on perceptual measures of performance. Coelho et al. (2003) find, in the financial services sector, that multiple channels are associated with higher sales performance and lower channel profitability. Wallace et al. (2004) show that the adoption of a multiple channel retailing strategy enhances retailer performance (measured in terms of Customer Satisfaction and, consequently, Customer Retailer Loyalty) compared to a single channel retailing approach.

Taken together, these studies suggest that there is an overall positive impact of distribution expansion on perceptual measures of organizational performance, particularly for sales or customer-related measures. The evidence for profitability measures is a little more mixed – one possible explanation is that distribution expansion may increase transaction costs and conflict with extant channel members (Hibbard et al., 2001) and this adversely impacts supplier profitability. It is possible that the addition of a new channel is much more visible (and potentially more likely to evoke a relatively stronger, adverse perceptual reaction from extant channel members) and this is why there are more studies that focus on the channel addition - perceptual performance measure relationship than on the distribution intensity - perceptual performance measure link.

DISTRIBUTION EXPANSION AND FACTUAL MEASURES OF FIRM VALUE

Gielens and Geyskens (2012) advocate the use of forward-looking measures of firm performance for a more effective assessment of the impact of changes in distribution strategy. In their view, these measures combine the best of perceptual and factual operational performance measures. Forward-looking measures typically take the form of shareholder value (as captured through abnormal stock returns) but can also include firm value metrics such as Tobin's Q (Table 3).

Insert Table 3 about here

Geyskens et al. (2002) conduct an event study to evaluate the shareholder value impact of the addition of a new distribution channel. Their study focuses on the addition of an internet channel in the newspaper industry and finds a positive cumulative average abnormal return (CAAR) of 0.71% around the event day. This indicates that, on average, the addition of an internet channel adds to shareholder value. Cheng et al. (2007) evaluate the addition of internet-based channels of distribution in the Taiwanese financial services industry. They too, like Geyskens et al. (2002), find a positive and significant CAAR associated with the addition of the channel. In addition, they find a positive effect on longer term performance measures such as Economic Value Added and Market Value Added.

In contrast to Geyskens et al. (2002) and Cheng et al. (2007), Homburg et al. (2014) do not focus on online channel additions only. They investigate effects of the addition of various types of distribution channels in three countries (U.S.A., Germany and China) on shareholder value. Their findings are consistent with those of Geyskens et al. (2002) and Cheng et al. (2007) – on average, the addition of a new channel positively affects shareholder value (as measured by the CAAR). They also assess the impact of an increase in distribution intensity on shareholder value. Here, their findings are less conclusive – they do not observe an unambiguously positive or negative average CAAR. They do observe considerable

variations (manifest in strong positive and negative CAARs for individual firms) in the impact of increased distribution intensity on the shareholder value of individual firms – for 58 firms, there is a positive average abnormal stock return of 2.21%; for another 52 firms, there is a negative average abnormal stock return of -2.21%.

While abnormal stock returns is one of the most widely used measures of shareholder value, there are other forward-looking, stock market-based measures of firm value. One such measure is intangible firm value (as measured by Tobin's Q). Extant research examines the effects of both dimensions of distribution expansion on Tobin's Q. Lee and Grewal (2004) study the impact of the addition of internet-based communication and distribution channels by traditional store-based retailers on their intangible value. Their findings regarding the adoption of the Internet as a sales channel are mixed – the effect is significantly positive only for retailers with extant catalog operations.

Regarding the relationship between distribution intensity and intangible firm value (as measured by Tobin's Q), Srinivasan (2006) studies the effects of the extent to which a franchisor uses dual distribution (the proportion of franchised retail outlets) on Tobin's Q. Given that extant research (Shane et al. 2006; Kosová and Lafontaine 2010) has confirmed a positive relationship between the proportion of franchised outlets and chain size and that the latter typically reflects distribution intensity, it can be inferred that Srinivasan (2006) implicitly examines the effect of increased distribution intensity on the intangible value of the firm. She finds mixed support for a posited positive impact of distribution intensity on firm value. More recently, Srinivasan et al. (2013) find considerable support for their contingency-

based framework for the effects of store openings and closings² on the intangible value of chain retailers.

In sum, two patterns seem to emerge from research on the effects of distribution expansion on factual measures of firm value. First, the effects of distribution expansion appear to be more conclusive for firm value measured in terms of shareholder value (as opposed to Tobin's Q). Second, the positive effects on firm value appear to be stronger for the addition of new channels than for the increase in distribution intensity.

CONCLUSIONS AND AGENDA FOR FUTURE RESEARCH

The empirical marketing literature on the performance consequences of distribution expansion is comprehensive in that it encompasses both dimensions of distribution expansion and multiple approaches for operationalizing performance. Across the various combinations of distribution expansion and performance measure type, there appears to be support for the beneficial impact of distribution expansion on organizational performance. However, there are a number of opportunities for further research:

(i) MODERATORS: A number of studies (e.g., Reibstein and Farris 1995; Bronnenberg et al. 2000; Geyskens et al. 2002; Lee and Grewal 2004; Krider et al. 2008; Avery et al. 2012; Pancras et al. 2012; Homburg et al. 2014; Wilbur and Farris 2015; Kauferle and Reinartz 2015; Wang and Goldfarb 2016) show how the relationship between distribution expansion and organizational performance is moderated by other factors (e.g., product type, category maturity, firm age; firm size; advertising; organizational resources; power, location, extant channel structure, competitive intensity, industry turbulence etc.). Homburg et al. (2014) show how these moderating relationships differ for distribution expansion through increased

² Our inclusion of Srinivasan et al (2013) is based on the assumption that store closings and openings imply changes in distribution intensity rather than withdrawal from/entry into new geographical markets.

intensity and distribution expansion through channel additions when performance is measured in terms of abnormal stock returns. Opportunities exist for similar comparative analyses of the effects of moderators when the performance impact of the two forms of distribution expansion are measured using other approaches (e.g., perceptual or operational metrics).

(ii) **PROCESS:** It is important to develop a comprehensive understanding of the process by which distribution expansion impacts organizational performance. While extant research has identified a number of moderators of the distribution expansion-performance relationship, not as much is known about the process by which distribution expansion affects performance – the distinction between these two ideas is subtle but important. The need to better understand process issues is reinforced by findings about the effects of distribution expansion on intermediate process measures (e.g., distributor opportunism) and final performance metrics. Hibbard et al. (2001), Sa Vinhas and Anderson (2005) and Samaha et al. (2011) provide some promising insights on how the addition of channels or the increase in distribution intensity may impact relationships and processes in extant channels. Additional research can build on their findings and conclusions.

(iii) **INSIGHTS FROM GAME THEORY AND OTHER LITERATURES:** Opportunities exist for more fully incorporating insights from analytical, game theoretic models as well as empirical literatures in other domains and/or disciplines (e.g., franchising, strategy, operations) in examining the direct and indirect effects of distribution expansion on organizational performance. A number of game-theoretic models in marketing have modeled how increases in intensity of distribution (e.g., Trivedi, 1998) or the addition of a new channel (Chiang et al., 2003) impact strategic decisions and equilibrium outcomes for a firm. This body of literature yields a number of potentially key moderators for the relationship between distribution expansion and performance – e.g., channel coordination and pricing

mechanisms used, governance structures, vertical restraints, locus of channel power, the nature of extant interbrand and intrabrand competition, and the structure and heterogeneity of consumer demand. Ingene and Parry (2003) and Lee et al. (2013) provide a comprehensive perspective on this stream of research.

(iv) VARIATIONS ACROSS PERFORMANCE MEASURES: The distribution expansion literature suggests that the positive impact of increased intensity of distribution may be stronger on market share or sales-based measures of performance than on profit or shareholder value-based metrics. Future research could undertake a more definitive and comprehensive examination of these variations as well provide a theoretical explanation for them. Furthermore, can insights from (i) (moderators) and (ii) (processes) help in explaining these variations or reconciling other results regarding the distribution expansion-performance relationship?

(v) EMERGING MARKETS: The extant distribution expansion-performance literature covers a number of developed countries other than the U.S. – e.g., Japan (Nishida 2017), Germany (Homburg et al. 2014; Kauferle and Reinartz 2015), UK (Coelho et al. 2003; Deleersnyder et al. 2002; Easingwood and Storey 1996), and The Netherlands (Deleersnyder et al. 2002; Geyskens et al. 2002). However, less is known about the distribution expansion-performance relationship in emerging markets, with Taiwan (Cheng et al. 2007) and China (Homburg et al. 2014) being exceptions. In particular, there are fertile opportunities to undertake comparative empirical examinations of specific distribution expansion-performance relationships in developed and emerging markets, following the path of Homburg et al (2014) – this would shed insights on how country-level cultural, regulative and socio-economic subsystems (Burgess and Steenkamp 2006) impact the distribution expansion-performance relationship.

Given continued advances in technology as well as increasing competition and the growing complexity and levels of consumer needs, the business imperatives for firms to pursue distribution expansion are only likely to grow in the future. While there is a considerable body of extant research in marketing on the performance impact of distribution expansion, there are a number of unanswered questions. Thus, examining the consequences of distribution expansion promises to be a fruitful domain for future research.

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TABLE 1: IMPLICATIONS OF DISTRIBUTION CHANNEL EXPANSION FOR FACTUAL OPERATIONAL PERFORMANCE MEASURES

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/Mediator/Moderator	Performance Measure	Key Findings
		Channel Multiplicity	Intensity of Distribution				
Farris et al. (1989)	Develops an aggregate-level model of the relationship between distribution and market share for frequently purchased, branded consumer goods.		✓	Primary store audit data (31 stores) and commercial market research data for sparkling wine.	Unmodified Preference In-Store Attractiveness Distribution Intensity Resistance to compromise	Market Share	Under certain model assumptions, the authors find (analytically and empirically) that there is an increasing convex relationship between distribution intensity (DI) and market share (MS) for consumer-packaged goods.
Reibstein and Farris (1995)	Considers evidence regarding the generalized convex cross-sectional relationship between retail distribution coverage and unit market share for brands.		✓	IRI's 1988 (Info Supermarket Review) data including super market scanned data.	Distribution Intensity	Market Share	The authors identify other studies that had examined similar relationships in different product categories/contexts and also use IRI data to estimate the relationship between DI and MS for twelve new categories – for eleven of these categories, they obtain statistically significant results indicating a positive convex relationship.
Bucklin et al. (2008)	Examines how changes in the distribution intensity of mature networks impact consumer choice.		✓	21,268 purchase observations of new midsize premium car sales in California for the 1997 model year from PIN data.	Distribution Intensity - Dealer Accessibility - Dealer Concentration - Dealer Spread	Market Share Dealer Profitability	Analysis for all three buyer-centric measures of distribution intensity was significantly positively related to new car choice. Higher DI increases sales but decreases dealer's profit. The authors find that the MS elasticity of DI is approximately 0.6 across the new car models studied.
Bronnenberg et al. (2000)	Studies the dynamic relationship between retail distribution and market share for		✓	Five years (1991-96) of weekly U.S. grocery data from the ready-to-	Distribution Intensity Life Cycle	Market Share	The authors find a positive feedback effect between DI and MS for a brand in the growth stage of a category. This leads to results where, in the nascent

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/Mediator/Moderator	Performance Measure	Key Findings
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	brands in new repeat-purchase categories.			drink tea category supplied by Information Resources Inc.	Manufacturer Pull and Push		stages of the development of a category, small short-term increases in DI can generate larger longer-term changes in MS. This magnifier effect dissipates as the category matures and late entrants find it harder to acquire a large share of the market.
Krider et al. (2008)	Explores the relationship between distribution coverage and market share (in a packaged goods category) for an incumbent brand and for new entrants, using a graphical visualization approach.		✓	Weekly market share and distribution coverage for four brands of ready-to-drink iced tea during the period 1991 to 1996.	Distribution Coverage Life Cycle	Market Share	Using state space diagrams, the authors find that the nature of the relationship between DI and MS changes as a category evolves – in the early stages of category development, the growth in demand drives increases in distribution coverage which then reinforces market share growth; as the category matures, a market leader uses the intensity of its distribution coverage to defend its MS from competitors.
Wilbur & Farris (2014)	Presents new empirical generalizations about the cross-sectional relationship between distribution and market share.		✓	Census of more than 79,000 SKUs in 37 consumer packaged goods categories.	Distribution Intensity Product category	Market Share	The relationship between market share and retail distribution is positive and convex at the SKU level. The degree of convexity is greater for categories with higher revenues and concentrations in market shares.
Pancras et al. (2012)	Develops a demand model to infer the effect of store openings and closures on chain performance.		✓	Panel data of monthly sales from a chain of 66 fast food franchise chain in a large U.S. metropolitan area spanning 36 months from October 2002 to September 2005.	Goodwill Location Endogeneity Spatial Competition	Sales	The authors develop and calibrate a demand model that illustrates the positive impact of an increase in DI on sales. They find that, on average, 86.7% of sales at new stores take the form of incremental purchases whereas the rest consist of cannibalized sales from nearby stores belonging to the same chain (with cannibalization considerably decaying as distance

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							increases).
Nishida (2017)	Empirically assesses how a pioneering firm entering a geographical market may (or may not) achieve a market-share advantage through increased distribution.		✓	Manually collected panel on six major Japanese convenience-store chains from 47 geographical markets between 1991 and 2007.	Entry Order Density of Outlets Time in Market	Market Share Outlet Share Sales per Outlet	There is a non-monotonic (inverted U) relationship between the density of retail outlets and the sales performance per outlet. The author notes that an implication of this result is that as a chain expands its number of outlets, there may be a trade-off between repetition and cannibalization effects.
Deleersnyder et al. (2002)	Uses recent structural-break time-series econometrics to study the impact of an Internet channel addition on the long-term performance of a firm's extant distribution channels in the information goods industry.	✓		Approximately 10 years of data (from 1990) of 85 Internet channel additions during 1994 to 2000 in the newspaper industries of the UK and The Netherlands.	Internet Channel Addition	Sales (in terms of newspaper circulation and advertising revenues)	The authors conclude that cannibalization fears may be overstated. They find that neither print newspaper circulation nor advertising revenues (as measures of sales) show a significant negative decline as a consequence of the new internet channel addition.
Biyalogorsky and Naik (2003)	Develops a method that allows 'bricks and mortar' retailers to use easily available market data to decide on whether to add an online channel.	✓		Weekly dollar sales from website and retail stores for 52 weeks (from August 1998) for Tower Records in North America.	On-line Purchase Behavior On-line Equity Formation	Off-line and on-line sales	The new online channel does not significantly cannibalize offline retail sales (contemporaneous cannibalization represents 2.8% of online sales) and overall sales increase.
Avery et al. (2012)	Examines how the addition of a "bricks and mortar" offline channel impacts the	✓		Data from a multichannel retailer of high-end apparel,	Store opening	Sales Number of first-time	In the short term, adding a physical retail store cannibalizes sales for the catalog channel, but not for the Internet channel; in the longer term, the

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/Mediator/Moderator	Performance Measure	Key Findings
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	performance of different types of direct channels – online and catalog.			accessories, and home furnishings.		customers	presence of the physical store benefits both the Internet and catalog channels. More first-time customers begin purchasing through the direct channels after the opening of the physical store.
Pauwels & Neslin (2015)	Decomposes the revenue impact of adding bricks-and-mortar stores for sales in a firm's existing catalog and Internet channels.	✓		309 weeks of sales data from durables and apparel in mature categories predominantly through catalogs and the Internet	Addition of stores Purchase frequency and size Return frequency and size Exchange frequency and size	Revenue	Authors find that physical store introduction does cannibalize catalog sales but has much lower impact on Internet channel sales. The positive revenue effect of the net increase in purchase frequency offsets the adverse revenue effect of an increase in returns and exchanges; overall net revenues increase by 20% as a consequence of the addition of a store channel.
Wang & Goldfarb (2016)	Examines the different dimensions (distribution, communication) on which the opening of physical stores affect the performance of the online channels of 'bricks and clicks' retailers.	✓		Data from July 2010 to June 2012 on purchases by 42,000 customers of three different bricks-and-clicks retailers owned by the same firm.	Nearby Store opening Controls: - Direct marketing communications - Store openings by competitors	Online sales Total sales Number of sessions on the website Number of unique visitors to the website	The relationship between sales in the online and physical store channels varies on the basis of the strength of the retailer's presence in a region – when the presence is strong, the opening of an offline store lowers online sales and search; when the presence is weak, the opening of an offline store leads to an increase in online sales and search.
Chu et al. (2007)	Uses a structural modeling and policy simulations-based approach to evaluate firms' channel policy changes in a multichannel, multiproduct setting	✓		Retail prices and unit sales of U.S. PC market for 1995–1998 at the manufacturers' brand-model level across six different	Consumer heterogeneity in preferences for brand, product attributes, and price response	Firm Profits Consumer Welfare	Models (based on the idea that indirect channels can attract more customers and provide more sales while a direct channel can provide higher margins) successfully explain multiple channel addition decisions (e.g. involving Dell and Compaq) – manufacturer profits increased in four out of the six channel

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/Mediator/Moderator	Performance Measure	Key Findings
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	and assesses the impact of the change for firm profits and consumer welfare.			distribution channels.			addition simulations examined by them.
Käuferle and Reinartz (2015)	Analyzes drivers of a firm's distribution intensity and their respective effects on performance.	✓	✓	Data from 150 German industrial wholesalers in 2009. Performance data from annual reports; Other variables from a mail survey.	Business Strategy Environmental Conditions Distribution intensity - Variety of Channels - Degree of Channel usage	Performance (Employee Productivity)	They find that increased distribution intensity and channel addition are positively related, reflecting an overall strategy for distribution expansion. They do not find any general positive effect of greater intensity or more channels on performance; they submit that there is an ideal level of distribution intensity and number of channels for each firm and deviations from this optimum level adversely affect performance. Aggressive distribution (greater intensity, more channels) has a stronger beneficial performance effect when the products sold are complex and when the customer base contains a higher proportion of demanding, key customers.

TABLE 2: IMPLICATIONS OF DISTRIBUTION CHANNEL EXPANSION FOR PERCEPTUAL PERFORMANCE MEASURES

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/ Mediator/ Moderator	Performance Measure	Key Findings
		Channel Multiplicity	Intensity of Distribution				
Easingwood and Storey (1996)	Examines the use of multiple distribution channels (and the intensity with which they are used) in the marketing of financial products	✓	✓	Mail survey of 153 new financial products in the UK	Relative Channel Use Number of Channels Channel Intensity	Sales Performance Enhanced Future Opportunities Profitability	While the authors find a positive effect of distribution coverage (in terms of the number of channels and the intensity with which these channels are used) on Sales Performance and Profitability, they do not find any significant effects on Enhanced Future Opportunities.
Wallace et al. (2009)	Examines how channel alignment capabilities (reward alignment and channel tracking) directly and indirectly (through distribution coverage) impact performance and how these impacts vary based on the channels multiplicity.	✓	✓	Mail survey of the 183 sales and marketing managers for suppliers in the specialty outdoor sporting goods industry and point of sale scanner data.	Multichannel Distribution (Moderator) Environmental Uncertainty IT Enablement Channel Tracking Reward Alignment	Market Coverage Service Delivery Firm Performance	Channel tracking and reward alignment capabilities improve firm performance both directly and through expanded market coverage and these effects are moderated by channel complexity (reflecting the use of multiple channels).
Sa Vinhas and Heide (2015)	Conducted from the perspective of distributor. It examines how different forms of competition with a manufacturer-owned channel	✓	✓	Survey of 167 informants from a multi-sector manufacturer's distributor.	Dual Distribution Competition Distributor Opportunism End-User Satisfaction	Competition for customers Distributor opportunism Customer satisfaction	In dual distribution channels, although enhanced intra-brand competition benefits customers, it increases distributor opportunism. Vertical separation by the upstream channel member limits the competition but decreases customer

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/ Mediator/ Moderator	Performance Measure	Key Findings
		Channel Multiplicity	Intensity of Distribution				
	impact distributor opportunism and the distributor's end customers.						satisfaction.
Coelho et al. (2003)	Explores how multiple channels influence key channel performance indicators.	✓		Interviews with sample of 62 UK financial services organizations.	Channel typology	Sales Profitability	A multiple channel strategy is associated with higher sales performance but lower profit performance, with the magnitude of the relationship dependent on the extent of use of multiple channels.
Wallace et al. (2004)	Investigates the impact of multiple channel retailing strategies on customer-related performance metrics.	✓		Survey of 616 customers of a large regional retailer of specialty outdoor sporting goods with bricks and mortar, mail order and internet businesses.	Customer Multichannel Employment Multichannel Portfolio of Service Output Disconfirmation Customer Satisfaction	Customer Satisfaction Customer Retailer Loyalty	Multiple channel strategies increase customer satisfaction and loyalty by augmenting the portfolio of service outputs provided to customers.

TABLE 3: IMPLICATIONS OF DISTRIBUTION CHANNEL EXPANSION FOR FACTUAL MEASURES OF FIRM VALUE

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/ Mediator/ Moderator	Performance Measure	Key Findings
		Channel Multiplicity	Intensity of Distribution				
Geyskens et al. (2002)	Assesses the net impact of adding an Internet channel on a firm's stock market return.	✓		Event study of 98 European newspapers which announced an Internet channel addition.	Internet Channel Addition Firm Characteristics Introduction Strategy Characteristics Marketplace Characteristics	Abnormal Stock Returns	The authors find that the internet channel addition positively impacts shareholder value. Additionally, they find variation in the impact across individual firms and conclude that the positive effect is strongest for early followers that are powerful firms and have a relatively smaller number of direct channels.
Cheng et al. (2007)	Studies whether eChannel addition could enhance the financial performance of a firm.	✓		Event study of 32 Taiwanese financial service firms which announced online order services during 1997-2003 collected from Taiwan Econometric Journal Co.	eChannel Addition	Abnormal Stock Returns Economic Value Added (EVA) Market Value Added (MVA)	They find a positive and significant cumulative average abnormal return (CAAR) associated with eChannel addition. In addition, they find a positive effect on longer term performance measures such as Economic Value Added and Market Value Added.
Homburg et al. (2014)	Investigates whether a firm's announcement of an increase in distribution intensity or the establishment of a new channel influences firm	✓	✓	Event study of 87 U.S. firm, 110 German firm, and 43 Chinese firm announcements of channel expansion from firms that are listed in the U.S. S&P 500; the	Increase in Distribution Strategy Establishment of New Channel Moderators	Abnormal Stock Returns	They find that addition of a new channel positively impacts shareholder value. While industry turbulence and competitive intensity strengthen this relationship, firm efficiency and addition of the first concurrent channel weaken that. They do not observe an unambiguously positive or negative average CAAR for increases in

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/ Mediator/ Moderator	Performance Measure	Key Findings
		Channel Multiplicity	Intensity of Distribution				
	value.			German DAX, MDAX, SDAX, and TecDAX indexes; and the Chinese CSI 300.	Firm Factors Industry Factors Channel Strategy		distribution intensity. But this effect is negatively moderated by industry turbulence and competitive intensity and positively moderated by firms' market share and international expansion.
Lee and Grewal (2004)	Develops a theoretical framework to understand how strategic responses to new technologies (the adoption of Internet by traditional store-based retailers) impact firm performance.	✓		Secondary data of 83 retailers that adopted the internet and 23 retailers that had not adopted between 1994 and 2000.	Strategic Responses - Speed of Communications and Sales channel adoptions - Speed of e-alliance formation Slack Resources	Intangible Value (Tobin's Q)	Retailer adoption of the Internet as a communications channel and e-alliance formation favorably impacts firm performance. Organizational resources have a moderating effect – the use of slack resources strengthens the positive effect of communications channel adoption. The results for the adoption of the Internet as a sales channel are mixed – the performance effect is significant only for retailers that have extant catalog operations.
Srinivasan (2006)	Examines the relationship between a firm's dual distribution strategy and its intangible value.		✓ ³	Unbalanced panel data of 55 publicly listed U.S. restaurant chains for the period 1992–2002.	Dual Distribution Strategy Firm Age Scope of Vertical Integration Advertising Stock Financial Leverage	Intangible Value (Tobin's Q)	The direction of the direct and interactive effect of dual distribution on intangible value varies – for some firms it is negative and for others it is positive. Interactions are with firm characteristics such as firm age, scope of vertical integration, advertising, financial leverage, and financial liquidity.

³ Implied by Increase in Dual Distribution

Author(s)	Focus of Study	Types of Expansion		Sample and Industry	Key Variables: Independent/ Mediator/ Moderator	Performance Measure	Key Findings
		Channel Multiplicity	Intensity of Distribution				
					Financial Liquidity		
Srinivasan, Sridhar, Narayanan and Sihi, (2013)	Examines the effect of the opening and closing of stores on chain retailer performance.		✓	A panel of 1,447 retailer-years of 132 publicly listed US chain retailers from the Standard and Poor's Compustat Retail Industry-Specific Database from 1998 to 2009	Opening and Closing Stores Market Share Advertising Intensity Firm Age Firm Size	Firm Value (market-to-book value)	They develop and find support for a contingency-based approach. Closing stores increases firm value as the retailer's market share, age and advertising intensity increase; closing stores decreases firm value as the chain size increases. Opening stores decreases firm value as the retailer's market share, chain size and advertising intensity increase.