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Achieving Revenue Gains from Distributed Logistics

THE VALUE OF INVENTORY PROXIMITY TO CUSTOMERS

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Contents

INTRODUCTION

Ever since its inception, supply chain management has largely been focused on cost and expense management, seeking methods to reduce the costs of logistics, transportation, warehousing, distribution, procurement, manufacturing, and all the other business processes that make up supply chains. Further, in recent years the costs associated with inventories (including working capital), fixed capital (facilities), and supply chain technologies have been measured and targeted for reductions. Since these processes and supporting investments were established as necessary functions of the enterprise, their operations were viewed as important for cost management.

Unfortunately, not enough is known about the correlation between supply chain strategies and revenue enhancement. Do efficient or effective supply chains really contribute to more sales and revenue gains?

In the past few years, fueled by the growing significance of eCommerce and the highly competitive nature of products, supply chain services have begun to be more examined as potential revenue growth weapons. The value of the customer experience, the impacts of the Amazon Effect, and the competitive advantages of being endorsed and invested in by industries and private equity financing, have coincided to raise the questions and the opportunities for leveraging supply chains for revenue growth.

OBJECTIVES

Two key objectives will be addressed throughout this paper:

1. Are there established connections between the proximity of inventories to sales? Can revenue gains be attributed to locating inventories closer to customers who buy or replenish through online orders?

   This is a long-standing question amongst supply chain and logistics executives. There exist few examples of measuring the attribution of inventory placement to increased sales. While, some have done “before and after” assessments, the long lead times between deciding to implement a network design, to build it or outsource it, and then to begin to fulfill orders, allows the occurrence of many other merchandising decisions about promotions including discounts, product changes, seasonality, and customer changes that affect sales.

As an alternative to reporting on confirmed experiences, we address the question of inventory location by posing and assessing six common sense expectations in the section on, The Rapidly Evolving Omnichannel World. We have cited certain research surveys and testimonies to describe the latest thinking.

2. Does this change the criteria for deciding on supply chains for eCommerce? If so, how?

   It is clearly accepted that the extraordinary growth of eCommerce has, in a relatively brief period, changed the retail landscape challenging supply chains of all industries. In the section, The Current State of Supply Chain Growth Strategies, we present selected surveys and data findings that emphasize the critical impacts on supply chain thinking in terms of revenue enhancement.

   Following the assessments, The Rapidly Evolving Omnichannel World presents how leaders are changing their value statements and business cases. The new value propositions include statements of gaining customer loyalty and subsequent revenue gains, not simply those of total cost containment.

WHY eCOMMERCE IS CHANGING SUPPLY CHAIN VALUE CREATION AND STRATEGIES

It is impossible to describe the changing supply chain requirements and opportunities without mentioning the aptly-named Amazon Effect. Amazon has already impacted nearly all companies that are involved in any type of eCommerce. Amazon's rapid growth and expansion has raised customer expectations and created serious challenges for sellers. Those that select Fulfillment by Amazon are experiencing increased costs of storage and tighter inventory regulations.

There are three major impacts that this paper is addressing.

1. It is commonly agreed that inventory planning and management of eCommerce is different and is a major challenge for most companies.

   Managing inventory has become more complicated with issues connected to omnichannel fulfillment, seasonality, and needed in-stock availability for dynamic buying behaviors. Most companies have established policies and processes that enable replenishments, either from their distribution centers (DC), to retail DC, to wholesaler DC, or to stores. Product forecasts have been developed based on retail sales. Therefore, product replenishment shipment sizes have been executed by pallets, cartons, and even container loads.

2. The rapid growth of eCommerce is estimated at almost 14% of all retail in 2017, is expected to grow to 17% or more in 2018, and as high as 70% by 2025. The percent of total retail sales by eCommerce is even more for certain sellers. This has highlighted the issues of providing customer satisfaction with omnichannel fulfillment and distribution. This is true no matter what sales channel is considered B2B, B2C, or C2B (returns). The expanding variety of sales channels including stores, eCommerce, catalog, direct-selling, or others, is leading companies to realize that traditional order fulfillment and distribution will no longer work.

   Supply chains need to be realigned to accommodate smaller more frequent orders and rapid turnaround.

Figure 1: Global Supply Chain

3. This challenging inventory management issue is affecting profitability. Surveys are revealing retailers are struggling with not only performance problems but also operating margin pressures. For example, from 2013 through 2017 the gross profit margin for department stores retailers declined 150 basis points. Apparel stores have dropped a staggering 430 basis points. This means that, for each $100M in sales, department stores' gross profit is $1.5M lower and apparel $4.3M lower. As the operational costs increase, supply chain and eCommerce leaders are facing senior

management demands for improved value statements for investments or expenses that focus on cost reduction. Both the costs of fulfillment and shipping are under heavy scrutiny. If a company chooses to strive for 100% in-stock and faster deliveries, what does that mean for costs?

A recent report by Armstrong & Associates, eCommerce Logistics in the U.S., estimates the total costs of logistics for enabling eCommerce reached $117.2B in 2017 and is increasing daily as online orders expand. These costs are borne by sellers, who pass much of these costs onto their customers.

Furthermore, surveys reveal that internet sellers are losing revenue due to cross-channel commerce challenges. Information technologies, knowledge gaps, and policies are all constraining the value of cross-channel capabilities.

Recent surveys also confirm that the eCommerce development curve is not ending soon. Most companies report organic growth in volumes. Adding sales channels provides more buyer opportunities. This organic growth intensifies the cost base. Network realignment and the corresponding investments that this entails cannot be justified when only costs are addressed.

Furthermore, there is growing consensus that buying online and via mobile will dominate the buying and receiving experience due to convenience and immediate gratification.

Clearly, supply chain and eCommerce leaders need new value statements for the requirements made by customers and more rapid turnarounds, delivery times being the primary driver.

THE CURRENT STATE OF SUPPLY CHAIN GROWTH STRATEGIES

As mentioned earlier, all industries have evolved their supply chains based largely on cost minimization. Network analysis and design models, transportation cost reduction, and most all other supply chain methods, have been developed and used to better identify operating costs and suggest strategies and tactics to reduce costs. As companies expand and major retailers open more brick and mortar stores, the sales forecasting process is geared toward supplying demand with larger-scale shipments and replenishments. Benchmarking and other comparisons and key performance indicators (KPI's) were developed largely on cost metrics by supply chain process, by customer, by product, and by detailed activity-based cost drivers.

As eCommerce expanded certain companies and leaders have questioned whether supply chains could be responsible for revenue generation. A survey by Tompkins International in 2017 yielded interesting results:

- More than 50% of the companies surveyed stated that top-line revenue growth was important to their supply chain management.
- Over 60% reported that they included targets for revenue growth in their supply chain strategies and plans.
- Most of these companies stated this was done through sales and operations planning meetings and budget planning meetings.
- Most commented that customer service was their driver of potential sales increases, time to market, short cycle times, high service levels, and product availability were the metrics most cited.
- These companies also reported that their KPI's for revenue contributions from supply chains include on-time delivery, total customer order cycle time, inventory turns, and in-stock position, amongst others.

Figure 2 provided by FinListics Solutions, shows the relative performance for some of these revenue metrics using median and top performers for retail. In the areas of on-time deliveries and in-stock position, median performers are 97% – 98% effective, suggesting that further improvements in these areas would likely not provide additional revenue gains. Customer order cycle time on the other hand is less than 50% effective. Pick-to-delivery cycle time is less than 30% effective, providing insight into the large variance of customer order cycle time. It takes the median company a little over 1.5 days longer to deliver orders once they are picked. Improvements in pick-to-delivery should be a focus area given customers' increased demands for shorter delivery times.

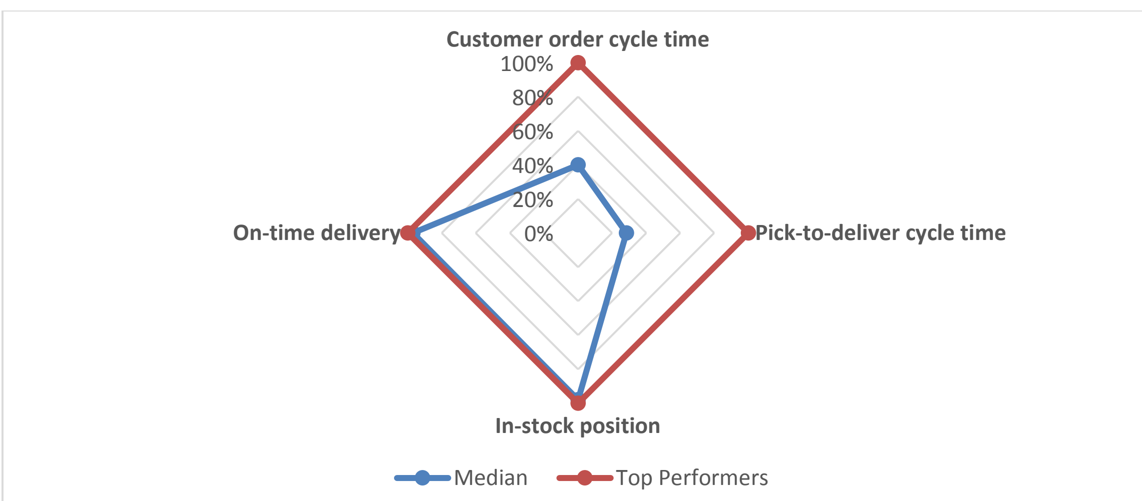

Figure 2: Relative Performance for Revenue Logistics Operational KPI

- These companies also stated that their challenges in attaining revenue growth came primarily from heavy competition, weak reporting systems, sales problems, and difficulties in attribution.

These findings note that 60% of the supply chain managers surveyed are interested in revenue gains but are struggling with measurements, attribution, and the value of customer service.

A recent survey reported by Accenture revealed that most supply chain leaders continue to see their role as support instead of growth, MH&L, May 18, 2018. Many are not leveraging their executive counterparts to help realign their supply chain to transform them into engines of new growth models. Only 53% of executives surveyed even viewed their supply chain as a growth enabler. In these companies supply chains are not seen as drivers of differentiation and aggressive growth. Supply chain leaders blame unclear business strategies, gaps in talent, and legacy computer systems for these limitations.

Attention is currently being given to what some industry leaders refer to as "The New Retail". The New Retail is the complete integration of online, offline, logistics, and technology into a single value chain that places customer centricity and convenience above all else. The New Retail incorporates data science, logistics excellence, smart stores, and experiential retail-tainment for a unichannel experience.

The New Retail requires retailers, wholesalers, and brands to adapt to significant changes, to take calculated risks to differentiate, and to realize the seriousness of competition from Amazon and other internet retailers. What are the changes? Below are a few:

> "Pure eCommerce is reduced to a traditional business, replaced by "The New Retail" – the integration of offline, online, logistics and data across a single value chain."
>
> **-Jack Ma**
> *Chairman, Alibaba*

- Customers are now seeking connection, personalization, and efficiency in the entire buying, shipping, receiving, and returning process.
- Customers demand an experience and comprehensive services. Brands are especially challenged to gain and retain loyalty.
- The New Retail goes way beyond interesting shopping formats. Alibaba is leading exciting changes in China that re-define the customer experience, starting with shopping and not ending with delivery.
- Customers are placing more value on the entire shipment and delivery process because most products are available on numerous websites, stores, marketplaces, and other channels.

The New Retail also involves the increasing use of data analytics to discover and track customer buying behaviors. Demand forecasting continues to be extremely challenging. The impacts of service levels continue to be misunderstood. Customers now expect to receive greater service levels without bearing the additional costs. Free shipping or returns are only "free" to the customer. Return rates of over 30% are the result of return policies that need to be modified.

Figure 3: The New Retail

The New Retail, if not well thought out, will increase costs. Companies must think more about increasing profitable growth.

THE RAPIDLY EVOLVING OMNICHANNEL WORLD

The New Retail, Amazon Effect, and the rapid evolution of customer buying power, have converged in recent years to drive all companies toward re-assessing their operational strategies and capabilities; realizing that the customer experience is the primary driving force for change. Shifts in customer opinions and behaviors are primarily responsible for eCommerce growth.

Walker Sands Communications points out some relevant findings on this topic in its, Future of Retail survey:

- The speed of supply chains matter to frequent online shoppers.
- One-day shipping, easier online returns, easier in-store returns, and same-day shipping are increasing as buyer preferences.

■ The preference for online vs. in-store shopping continues to broaden to more product categories, as long as desired products are available for rapid turnaround.

These findings confirm eCommerce sales growth is correlated with speed, availability, and service quality. The six significant expectations described below emanate from this belief. In each area, we cite surveys, analyses, and experiences to reinforce these beliefs.

Faster turnaround times are enabled by locating inventories closer to customers.

The three key sources of increased sales from distributed logistics are:

- Lowering abandoned carts
- Reducing returns
- Enhancing customer experience

Figure 4 shows the percentage increase in sales from a 10% improvement in these areas. The total benefit is 8.2%. We explore each of these areas of benefits in this paper.

Sales Improvement from Distributed Logistics

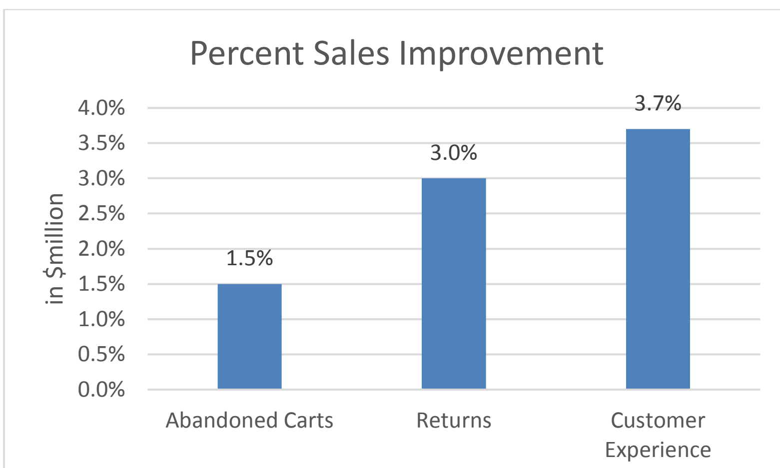

Figure 4: Source FinListics Solutions

1. Faster delivery of online orders is correlated with more sales.

   A survey by Dotcom Distribution reports 87% of online shoppers state that the amount of time it takes to receive an eCommerce order influences their decision to shop with the retailer or brand again. Fast delivery was the highest rated factor, ranking almost twice as high as an overall improved product. These factors rise even more when the item purchased is considered a luxury item or is required by a deadline connected with a special event, such as a birthday.

Research shows that 15% – 20% of online shoppers abandon their cart if delivery times are too long. It is not likely that shortening delivery times to meet shoppers' expectations would result in capturing all of these lost revenues. However, we can assume it results in a 10% reduction, adding $1.5M – $2.0M to the top line for every $100M in revenue.

2. Over the past few years, overall customer turnaround times have decreased from 5.5 days to 4.5 days and are rapidly trending lower. This year is showing that two-day deliveries are almost required to compete.

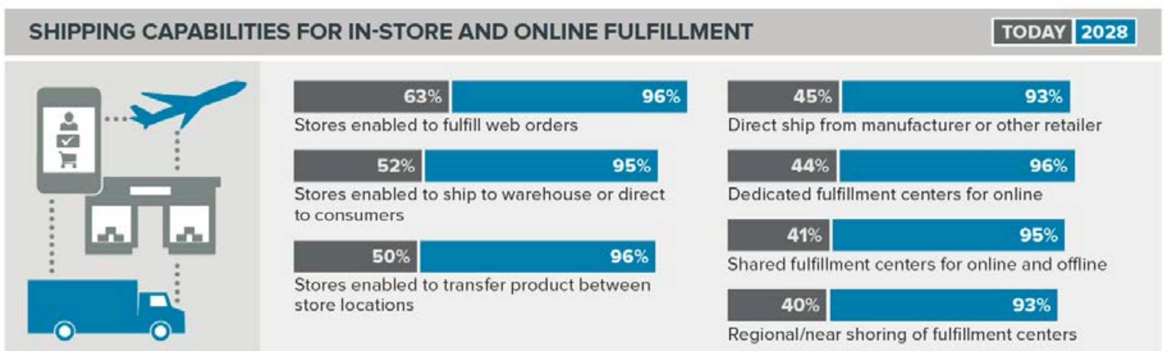

Figure 5: Zebra Technologies

The recent Future of Fulfillment Vision Study by Zebra Technologies confirms this trend. The several options available to customers buy online pick-up in store (BOPIS), ship to home, return to store, or pick-up at a 3rd party location, are all focused on reducing the lead time from order to delivery/pick-up. Future expectations are being stated as same-day and being measured in hours. Emerging shipping options often mention dedicated people, couriers, crowdsourcing, autonomous vehicles, and drones. Clearly, the average turnaround times for all eCommerce is downward and decreasing rapidly.

3. Faster delivery of online orders reduces product returns, translating into less costs and less lost revenue. On average 30% of online purchases are returned. In 2017 this amounted to over $135B in returns. Returns occur for several reasons items do not match online description, wrong items are shipped, items are damaged, and change-of-mind.

A buyer may have a change-of-mind because during the time the item is being fulfilled and shipped they find the same item at a lower price, find a more appealing item, or simply had buyer's remorse. Faster delivery times mitigate the impact of returns due to a buyer change-of-mind or another reason.

There is a lack of empirical research on the value of delivery times and returns. For illustrative purposes, suppose that faster delivery times lower returns by 10% adding $3M to revenues.

Lower return rates not only boost revenues but also reduce costs. A report by UPS shows that the cost of processing returns is 20% – 65% of an item's cost of goods sold. The percentage cost of goods sold widely varies by merchandise category and ranges from 50% – 70%. Using the mid-point of 60% – 30% returns, each 10% reduction in returns saves $1.8M in processing costs, which drops to the bottom line.

4. As brick and mortar stores continue to decrease customers have fewer options to BOPIS. Retailers announced over 6,700 store closures in 2017.

   Between 30% – 50% of online orders are picked up in stores. One of the top reasons for BOPIS is speed. Fifty percent of customers picking up in stores say they will likely buy other items while in the store. Lowe's for example, reported that 60% of online orders are picked up in their stores and 40% of those shoppers buy additional items while there. Macy's and Kohl's reported that these additional items add an average of 25% to the receipt.

   The increasing number of store closures re-enforces the need for retailers to provide faster delivery times. Retailers closing stores must be able to at least match the speed of BOPIS. A retailer with $100M in revenue and a conservative 30% BOPIS loses $3M in revenue for a 10% reduction in BOPIS.

Figure 6: BOPIS

5. The customer experience is directly related to customer loyalty, repeated sales, and gaining new customers. Faster turnaround times and on-time deliveries are highly valued.

   The Dotcom Distribution survey also reported that the entire shipment and delivery process impacts customer loyalty. Customers have several options for buying most products, therefore perfecting eCommerce fulfillment and delivery is vital. A seamless and positive delivery experience is necessary from start to finish in today's highly competitive marketplace.

   Using world-class shipping, delivery, and returns processes, not only improves customer loyalty but potentially increases revenues. Higher customer loyalty leads to lower customer churn and greater cross-sell/up-sell. There is a third revenue potential benefit from new customers. Satisfied customers provide recommendations to others. This is one of the basic ideas behind the net promoter score.

   In retail customer churn, cross-sell/up-sell, and new customers make up an average 37% of revenues. This means that every 10% improvement in these three areas adds $3.7M in annual top-line revenue.

   This fact is the bottom line value on which to achieve sales growth. Amazon currently operates out of 182 facilities, with about 50% of these being fulfillment centers (FC).

   Other companies are making significant investments to shorten delivery times. For example, Home Depot is investing $1.2B over the next five years and will add 170 distribution facilities across the U.S., enabling them to reach 90% of the U.S. population in one-day or less. The new sites will include dozens of direct FC for next-day or same-day delivery of commonly ordered products. Further, 100 local hubs where bulky items like patio furniture and appliances will be consolidated for direct shipment to customers.

   Furthermore, the industrial real estate market is working overtime to keep up with customer demand and the growing impacts of eCommerce. Transwestern has recently reported that the voracious appetite for industrial real estate, where demand for warehouse space in proximity to households is driving capacity well beyond brick and mortar retail. With annual rent growth of over 10% and asking rental rates at $6.27 per sf, it is not surprising that companies are struggling to locate inventories closer to customers.

Amazon is not a seller's only option to execute fast delivery. There are alternatives being introduced for nationwide coverage for two-day delivery and faster. New nationwide fulfillment services are starting up with innovative methods for processing orders and delivering them faster and better, positively impacting sales growth.

HOW THE LEADERS ARE CHANGING THEIR VALUE STATEMENTS AND ROI JUSTIFICATIONS

THE NEW VALUE STATEMENTS

As discussed, there is growing consensus that speed and inventory availability are contributing factors to customers' buying behavior. While there is a lack of proven evidence, the fact that there is a correlation between these key factors and revenue gains is hardly disputed.

With nearly every brand or retailer looking to improve and accelerate their online service offerings, the precise sales and revenue uplift from faster delivery performance can be difficult to pin down. In recent years Tompkins International has worked with a multitude of global brands; who have grown their online sales between 12% and 40% annually through a combination of investments including:

- Improved online brand presence
- Product development
- Fulfillment infrastructure investment
- Website redesign & SEO (Search Engine Optimization)
- Pricing & promotional activities
- Inventory management & availability
- On-time delivery performance
- Mobile applications

Whilst the exact attribution of revenue gain from each element is a subject for internal debate, companies universally agree that without competitive service and delivery options, customers will simply look elsewhere for the same or similar product.

Customers "want what they want, when they want it" and investing in many of the above means little if your supply chain cannot put the product in your customers hands in a timely manner. To underscore this position Home Depot, Target, Walmart, and Amazon all invest in many if not all of the above and ensure their strategies encompass investment in their supply chains to not only promise the delivery but deliver the promise.

SCM Strategic Priorities

Topic	Rank
Enabling omnichannel growth	1
Establishing essential infrastructure	2
Maintaining smooth transportation flows	3
Facilitating inventory access	4

Figure 7: Source Auburn University & Retail Industry Leaders Association

eCommerce leaders are beginning to expand their thinking regarding revenue generation and the value of proximity in locating inventories closer to customers. While costs remain important, the distribution of logistics and stocks may concern those who focus only on costs, the gains in revenue due to this strategy are no longer being ignored.

Figure 8 illustrates a high-level value statement format being used by MonarchFx, an online order fulfillment business.

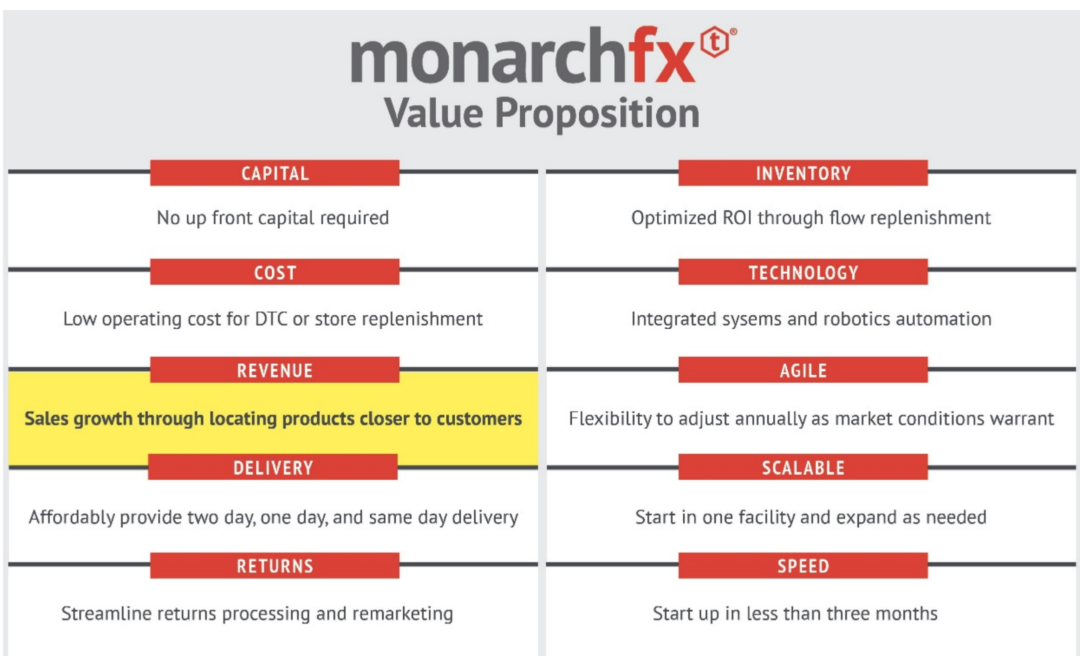

Figure 8: MonarchFx Value Proposition

Even conservative estimates of sales lift will matter to company executives as they consider how to adapt to The New Retail, the Amazon Effect, and changing customer buying behavior.

Today's Return on Investment (ROI) models must reflect the costs to distribute and also the benefits of doing so.

THE NEW ROI JUSTIFICATIONS

In order to incorporate revenue and sales growth anticipated from increasing speed and lowering shipping costs, we have postulated some estimates of sales growth with low and high ranges. We start with 2018 and extrapolate for the years 2019 and 2020, as faster deliveries take further hold on a national scale.

The estimates for 2018 include the Holiday Season and are based on the surveys and analyses included in this paper, as well as our collective knowledge, experience, and professional judgment. We also credit Dr. James A. Tompkins, CEO of Tompkins International and MonarchFx, for his expert advice as a recognized thought leader in eCommerce and fulfillment.

The following figure illustrates our estimated views on sales growth from locating products closer to customers.

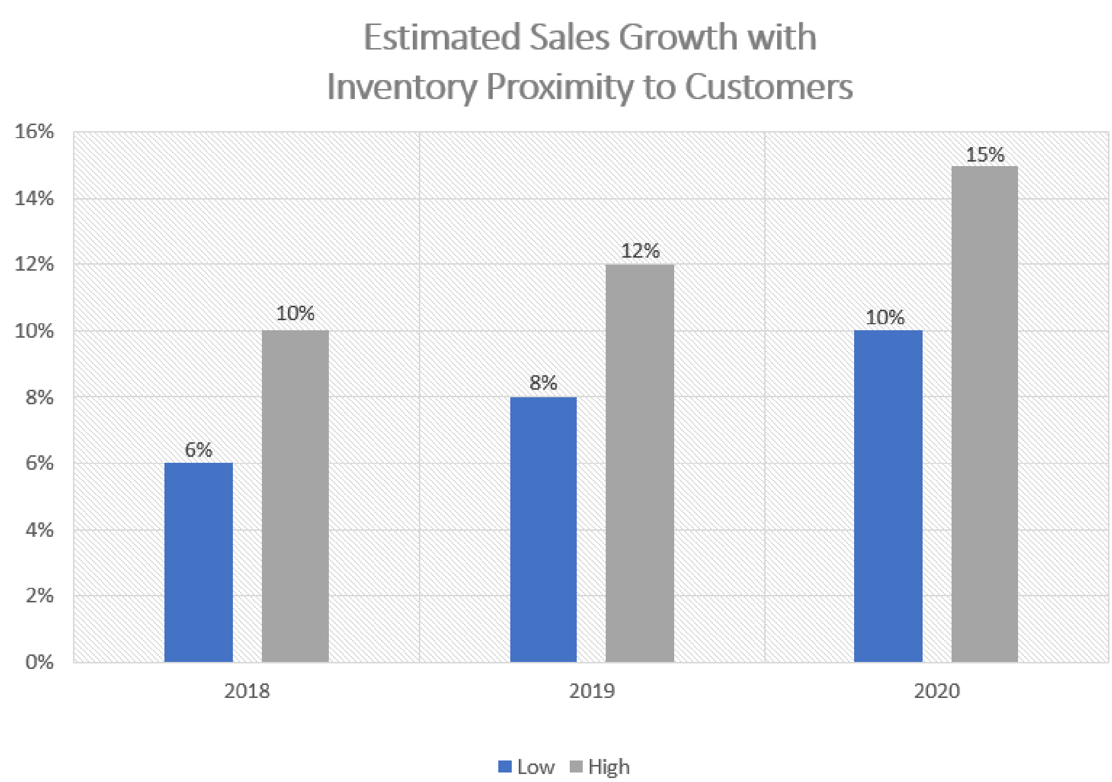

Figure 9: Estimated Sales Growth with Inventory Proximity to Customers

These estimates assume the growth of one-day, next-day, and even selected same-day deliveries, over the three years.

These estimated revenue gains are for overall sales from distributed inventories. Assuming all other buying factors are equal i.e., a company's products are desired by customers.

THE ROADMAPS TO DISTRIBUTED LOGISTICS

Each company will have a different timeline for succeeding in the new eCommerce world. Avoiding the loss of customers, sub-optimized revenue growth, and over-focusing on costs will accelerate disruptions and losses of competitive positions. The pace of change and the expansion of customer alternatives are simply too serious to ignore.

In the past roadmaps could extend for years. Redesigned processes and programs for change management were all viewed as long-term projects. Today, companies must reinvent themselves both constantly and rapidly.

Today's roadmaps address how to best sell and how to best fulfill orders. Including revenue gains from distributing inventories, together with effective inventory allocations, and replenishment efficiency, will change the value proposition.

SUMMARY

This paper has addressed the questions surrounding the value of locating inventories closer to customers and the criteria for deciding on eCommerce supply chain networks. The fact that actual, credible, real world evidence does not exist on "before and after" evaluations only makes the expectations and surveys more important.

Throughout the discussion we have positioned two key questions.

1. Are there established connections between the proximity of inventories to sales?

2. Does this factor change the criteria for deciding on supply chains for eCommerce? If so, how?

We have addressed these questions in the absence of scientific proof of attribution by citing surveys, performing certain analyses, and incorporating knowledgeable judgment and experience. We recognize that common sense is not always common, that supply chain financial and other managers, may well have countering views based on traditional business practices.

eCommerce is substantially different. eCommerce is about the incredible growth of online shopping and ordering. Experts predict eCommerce will eventually peak at over 2/3 of all orders. eCommerce is also about the new thinking and practices that must be implemented around items. These items are not just small, high volumes of orders or not only large, small volumes of replenishments. Companies must get to Omnichannels operating in a unified way, with seamless customer experiences and innovative improvements.

We have also shown that depending on the cost of the product, its category, and the demographics of the customer, significant sales lifts are achieved by faster deliveries, improvements in deliveries, shipping costs, and quality of service. Customers will continue to place high value on speed and cost.

These sales lifts can be justified for value statements and ROI. The lower ranges over the next three years, as we illustrate, are estimated at 6% – 10%. The higher ranges are estimated at 10% – 15%. Depending on product categories these estimates could be conservative.

Supply chain and eCommerce leaders have several challenging decisions to make in the new digital world including the right type of facilities and locations. DCs have been used for decades to store and ship pallet-loads and cartons. FCs are for picking and shipping parcels.

Minimizing total operational costs are an important objective when deciding on these questions. The introduction of revenue gains to the value statement is timely and important. It is time for decision-makers to add expected revenue gains to their business cases for deploying and allocating inventories to compete in the world of The New Retail.

ABOUT THE AUTHORS

Gene Tyndall, President, MonarchFx – Tyndall is a highly respected supply chain consultant, industry veteran, and thought leader. Prior to joining MonarchFx he was Executive Vice President with Tompkins International. Tyndall has highly relevant experience as he has been President of Ryder Global Supply Chain Solutions, Global Leader and Senior Partner of the Ernst & Young Supply Chain Management Consulting Practice, and a United States Navy Officer. He has over 30 years experience with over a hundred multinational corporations and domestic companies, in strategy development, new process design, numerous technologies, and leading practices. Many of the best practices in place today across all industries are due to his thought leadership and design.

Dr. Stephen Timme, President, FinListics Solutions – Timme is the founder of FinListics, which for over 25 years has helped sales professionals show the financial benefits of their solutions, engage higher in a client's organization, expand deal size, and shorten sales cycles. Timme is recognized as an expert in connecting improved supply chain management practices to improved financial performance. He is also an adjunct professor in the Georgia Institute of Technology's Executive Masters in International Logistics and Supply Chain Strategy program, a former finance professor at Emory University, and Georgia State University.

Alex Baker, Vice President & General Manager, MonarchFx – Baker is a highly accomplished Senior Supply Chain Executive providing strategic vision and leadership to accelerate growth, maximize profitability, optimize inventory leverage, and strengthen the overall performance of the supply chain. Baker specializes in retail supply chain strategy and omnichannel distribution operations. His career to date has been exclusively within Retail, Department Stores and Brands, driving increased revenue and profitability through the design and execution of agile omnichannel Supply Chain strategies with a particular focus on eCommerce growth platforms. He has had international multi-site responsibility over four million sq. ft. of automated facilities supporting over $6B in revenue. Before joining MonarchFx Baker worked for Ralph Lauren Corporation in different capacities including Senior Vice President of Supply Chain Operations, Vice President of Wholesale Operations, and Vice President of Retail Operations. Baker holds a Bachelor of Science in Supply Chain and Logistics from The University of Huddersfield and has also studied at the Massachusetts Institute of Technology and the University of Oxford.