1 Introduction

Since Shapiro’s (1977) article “Can Manufacturing and Marketing Coexist?”, scholars have pursued the study of Production and Operations Management (POM) and marketing interfaces. Based on systems theory, prior studies have classified interface research into three domains: 1) Input; the situational context in terms of individual, function, interdepartmental, organization, product, and market, 2) Process; the level (Strategic, Tactical, and Operational) of decision-making interaction, and 3) Output; the tangible result of the interface (Parente 1998). In this chapter, we describe developments in each domain.

Recent studies have shifted our attention to the multichannel retail setting, as it poses a challenging context where firms have to manage issues in customer targeting, increased inventory fluctuations, and product returns. In the domain of process, we delineate process coordination and forecasting issues in sales and operations planning (S&OP), interfirm joint capability decision making, and managing closed loop supply chains. On the output side, we assert that performance metrics derived from a single business function (e.g., operations, marketing, or finance) are insufficient. Instead, we propose the need for assessing shareholder value as a complementary output metric, which not only captures the performance of each function as a whole, but also takes into account the institutional concerns regarding sustainability and corporate social responsibility (CSR).

We develop Figure 20.1 to show how the POM and Marketing interface come together within the input-process-output typology commonly found in operations management. We call it the Triple C (Context, Coordination, and Consequence) framework. The input represents the context within which Marketing starts playing an important role in distributing a firm’s goods and services to its customers, the process represents the coordination of different processes within POM that drive value for the customer, and output represents the consequence of how well the interface creates value for the shareholders. The relevant topics within each leg of the Triple C framework are shown in Figure 20.1, which we discuss next in greater detail.
POM and Marketing

2 Input Context-Multichannel Retailing as a Challenge to Customer Segmentation, Inventory Management, and Reverse Logistics

The integration of POM functions with Marketing continues to prove a point of considerable attention in multi-channel retailing literature. As firms ramp up their online presence, new channels for retailing and distribution emerge, placing a far greater strain on operations decision-makers who are tasked with implementing feasible channel-specific marketing initiatives. Online shopping provides consumers with unparalleled ability to compare prices, sort desired products across many attributes, and read critic and user-generated reviews for valuable insights. Retailers like Amazon, and even traditional players like Wal-Mart (that's increasingly diversifying into online distribution modes), often provide low-price shipping coupled with consumer-friendly return policies. While firms' marketing departments communicate the tremendous value provided to consumers through these multi-channels, significant POM challenges emerge as well.

Take for example the unique marketing mix of eyeglass and sunglass brand Warby Parker, which includes free delivery and return for a five-day trial of a box of five consumer-selected frames for potential patrons to choose, fostering a unique product trial experience (www.warbyparker.com/home-try-on). However, delivering multiple frames to consumers all at once gives rise to operational challenges in inventory management, repackaging, and product return forecasting. The key to such service implementation depends on devising novel and cost-efficient methods to deliver personalized products through untraditional channels.

Conversely, providing increased customer value across channels presents many opportunities for firms to recoup their investments, with evidence existing in the very same eyeglass and sunglass industry. Over the past few years, Warby Parker has strategically introduced showrooms across the United States, recognizing the potential benefits of a multi-channel approach. Adding to the literature addressing the impact of a multi-channel approach on sales (Forman et al. 2009; Avery...
et al. 2012), Bell et al. (2015) demonstrated that within its trading area, the showroom introduction increased sales for Warby Parker both overall and through the web channel. From a POM perspective, showrooms experienced an increased conversion in the channel sampled, which led to decreased returns, whereby orders fell by 6.1% while sales only fell by 4.5% (Bell et al. 2015).

The traditional consumer shopping process of in-person product evaluation and purchase continues to shift into a multi-channel framework where products may be explored in a brick-and-mortar store but purchased online. Preventing product stock outs at retailer locations becomes even more challenging if price matching between multiple channels is implemented, allowing consumers to utilize feature-sorting interfaces online for research and brick-and-mortar stores for procurement. Undoubtedly, the emergence of multi-channel retailing provides an improved value proposition for consumers, who can now decrease search costs and circumvent the traditional product acquisition processes through direct home shipping.

Online retailers like Amazon, which offers superb selection and often free two-day shipping, may stimulate online purchasing indirectly by encouraging customers to use brick-and-mortar locations as informal showrooms. Lower offline consumer purchase intentions push firms to more closely evaluate their retail store environment and stocking strategies. Such product and service marketing context requires the integration of several separate firm functions across the supply chain. Research in consumer segmentation, inventory management, and product return policies provides a rationale for firms to create a strong link between POM and Marketing in an evolving retail space.

The current multichannel retailing research in POM and Marketing falls into three distinct categories, related to complex market segments, increased inventory volatility, and returned and remanufactured goods. Each of these categories is explored in the following subsections.

### 2.1 Complex Market Segments

While retailers across channels strive to stimulate consumer purchases, some segments may be more profitable to target in specific channels. Using a game theoretic model, Hsiao and Chen (2014) deduced that grocery shoppers who preferred purchasing through a physical channel and were classified as within an intermediate profitability region (between highly profitable and relatively unimportant), were the most desirable consumers for manufacturers to “poach” from physical channels. On a related note, Prasad et al. (2011) demonstrated that marketing efforts focused on advanced selling are less fruitful for retailers when consumers are more risk averse. Advance selling can take the form of an example by Tang et al. (2004), where bakeries in Hong Kong provided price discounts to encourage customers to purchase cakes for a festival a month in advance in order to reduce inventory risk. Such benefits put emphasis on understanding the factors that contribute to consumers’ expected utilities, as they drive advance purchase decisions.

As online search engines and advanced user interface provide richer information (e.g., historical price trends) to consumers, the characteristics of these segments may shift to become more strategic (forward-looking). As a result, the effectiveness of prior established practices such as quick-response, can generally be lower and even damaging depending on pricing strategies or consumer return policies (Swinney 2011).

Geographical properties also tend to affect the multi-channel effectiveness. Through a field experiment that began with the introduction of an informational website, Pauwels et al. (2011) showed that the negative revenue effects of introducing an informational website proved more likely to appear for customer groups living closer to the physical store. While some consumer segments showed increased sales, other segments used the website as an alternative to physically frequenting the store. It can also affect a firm’s operational decisions on optimal staffing.
Understanding consumer preferences across segments can provide insights in resolving channel conflict. In an online and catalog multichannel setting, Brynjolfsson et al. (2009) showed that competition was more intense between Internet and brick-and-mortar retailers when selling mainstream products, but far less intense by comparison when selling niche products (products not amongst those cumulatively generating 80% of total sales). Therefore, regarding distribution strategies, it is important for the manufacturer to consider target segments and positioning of the product that drives intra-brand competition across channels.

2.2 Increased Inventory Volatility

Firms constantly strive to reduce optimal levels of inventory by fostering better communication throughout the supply chain and aligning product distribution strategies. Alan et al. (2014) used longitudinal analysis of portfolio returns to demonstrate that inventory management performance as measured by inventory turnover, gross margin returns on inventory, and adjusted inventory turnover, can predict future near-term stock returns. This emphasizes the importance of inventory management. However, recent distribution decisions in practice are not easily explained by POM efficiency logic. Gateway PC shifted their focus to online sales after closing 188 offline retail stores in 2004, while GM and Chrysler closed approximately 30% of their dealerships (Lee et al. 2013). Such decisions show increasing concerns of intra brand competition and customer substitution between online and offline channels. Moreover, as online channels do not provide the touch and feel of products, there is an increase in likelihood of product returns (Ofek et al. 2011) and obscuring of true product demand. Product returns also lead to a number of negative events, one of them being the increase in phantom products that are physically present in the store, but only in unobservable storage spaces due to mishandling of a returned product. Estimated sales losses due to these invisible products amount to $560–960 million per year in the US supermarket industry (Ton and Raman 2010). Scholars have suggested the use of different accounting methods, RFID tracking, store environment redesign, and change in distribution structure (DeHoratius and Raman 2008) to tackle this problem.

While consumers often examine products in store and purchase online, it is common for product pick-up to happen within a brick-and-mortar location. Gallino and Moreno (2014) examined the related interface between operations and marketing in a similar purchase process, finding that implementation of a buy-online, pick-up in store (BOPS) product reduced online sales and increased in-store sales and traffic. They concluded that a cross-selling effect might have emerged, where customers who used the BOPS functionality bought additional products once in the stores. By analyzing online cart abandonment and in-store conversion rates, Gallino and Moreno (2014) demonstrated that BOPS implementation might have increased “research online, purchase offline” consumer behavior.

2.3 Returned and Remanufactured Products

The issue of product returns is a still an underdeveloped research topic, one that requires understanding the combined issues of cross-functional integration of marketing and operations (Malhotra and Sharma 2002), and reverse flow of products. Mollenkopf et al. (2007) argue that product returns should be investigated by taking a holistic view, where firms should try to get a better understanding of the total costs of returns, develop cross function teams to interact with customers, and pay close attention to the quality of the product and service dimension that is relevant to the intermediary customers in the supply chain.
The marketing actions of a retailer related to promotional offerings and pricing decisions are often made before consumer demand can be assessed (Iyer et al. 2007), something which often leads to increased product returns. Therefore, a stream of Marketing and POM interface research focuses on what to do with returned products, or reduce the return likelihood. Akçay et al. (2013) demonstrated that money-back-guaranteed policies that sell returned products in an open-box format resulted in decreased initial stocking quantities, diminished retailer inventory risk, and reduced procurement costs. The effects were found to be greater for innovative new products in a multichannel setting. Their model takes into account retailer decisions related to procurement quantity, new product and open-box product pricing, and the refund amount provided. These decisions require proper coordination between POM and Marketing functions.

Products purchased during certain seasons, for specific purposes, and in new channels can also provide insight into product return likelihood. Using data from a business-to-consumer multi-channel retailer, Petersen and Kumar (2009) demonstrated that on average, products purchased during the holiday season were more likely to be returned. For consumers who purchased more through channels new to them but within familiar product categories, product returns decreased. Consumers were also more likely to return products from new categories when purchasing them in a new channel.

Methods for implementing operationally-efficient return policies must therefore take into account not only the product category, but also the consumer profile, time, and channel of purchase. With a focus on identifying their most valuable consumers, firms can develop methods to push traffic to certain channels for certain consumers. Chen and Bell (2012) demonstrate this idea by showing the results of an analytical model, where a firm offers a full refund scheme and no return scheme in a single market to generate sub segments. These sub markets can use alternative distribution channels for various geographic locations with multiple prices. They conclude that new products with uncertain customer expectations perform better with a full refund policy, and mature products with low uncertainty are better off with a no-returns policy or distributed through a dual channel. Segmenting a market using customer returns can be a profit maximizing policy, though research on more sophisticated segmentation schemes is needed.

3 Process Coordination: Intra-/Inter-Firm Issues in POM and Marketing Interface

In order to cope with the downstream changes due to the rise of multichannel retailing, firms can build competency by focusing on the details of process integration to make better forecasts, make joint decisions, and expand supply chain perspectives by including end-of-life or returned products. In this section, we discuss the POM research findings in each respective domain.

3.1 Focus on Micro-Level Process Integration with Data Rich Forecasting

The focus on micro-level processes is important because there can be information deficiency in decision-making processes, and people are vulnerable to political barriers, functional limitations, and biases (Oliva and Watson 2009). Even with a well-defined system, this subjective element can affect the choice and outcome of a process. Through a case study of Sales and Operations (S&OPs) planning, a cross functional process performed to balance demand and supply and to align all business function plans with the strategic business plan (Ling and Goddard 1988), Oliva and Watson (2011) propose that the incentive structures of each function depend on how each detailed sub processes are specified and carried out. In an interorganizational, multichannel setting, there
are still voids in research on designs of micro-level processes in collaborative activities such as Efficient Consumer Response (ECR) and Collaborative Planning, Forecasting, and Replenishment (CPFR) that synchronize and coordinate forecasts and plans across supply chain partners. If the processes are still ambiguously specified on a case-by-case basis, the implementation cost can be very high due to safeguarding costs of relationship specific assets, and there can be considerable cynicism in practice due to negative inequity and power play (Corsten and Kumar 2005).

Alongside process integration, additional sources of information can contribute to better forecasts. For example, the hospitality and tourism industry has been utilizing social media data as a crucial information source to improve demand predictions (Noone and McGuire 2011; Sigala et al. 2012). For example, HKHotels closely monitors customer reviews on TripAdvisor and uses this data to enhance value for customers by adjusting items in the breakfast buffet, as well as providing additional wine and cheese services in the evening. Wyndham Hotels and Resorts on the other hand, previously put effort into developing a micro-site to attract female travelers in order to gain insights into the services and amenities that matter to female travelers (now-defunct “Women on Their Way” website).

Due to the advancements in online communication technologies, recent forecasting methods incorporate web content volumes, online search records, stock market valuations, advertising and marketing activities, advance selling volumes, and social media viral traffic data (Xiong and Bharadwaj 2014). Recognizing such rich sources of information available online, POM research on predictive models can guide firms on how to interpret and utilize these content rich data to reduce the uncertainty in daily operations and decision making. As an example, Huang and Mieghem (2014) evaluate the case where a firm features their products online, but takes orders offline. They show that using online clickstream variables can help predict the propensity, amount, and timing of offline orders. As a result, the estimated reduction in inventory holding and backordering costs can be as high as 3% to 5%.

### 3.2 Joint Capability Planning

From a financial strategy perspective, integrating POM and Marketing functions proves to be critical in a variety of contexts. Particularly with regards to firm investment decisions, extant research has demonstrated that short-term and long-term implications abound for imprudent internal firm communication and POM coordination. Liu et al. (2010) examined supply reliability in a retail context that included joint marketing and inventory decisions. For products with a lower marketing costs function, the value for increasing supply reliability was always higher. Investment in new technologies was demonstrated as more financially beneficial when marketing costs related to increasing consumer demand were lower.

Relatedly, Shockley et al. (2015) employed a service operations management strategy to examine strategic design responsiveness (“the degree to which retailers dynamically coordinate investments in human and structural capital with the complexity of their service and product offerings”) in a key area where marketing and operations functions are intertwined. They found that delayed applications of strategic investments did produce short-term financial benefits, but operational performance ultimately suffered. These results thus provided empirical support for the financial implications of an uncoordinated marketing and operations interface in the chain retail store context. In fact, in their analysis of ACSI customer satisfaction data, Shockley et al. (2015) found that decreasing labor force intensity faster than proportional margins was significantly and negatively associated with forward customer satisfaction scores.

Service capacity decisions within the supply chain require attention for the supply chain members to enhance joint profitability. In the case of after-sales service where the sales volume
is affected by the retailer’s service level commitment, the retailer faces make-or-buy decisions for the service capacity. Li et al. (2014) found that the outsourcing market encourages retailers to make higher levels of service commitment and have the manufacturers lower their wholesale price. Moreover, if the manufacturer is willing to share the cost to build service capacity with the retailer, profits of both parties tend to increase, especially when combined with different pricing strategies. Cachon and Feldman (2015) propose a pricing strategy of charging a high price only when the demand is high, and offering discounts otherwise. Although this strategy offers discounts more frequently than price commitment strategies, it happens to be more profitable, and reduces the need for overbuying capacity (higher levels of inventory). These findings are contrary to suggestions that advocate limiting markdowns and acquiring excess capacity. Periodic and infrequent communication between POM and Marketing decision makers within an organization does not work well in a traditional retail framework, and the deficiencies of such an approach likely prove even more pronounced in a multi-channel setting.

When consumers do elect to visit brick-and-mortar stores, conversion rates (the ratio of the number of transactions to traffic in the store) become critically important to retailers. Using apparel retailer data, Perdikaki et al. (2012) found that conversion rate declined with increasing store traffic, and that lower conversion rates led to a decrease in future traffic growth. However, when store traffic and staffing levels were close to their means, increasing average traffic per hour by one unit increased average sales volume. Retail firms must be able to balance demand across different channels; increasing just the store traffic yields diminishing returns in conversion rates. Marketing strategy is critical in identifying what consumers could be serviced effectively through online channels, lessening the operations-related strain of variable staffing and potential stockouts for brick-and-mortar retailers.

### 3.3 Reverse Logistics and Sustainability

As for the POM response on dealing with returned products, we discuss supply chain designs for reverse flow of products. The reverse supply chain needs to acquire products from end-users, transport those products to their disposition point. It also needs to test, sort, and inspect the product’s condition, as well as refurbishing and remarketing the products (Guide et al. 2003). Together, the forward and reverse supply chains comprise a closed loop supply chain (Guide and Wassenhove 2009), proper design of which can allow firms to deal with not only product returns, but also product recalls and remanufactured products. Studies have looked into the determinants of product recalls and returns, and have found that the quality of the product itself is not a sufficient predictor of such incidences. In addition, innovative firms that focus heavily on R&D or maintain a broad SKU line will experience higher probabilities of product recalls (Thirumalai and Sinha 2011). Other studies have looked into the pricing schemes and product designs for remanufactured products (Chen and Chang 2013; Wu 2012). Regarding an important decision of what and how much to remanufacture, prior studies have attempted to identify optimal acquisition and sorting policies (Galbreth and Blackburn 2006; Ferguson et al. 2009). If a firm can manage to pool knowledge from multiple retail channels, the combined market knowledge about acceptability and consumer preferences of remanufactured products can enhance the effectiveness of such policies.

Another way firms have found useful in redistributing remanufactured or refurbished products is through specialized online retail channels that adopt “one deal a day” business models. An example is Woot.com, a deep discount retailer selling consumer electronics, wine, t-shirts, and remanufactured products (Wang et al. 2009). Selling through these channels rely on a psychological effect known as “the scarcity principle” (Lynn 1991). By placing limitations on the deals, consumers are induced with a sense of urgency, which increases the purchase tendency, shortens searches,
and results in greater customer satisfaction (Sodero 2012). Such channels with innovative business models prove to be effective in dealing with excessive returns and remanufactured inventories.

4 Output Consequence: Complementarity Between POM and Marketing for Building Shareholder Wealth

One of the primary objectives of firms is to maximize the financial wealth of their shareholders. Therefore, it is important to ask whether the value of marketing and POM integration yields significant shareholder wealth. However, despite its importance, research on shareholder wealth has chiefly been the domain of scholars in finance. This is unfortunate, as limited attention on shareholder wealth in POM and Marketing has resulted in an under-appreciation of these business functions in the C-suite.

It is not that scholars in POM & Marketing have not considered financial performance in their investigations. However, a significant portion of this research has centered on accounting-based metrics rather than measures of shareholder wealth. Accounting-based metrics by definition are backwards-looking and provide limited guidance towards the future outlook of firms. Both POM and marketing can significantly impact forward-looking metrics that form components of shareholder wealth, underscoring more research attention on these. Indeed, marketing is focused on understanding and influencing customer needs and demands, and POM ensures that the supply chains of firms are aligned to optimally and efficiently meet the customer needs and demands. As such, the two business functions of POM and marketing have the potential to complement each other and positively inform firm value. A recent study by Inman et al. (2011) supports this complementarity by showing that marketing performance mediates the indirect relationship between firm operational and financial performances. This complementarity can give rise to key organizational capabilities that can enhance future financial flows of firms.

Based on these observations, we next describe the key theoretical frameworks that can be used to investigate the shareholder wealth of firms, along with an overview of some of the research that has already been conducted on this topic in POM and Marketing.

4.1 Theoretical Frameworks for Research on Shareholder Wealth

To evaluate how POM-marketing influences shareholder wealth in a complementary fashion, multiple theories can be called upon to develop a grounded view. However, one theory that has proven highly relevant and has been increasingly utilized by scholars is the resource-based view (RBV) of the firm (e.g., Barney 1991). According to RBV, competitive advantage resides in firm resources that have four characteristics—such resources are 1) valuable, 2) inimitable, 3) non-substitutable, and 4) heterogeneously distributed across firms. RBV thus suggests that if POM and Marketing allow firms to create resources with these four key characteristics, they will help firms derive higher prospective cash flows that enhance shareholder wealth.

While RBV stresses resource possession, the dynamic capabilities theory has recently underscored the point that firms also need to help unlock the value residing in their resources (e.g., Morgan et al. 2009). According to this theory, capabilities involve complex patterns of skills and knowledge that are embedded in firm routines and are difficult for competitors to acquire or duplicate (Eisenhardt and Martin 2000; Teece et al. 1997). Dynamic capabilities allow firms to acquire, integrate, and deploy valuable resources better than competition and lead to enduring competitive advantage (Peng et al. 2008) associated with greater financial flows that impact shareholder wealth (Shankar 2012), and also help firms achieve success in new product development and introductions. The importance of dynamic capabilities is becoming more relevant as the rate
of change in technological advancements increase, and institutional concerns such as product safety (Beske et al. 2014), environmental issues (Mathiyazhagan et al. 2014), and humanitarian operations assert strong pressures in markets.

Similarly, supply chain synergies can create intelligence, which allows for enhanced market responsiveness (Schoenherr and Swink 2015). For example, Bang and Olufsen (B&O) was able to develop a new mobile phone by tapping into their supplier’s (Samsung) technology base via close collaboration. Such close collaborations lead to early involvement of suppliers in new product development, which is fundamental in leveraging supplier capabilities and increasing supply chain responsiveness. Such a shift leads to the creation of a dynamic capability that stems from downstream customer focus (Roh and Min 2014). Examples of tapping into supply chain synergies provide support for the notion that proper alignment of POM and Marketing capabilities can serve as a competitive advantage that can enhance firm performance (Moorman and Slotegraaf 1999; Peng et al. 2008).

Marketing scholars have started to build on the dynamic capabilities theory to highlight the value of marketing capabilities. In this vein, leveraging stochastic frontier analysis in order to capture capabilities using objective data (Dutta et al. 1999; Narasimhan et al. 2006), studies have explored the complementary role of marketing capability in elevating shareholder wealth from key resources. For instance, in the context of mergers and acquisitions, marketing capability of firms has been shown to enhance the value residing in brands (Bahadir et al. 2008), and affect the valuation of brand acquisitions and disposals by firms (Wiles et al. 2012). For example, Unilever announced their brand portfolio slimming strategy in 2000, and eliminated hundreds of brands including Elizabeth Arden and Golden Griddle Syrup. This narrower focus allowed Unilever to streamline their procurement process, increase cost efficiency, and eventually contribute to shareholder wealth. Similarly, the key role played by marketing capability in elevating shareholder value from advertising resources (Xiong and Bharadwaj 2013) and from Corporate Social Responsibility (CSR) has been established (Mishra and Modi 2016).

Still, much of the extant research in these two fields has developed in isolation of each other, resulting in limited understanding of how POM and Marketing resources and capabilities financially complement each other. The finance literature provides useful metrics and empirical frameworks to capture shareholder wealth, and future researchers can draw upon these and to make further empirical investigations on this important topic (see Srinivasan and Hanssens (2009) for an excellent summary). Together, RBV and dynamic capabilities theories are key lenses that scholars in POM and marketing can utilize to investigate shareholder wealth, and evaluate the complementarities between POM and Marketing capabilities and resources. We now turn towards highlighting some research topics in this area.

### 4.2 Current Research on Shareholder Wealth in POM and Marketing

Utilizing RBV and dynamic capabilities theory, scholars have underscored the value of POM and Marketing resources and capabilities to firms. Indeed, given the central role of these two business functions in the value chain, they are expected to allow for valuable resources such as brands, innovations, and CSR that will make more customers buy firm offerings and do so with higher certainty (e.g., Mizik and Jacobson 2008; Luo and Bhattacharya 2009; Zhang et al. 2014). POM and Marketing are also responsible for adoption and utilization of enterprise-level systems which allow firms to better anticipate/forecast customer demands while managing production and operations more efficiently to help lower the level and variability of a firm's future cash flows (Hendricks et al. 2007), thereby increasing shareholder wealth. POM and Marketing capabilities
in turn can afford firms the opportunity to convert their resources into valuable outputs more efficiently than competition, leading to gains in firm value (Dutta et al. 1999).

Underscoring the value relevance of POM, scholars have shown how specific supply chain resources add to firm value. For example, in a series of studies Hendricks and Singhal (2001; 1997) show that Total Quality Management (TQM) and quality improvement programs allow for short and long run stock market gains for firms. Similarly, scholars have also validated the link between firm adoption of ERP, SCM, and CRM systems and stock prices to underscore the financial value of these resources (Hendricks et al. 2007), and on industry exchanges between supply chain partners as key resources driving firm value (Mitra and Singhal 2008).

In addition to highlighting the value of resources, POM scholars have also investigated losses associated with supply chain risks to motivate managers to pay more attention towards lowering the probability of upstream disruptions. For instance, supply chain glitches that result in production or shipment delays have been shown to negatively affect stock returns (Hendricks and Singhal 2003). Similarly, excess inventory announcements, which indicate firm’s inability to match supply with demand, have been documented to reduce shareholder wealth (Hendricks and Singhal 2009). Focusing on inventories, another study has shown that although inventory efficiency is good for shareholder wealth, too much efficiency can expose firms to supply chain risks that detract from firm value (Modi and Mishra 2011). Highlighting the virtues and risks of inventory efficiency, a study by Kesavan and Mani (2013) has shown that abnormal inventory growth has an inverted U-shaped relationship with one-year ahead earnings of firms.

Similar to POM, scholars in marketing have also considered the financial implications of marketing resources. For example, studies have established how brands, brand equity, and brand strategies affect stock returns and risks (e.g., Mizik and Jacobson 2008; Bharadwaj et al. 2011; Krasnikov et al. 2009; Rao et al. 2004). In addition, researchers have also highlighted the value relevance of other customer-based resources such as customer satisfaction (e.g., Fornell et al. 2006; Mittal et al. 2005), customer-life time value, and customer equity (e.g., Gupta et al. 2004). The shareholder implications of marketing mix resources, including advertising (McAlist et al. 2007), distribution (e.g., Geyskens et al. 2002), and products (e.g., Sorescu et al. 2007) have been established as well.

5 Future POM and Marketing Interface Research Avenues

The discussion thus far has created the Triple C framework for better understanding and placing extant research in the POM-Marketing interface in its proper perspective. Even though we have alluded to potential research opportunities throughout this chapter, we focus next on a few specific avenues that seem relevant and fruitful, and which are summarized in Table 20.1.

5.1 Deepening Consumer Knowledge and Channel Dynamics Across Channels

Future research opportunities on the topic of multi-channel retailing and its need for integrated POM and Marketing are fruitful and diverse. Product returns, for example, place a strain on the POM side of retail firm management, necessitating a closer examination of how returns repositioned as open-box products are perceived by consumers. Increased multi-channel retail activity will require evaluating which products on what retail channel could benefit most from money-back-guarantees. These insights can only be gathered through considering the phenomenon from both a POM and Marketing perspective.

Hsiao and Chen’s (2014) findings that different consumer segments provide varying levels of value to manufacturers and retailers could promote research on how upstream supply chains
can use quantitative marketing techniques to determine ideal consumer profiles for new Internet channel efforts. Allowing consumers to choose their own channel to operate in has been shown to be detrimental in certain circumstances (Perdikaki et al. 2012), implying that new research must not only identify which segments are the most profitable for firms to target, but which product lines within each firm should be highlighted for those consumers.

On a macro level, Brynjolfsson et al. (2009) demonstrated that multi-channel firms must analyze local markets, providing an opportunity for retailers to vary targeting efforts based on the consumer geographic and channel profiles. Future research can explore if products that are considered niche in some markets (and typically appear online only) may in fact benefit from a presence in brick-and-mortar stores in specific locations, stimulating “online-only” niche-product-consumers to visit stores in person.

Relatedly, it may be worthwhile to more closely explore the beneficial impact of advance selling under different retailer and consumer-specific scenarios. Prasad et al. (2011) noted that discounts provided to stimulate advance selling must be adjusted downward if return policies prove too liberal, providing consumers with easy returns. Given the profoundly negative effects that product stock outs have on brick-and-mortar retailers, analyzing consumer perceptions of full and partial refunds may yield insights as to how marketers can decrease trial risk for consumers while lessening back-end operations pressure on inventory management. If advance buying proves appealing to consumers and is coupled with an excessively loose return policy, product stock outs may discourage future store traffic.

**Table 20.1** POM and Marketing Interface Research Topics

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<th>Process (Coordination)</th>
<th>Output (Consequence)</th>
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<td>Coordination &amp; Integration</td>
<td>Shareholder Value</td>
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<td>• Consumer Characteristics and Segmentation</td>
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<td>• Channel Conflict and Supplier Encroachment</td>
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<td>• More Dynamic Capabilities</td>
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<td>• Co-op Advertising</td>
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Finally, there is a need for research in understanding competitive and cooperative behaviors between upstream suppliers and downstream retailers. Recently, a phenomenon called supplier encroachment has garnered the attention of scholars. Many upstream manufacturers have invested in establishing direct channels such as online stores, catalog sales, and factory outlets during the past couple of decades. Supplier encroachment refers to the market infiltration behavior that can increase the competition between the supplier and their resellers. Prior studies have shown that supplier encroachment allows the supplier to control the selling price in the retail market, and reduce their wholesale price. As a consequence, the problem of double marginalization, which causes suboptimal joint profits due to mark-up in wholesale price, can be mitigated, and benefit both the supplier and retailer (Arya et al. 2007). More recent studies show that depending on how the information and knowledge of the selling process is distributed between the buyer and supplier, supplier encroachment can lead to lose-lose or lose-win outcomes (Li et al. 2014). Still our understanding in this matter is incomplete, and there is a need for empirical research to address the consequences of such channel conflicts and encroachment behaviors. On the other hand, there is also potential for cooperative behaviors that can take place, an example being cooperative (co-op) advertising. Co-op advertising is a commonly adopted practice where the manufacturer pays a portion of the retailer’s advertising costs. Many companies such as IBM, Apple, and Intel are known to use this strategy. Prior studies mostly analyze this arrangement under the rationality assumption, and conclude that co-op advertising does not lead to channel coordination (Bergen and John 1997). However, recent developments show that the manufacturer can coordinate the channel via co-op advertising schemes when firms care about the difference between each member’s profits, and are willing to sacrifice their own profits in order to achieve fair payoffs (Yang et al. 2013). This can be another fruitful area of research, which requires more evidence based on empirical approaches.

5.2 Designing Better Socially Responsible and Environmentally Sustainable Processes in POM and Marketing

Should managers care for philanthropy? Some studies based on risk management theory posit that corporate philanthropy can generate positive moral capital among stakeholders that can also provide shareholders with insurance-like protection for a firm’s relationship based intangible assets, and that this protection contributes to shareholder wealth (Godfrey 2005). As a result, CSR is increasingly becoming an important component of corporate strategy, with firms reporting their socially responsible efforts publicly. Moreover, the concept of triple bottom line (i.e., economic, environmental, and social) is gaining prevalence among managers and key stakeholders (Kleindorfer et al. 2005). Within CSR, POM scholars have looked at environmental issues (e.g., Angell and Klasse 1999; Corbett and Klasse 2006; Jacobs et al. 2010), the relationship between lean and green (e.g., Rothenberg et al. 2001), and the impact of sustainability on key firm stakeholders (Sarkis et al. 2010). In marketing, the focus has mostly been on the effect of CSR on consumers (e.g., Brown and Dacin 1997; Bhattacharya and Sen 2003; Chernev and Blair 2015), with some work evaluating how CSR affects shareholder wealth (e.g., Luo and Bhattacharya 2009; Mishra and Modi 2016).

Despite these rich insights, there remains significant potential for understanding complementarity between POM and Marketing in fostering CSR. For instance, marketing frameworks on how CSR influences consumers can be combined with POM insights to evaluate the effect of CSR on other firm stakeholders, particularly channel partners. Channel members are needed for facilitating the socially responsible agenda of firms, and articulating their role in the CSR-financial value relationship can be very useful for practice. Research can also look at if lean aligns with green, and how these two concepts relate to elevating shareholder wealth.
An avenue of CSR research that requires attention from POM-marketing researchers is to identify strategies that effectively reach the base of the pyramid (BOP) (Karmani 2007; Prahalad 2005). As growth opportunities are limited in developed markets and CSR is a paramount issue, firms that successfully tap into this highly potent customer base in BOP markets will make significant contributions to shareholder wealth. Future research should address how MNCs can evolve in BOP markets over time by utilizing their POM and Marketing competencies.

5.3 Fostering Complementarity Between POM and Marketing Capabilities

Building on branding research in marketing and research on lean in POM, it will be worthwhile to investigate the chain-of-effects linking lean and brands with shareholder wealth. The answers here will be non-trivial, and likely depend on a host of contingency factors, which remain to be explored. As an example, it is likely that the effect of lean would be contingent on how effectively a lean focus is communicated to key stakeholders, underscoring the role of advertising as a complementary resource.

A second path of inquiry relating lean and brands can focus on the buffering role of brand equity in attenuating the risks arising from inventory efficiency. As discussed, POM scholars have cautioned against an excessive focus on lean, as this may expose firms to unexpected negative events and shocks (Hendricks and Singhal 2003). Marketing researchers have highlighted that brand equity provides a cushion to firms against negative events (e.g., Bharadwaj et al. 2011). A compelling follow-up question then is: Are high brand equity firms also protected from external supply chain shocks as they maintain a lean focus, and if so how?

In addition to lean and brands, future studies can also focus on understanding how different types of SCM and CRM systems influence marketing resources to elevate shareholder wealth. One potential consequence of effective CRM implementation could be an increase in customer satisfaction, as this can allow firms to identify high value customers and better understand their needs to form more enduring customer relationships. SCM systems can similarly ensure that customer needs are met in a timely and predictable manner. Customer satisfaction is a valuable firm resource that generates shareholder wealth (e.g., Rego et al. 2013).

Finally, extant research has not provided much evidence towards the value potential of key organizational capabilities. Given the complementary role of marketing and POM, it is likely that capabilities of these two functions would positively reinforce each other to enable valuable firm resources. This can result in higher levels of customer satisfaction due to better management of the value chain catering to customer needs and wants. Similarly, these two capabilities can help attenuate the negative effect of external shocks (e.g., supply chain disruptions, product recalls, etc.) on shareholder wealth. Furthermore, the two capabilities can have a positive role in facilitating CSR and its effect on future firm cash flows. Uncovering these relationships can underscore the importance of POM and Marketing managers working more closely with each other in building their core competencies, and ensuring sustainable competitive advantage.

6 Implications for Practitioners

By tying research streams from multiple disciplines, practitioners can gain a clearer understanding of root causes that affect shareholder wealth. Also, the constant strive for relevance in research can provide a more detailed prescription on how process coordination can be achieved based on technological shifts or change in market demand.

We proposed shareholder wealth as one measure that can partly capture the value of marketing and POM dynamic capabilities residing within the firm. This long term forward-looking
performance measure can guide managers' attention towards building sustainable competitive advantages rather than pursuing immediate consequences. The 3C framework (Context, Coordination, and Consequence) presented in this chapter also presents several relevant insights for practitioners as listed below.

- It is always important to pay attention to the market and customers, as they are key determinants of how the context is formed and dynamics are embedded.
- Process and coordination efforts should also evolve constantly because the context is dynamic in nature. Combined with excellence in market sensing and adaptation, well-aligned processes complement the formulation of dynamic capabilities.
- Often firms focus on managing the consequences. However, consequences are only products of the input context and the coordination of processes.

7 Conclusion and Future Research Directions

Research in the area of Production and Operations Management (POM), set in various contexts ranging from outsourcing decisions, service failures, firm innovation, process improvement, and supply chain integration, has underscored the importance of relating operations to financial performance and firm value. At the same time, research in the interdisciplinary areas of POM and Marketing has highlighted the joint effect of operations and marketing capabilities on customer and firm value.

Drawing from recent findings in the literature, we have developed and presented in this chapter a 3C (Context, Coordination, and Consequence) framework that connects the demand side fluctuations with financial outcomes. Relevant POM research within this framework encompasses micro-level process integrations with data-rich forecasting, joint capability planning, and reverse logistics within the context of multichannel retailing. Using this framework, we have shown how POM and Marketing interface research can help address radical shifts in the business landscape such as the emergence of online retail channels, identification and management of complex consumer segments, volatile inventories, and increased product returns. Within this context, multi-channel retailing with a mix of online and offline, direct and indirect sales, forward and reverse, drastically impacts a firm's daily decisions. Due to an increase in complexity and volatility, firms should put more effort in coordination, both internally and externally. Measuring and managing the performance of such settings is truly a difficult task, and we propose a focus on shareholder value as an alternative that also considers the institutional pressures. Firms that successfully manage this complexity will be able to achieve competitive advantage, while firms that fail to do so will experience supply and demand mismatches and disruptions, which, in the end, will adversely impact the shareholder value of the firm.

We hope future research will adopt the multidisciplinary perspectives and theoretical lenses highlighted in this chapter to yield findings that advance both theory and practice, and provide a deeper understanding of how the POM-Marketing interface can help firms expand their strategic options. Research opportunities at the interface of these disciplines should be focused on aligning complex market segments with supply capabilities, resolving channel conflicts through cooperation, coordinating corporate social responsibility (CSR) and sustainability initiatives, and creating dynamic POM and Marketing capabilities.

References and Bibliography


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