

FINANCIAL PERFORMANCE AND SUPPLY CHAIN MANAGEMENT

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ABSTRACT

This paper examines how supply chain management and financial performance are interrelated. Various initiatives and strategies in inventory management, technology, financing, contracting, and logistics can help organizations achieve financial success through supply chain improvements. Each of these strategies, when implemented successfully, can improve the firm's financial profitability, liquidity, and agility.

Keywords: financial performance, supply chain management

INTRODUCTION

An often overlooked factor that influences financial performance is a firm's supply chain. Christopher & Ryals (1999) define the supply chain as "the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer." (p. 3) Supply chain management strives to achieve the optimal services levels, while minimizing costs throughout the supply chain. (Deshmukh, 2006) These definitions indicate that all levels of the supply chain affect the product or service that is ultimately provided to the customer and therefore, all firms in the supply chain affect each other's financial performance.

Firm financial performance is measured by its internal financial position, as shown in its financial statements. Specific numbers in the financial statements, such as profit and loss, indicate the firm's financial standing. A firm's financial performance can be improved by increasing profitability, liquidity, and productivity. (Johnson & Templar, 2011) In addition, an increase in a firm's agility can improve the firm's financial performance.

A firm's profitability is measured by its revenue less its expenses. Profitability is improved with increased sales or decreased costs. Sales can be increased by increased levels of customization and service. Responsiveness, availability, information transparency and reliability can also improve revenue. (Johnson & Templar, 2011) Expenses that can be evaluated for improvement within the supply chain include order processing costs, transportation costs, material costs, product costs, warehousing, and supply chain-wide inventory and financing costs. (Deshmukh, 2006)

Liquidity, which measures a company's ability to pay its debts, improves with increasing current assets, decreasing current liabilities and improving cash flow. Improving the agility and speed of the supply chain can also improve a firm's financial performance by enabling firms to "acquire, integrate and reconfigure resources and dynamically position themselves competitively." (Vickery, et al., 2010, p. 7028) Vickery, et al., (2010) define agility as "rapid responsiveness to

the needs and wants of customers and potential customers.” (p. 7028) “Agile firms are able to affect more numerous and more complex competitive actions that help them gain competitive advantage” (Vickery, et al., 2010) and therefore improve financial performance over competitors.

To improve these measurements, management generally looks to eliminate or reduce costs in manufacturing, development or other internal business arenas to improve the bottom line. However, there are many factors operating outside the firm which can be integrated into the firm’s strategies to improve its financial performance. The two generic competitive strategies are cost advantage and differentiation. (Johnson & Templar, 2011) Improving a firm’s supply chain will help reduce supplier costs, which can be passed to the customer and move towards achieving cost advantage. Levels of service, agility and responsiveness can differentiate a firm in any industry from its competitors. Both of these competitive strategies can be accomplished by implementing key changes within the physical supply chain.

This paper examines how supply chain management and financial performance are interrelated. Various initiatives and strategies in inventory management, technology, financing, contracting, and logistics can help organizations achieve financial success through supply chain improvements. Benefits of implementing each strategy, as well as factors that must be considered prior to implementation are discussed in details.

Inventory Management

A significant cost many organizations incurs is the cost to maintain and manage inventory. Inventory levels within a firm have a major impact on the firm’s financial performance. Stocking too much inventory increases the firm’s operating costs and ties up cash that could be used elsewhere within the firm, resulting in reduced profitability and liquidity. In addition, excess inventory levels means that firms cannot quickly respond to changing customer demand, meaning the firm is not agile. However, too little inventory may decrease customer sales and satisfaction. Therefore, inventory levels throughout the supply chain must be considered when attempting to improve financial performance.

A firm operating strategy that improves inventory management can help with profitability and financial performance. One solution to improve inventory management within the supply chain is to work with vendors to establish a system of Vendor Managed Inventory (VMI). To implement VMI, the firm provides the sales data to the supplier and the supplier is then responsible for maintaining inventory levels between pre-determined minimum and maximum levels. (Marqués, et al., 2010) VMI can improve a firm’s financial performance by increasing sales, decreasing costs and providing flexibility within the supply chain. A firm’s profitability is increased through VMI because of increased sales, as VMI “enables the creation of new revenue opportunities, efficiencies and customer loyalty.” (Marqués, et al., 2010, p. 547) VMI can increase in customer loyalty through improved in-stock levels.

In addition to increased revenue, implementing VMI through the physical supply chain can improve the firm’s financial position through reduced costs associated with maintaining and managing inventory. Costs associated with maintaining inventory include inventory holding

costs, transportation and administrative costs. Inventory holding costs include costs to finance the inventory, waste and storage costs (Deshmukh, 2006). Since VMI reduces the inventory that the firm maintains, the associated holding costs will be reduced. In addition, the firm's liquidity is also impacted by holding inventory. Cash is required to be tied up in inventory. If excess inventory is maintained, less cash will be available for operating expenses. Therefore, VMI can improve a firm's liquidity through reduced inventory levels.

Another major cost that can be reduced through the implementation of VMI is transportation costs. Transportation costs are related to inventory levels because more frequent deliveries will cost more for transport (Deshmukh, 2006). Therefore, an optimum level of inventory will not only factor in the costs to maintain the inventory, but also the cost to transport the inventory to the firm. Since the supplier can determine how often to replenish stock, they can also determine how much to transport to maximize full truck loads. In addition, they can identify the most efficient routing of delivery trucks, which will also reduce transportation costs (Marqués, et al, 2010). Transportation is one of the major cost considerations of inventory management and VMI can reduce those costs. Hence VMI can have a significant impact on the firm's financial performance.

In addition to the inventory holding costs and transportation costs, there are also some administrative costs that are associated with inventory management. In a traditional inventory planning system, each individual firm in the supply chain must forecast and plan for its own inventory levels. VMI transfers the firm's inventory management responsibility from the firm to the supplier, based on the same sales information which would have been used by the firm to make its purchasing decisions. (Marqués, et al., 2010) The firm's processing costs are reduced because the sales data from the downstream firm is provided directly to the upstream supplier, so the downstream firm no longer must expend labor and other expenses to plan its own inventory levels. Another administrative cost that is reduced is the costs associated with order placement by the downstream firm, such as individual purchase orders, backorders and returns because there is one less level of material requirements planning. (Claassen, et al., 2008) The firm's profitability will be improved with the implementation of VMI because these administrative costs are reduced or eliminated.

Successful implementation of VMI can also improve the firm's agility. Many supply chains experience the bullwhip effect on their safety stock levels. With information sharing under VMI, the bullwhip effect will be lessened and consequently the safety stock will be reduced. In addition to the cost savings and improved liquidity achieved by the reduced safety stock, the firm's agility will also be improved since there are fewer inventories to sell or dispose of if customer's demand changes. Successful VMI implementation occurs when both partners are committed to a long term relationship and accurate, timely, and complete information is provided. The commitment must come from multiple levels of supply chain. This management can result in benefits because it "eliminates delays in information and material flows and removes one source of uncertainty and distortion in supply chain decision-making." (Claassen, et al., 2008, p. 407) The elimination of delays can improve the firm's financial performance through improved agility.

Although there are many potential benefits to implementing VMI, its implementation will not provide the expected benefits if the supplier is too constrained, for example, with minimum and maximum inventory limitations that do not allow for optimal shipment quantities for the supplier. The concept of VMI originated with retailers demanding that vendors take the responsibility for determining replenishment levels. (Claassen, et al., 2008) However, the downstream firm can impose constraints on the supplier firms which may be too confined and ultimately increase the supplier costs. (Bookbinder, et al., 2010) If the relationship is not mutual, the firm may obtain benefits, but it may increase costs to the supplier, which will then be passed on to the firm. In addition, if the information provided to the supplier is not adequate or accurate, the supplier will not be able to obtain the projected efficiencies. Both of these issues will result in decreased financial performance of the firm.

Technology

Supply chain technology continues to advance at a rapid pace. Firms should take advantage of technologies and integrate them into the supply chain to enhance a firm's financial performance. Vickery, et al. (2010) determined that implementing supply chain information technology along with supply chain organizational initiatives does not affect firm performance directly, but does affect performance indirectly through improved agility. The improved tracking ability results in better communication between firms in the supply chain and reduced out of stock problems. These traits are beneficial to firm efficiency, as well as cost reduction.

Two such technologies are Radio Frequency Identification (RFID) and Electronic Data Interchange (EDI). RFID technology enables rapid tracking of inventory without needing to touch the product. EDI allows companies in a physical supply chain to transmit relevant data electronically within and between firms.

RFID originated during World War II, but was not used commercially until the 1980s and did not receive significant interest until Wal-Mart and the U.S. Department of Defense began mandating its use in the mid-2000s. (Reyes, 2011) Although the technology is not new, it is an emerging technology that enables greater visibility to inventory and its location within the supply chain.

Firms communicate about inventory when negotiating purchasing agreements and when the inventory is shipped between firms. However, the status of the inventory at all stages of the supply chain is relevant to the operations of both firms. RFID technology provides inventory information to firms within the supply chain on a real time basis. This information can then easily be integrated within and between firms to improve efficiency and data sharing. (Chang, 2011) The improved efficiency and data sharing can improve the firm's agility. Since the information is real time and flexible as to how much information it can provide, the firm can make decisions rapidly if customer demand changes.

RFID can improve the firm's profitability because of increased sales and a reduction in costs. The information obtained from the RFID tags allows the company to obtain an accurate count of inventory at each stage of the supply chain. This information should allow companies to reduce inventory levels without risking increased out of stock issues, since they know how much

inventory is at each location in the supply chain. A decrease in out-of-stock issues will result in more sales, which improves the company's profitability.

Costs that can be reduced as a result of RFID implementation include labor costs, as well as inventory storage and shrink costs. Labor costs associated with tracking or locating inventory will decrease. Since safety stock levels can be reduced with the increased visibility realized by implementing RFID technology, storage costs for the inventory will be reduced. In addition, inventory shrink issues can be identified on a real time basis. Since the source of the shrink, either theft or inefficiencies, can be identified through RFID, addressing and correcting the issue can occur timely, resulting in reduced costs. Another potential benefit is improved cash flow through increased inventory turnover and improved utilization of assets, as well as improved customer service. (Reyes, 2011) Better cash flow results in improved firm liquidity.

Examples of successful RFID implementation include Wal-Mart and Las Vegas McCarran International Airport (LAS). Wal-Mart was able to achieve cost reductions and improved profits by as much as 10 percent because of its improved inventory accuracy. (Reyes, 2011) It is estimated that using RFID tags to track baggage would save airlines over \$700 million per year. Already, LAS has reduced lost baggage by 40 percent. (Reyes, 2011)

However RFID should be adopted by firms based on their own needs and is not necessarily beneficial for all firms. Firms with higher inventory ratio (measured as inventory to sales) benefit more than those companies which have a low inventory ratio to implement RFID. (Chang, 2011) There are also technical issues that must be addressed and taken into account before implementation. Reyes (2011) indicates that one major challenge with RFID is that the implementation strategy must be established across the supply chain before it is implemented. Some specific issues that should be included in the strategy are security and privacy, whether tags will be applied to individual items or pallets, how tags will be reused or recycled, and how the system will be implemented across an international supply chain. (Reyes, 2011) Each of these issues, if not implemented through an overall organizational strategy, could result in the failure of implementation or increased overall costs to correct the issues subsequent to implementation.

RFID technology facilitates the access to correct and up-to-date data concerning its inventories. A complementary technology is Electronic Data Interchange, which provides sales data between firms in an accurate and timely manner. EDI provides solutions to steps in a supply chain process that are redundant, time consuming and expensive. In a standard accounting system, there are many processes which require multiple paper copies and many hours of labor to perform. For example, in the purchasing function alone, a standard process would include multiple copies of purchase orders, invoices, shipping notices and bills of lading. Each of these documents then have to be passed between personnel within the firm, stored and maintained. In addition, each company has its own format for their respective documents, requiring labor from each firm in the supply chain to change the data provided to their firm's unique format. (Deshmukh, 2006) EDI started in the 1960s when large corporations in the transportation industry began to implement a system where structured data was transmitted electronically between firms. Transmitting the data electronically and in a standard format allowed these companies to share data without any

human intervention. (Deshmukh, 2006) This capability enhances the firm's financial performance through decreased costs, increased sales, increased agility, and improved cash flow.

Although the implementation of EDI can take many years, significant benefits can be seen shortly after implementation. A direct financial benefit from implementing EDI is reduced costs from labor, supplies, postage and inventory. Errors which result from human interaction while trying to transfer data from one firm's format to another will be eliminated, thereby eliminating costs associated with identifying and correcting these errors. EDI allows the company to fill orders faster and more accurately. Improved customer service provides a competitive advantage, potentially resulting in increased sales.

EDI technology can also assist firms in improving their agility. The reduced delays in transferring data between firms allows for the supply chain to be more agile and respond more quickly to changes in the market. Additionally, shared data allows all firms within the supply chain to react as necessary. In addition, firm buyers will be more efficient since they can now handle more accounts. (Deshmukh, 2006) Liquidity will improve with EDI implementation, through improved cash flow. Since the transfer of data is faster and more accurate, delays associated with invoice preparation time and errors decreases. Invoices can then be sent to customers sooner and therefore, payments will be received sooner. (Deshmukh, 2006) Earlier receipt of payments means the firm will have more cash on hand, improving the firm's liquidity.

Although the benefits of implementing an EDI system are significant, before implementation, a firm should evaluate the costs of implementation in relation to the estimated benefits received. The costs of implementation can be considerable, and therefore, EDI may not be the best option for every firm. The upfront costs of EDI include hardware, software, training, trading partner costs and costs to change the existing workforce. Recurring costs include administration of costs, communication costs and, if partners are not EDI capable, possible duplication of procedures. Some firms whose costs would exceed the benefits of implementation should reevaluate whether implementation is a possibility in the future. Technology is always improving and costs go down. For example, the Internet will be able to offer lower cost options for EDI, which should allow smaller firms to do business with larger firms who utilize EDI. (Deshmukh, 2006)

Beyond implementing EDI for sharing purchasing and sales information, firms can implement Financial Electronic Data Interchange (FEDI) technology. FEDI expands the advantages of EDI processes to individual financial transactions. With FEDI, the processing of payments and receivables is handled in the same manner as EDI. Electronic funds transfers between firms are processed using the same formatting rules as FEDI. Information that can be transferred between firms includes remittance advices, payment detail, account analysis, letters of credit and electronic acknowledgements. (Deshmukh, 2006) If a firm implements FEDI, the financial performance of the firm should increase even further due to reduced costs from electronically processing payments. In addition, cash will be received more quickly from firms, improving cash flow, and thus improving liquidity.

However, as with all strategies identified, the implementation of EDI or RFID will not be successful if implemented without adequate planning and integration into the firm's strategies.

Hong et al., (2010) conclude that merely investing in Electronic Communication Technologies without identifying strategic priorities of the supply chain may not result in improved flexibility and quality. Vickery, et al. (2010) discuss how a firm's supply chain information technology must be implemented along with supply chain organizational initiatives and conclude that implementing supply chain information technologies without also implementing supply chain organizational initiatives will not result in improved firm performance.

Financing

Management at every firm must make decisions on how to finance the firm's operations. Financing expenses can have a significant impact on the firm's financial performance. Management generally considers financing of its internal operations as a part of its decisions regarding operating strategy, and larger companies have divisions devoted entirely to making financing decisions which will impact the company as a whole. However, these decisions can, and should, be expanded to include the physical supply chain.

Financing allows the firm to obtain cash to fund its operations until the customer pays for the goods. Most companies obtain a significant portion of their cash through loans and stockholder's equity. The costs associated with financing the loans will have an impact on the profitability of the company, since higher interest rates on loans means that interest expense will be higher. Financing the supply chain can also have an impact on the firm's liquidity. Favorable financing terms for loans can increase the amount of cash the firm has available for operating expenses or for other assets or investments.

If executed well, there are many financial benefits that firms can realize through supply chain financial management. Benefits can include "reduced working-capital investment, faster inventory turns, lower fixed costs, and greater return on assets." (Mathis & Cavinato, 2010) Supply chain financing strategies can improve a firm's profitability through reduced financing costs. Supply chain decisions are often made without the cost of inventory financing considered. However, there are financing costs associated with maintaining inventory. Typically, firms obtain financing through banks or other credit lending institutions. These institutions finance inventory for the firm through loans, but charge interest on these loans because they assume lending and market risks, such as the risk the firm will not be able to sell inventory, and to earn a profit for the use of their funds. An alternative to financing operations through banks is to obtain financing from other firms within the supply chain.

Firms with better financing terms can provide financing to other firm's within the supply chain, reducing the overall cost throughout the supply chain and creating a competitive advantage. A factor that is not often considered during supply chain management is that each firm in the supply chain separately considers the costs of inventory and financing based on the individual firm's needs. Firms within the supply chain can coordinate financing terms to improve the overall supply chain financial performance. For example, suppliers can share the favorable financing terms through such things as quantity discounts, revenue-sharing, wholesale and retail price protections, and capacity reservation contracts. These options help the supplier and retailer coordinate the appropriate inventory levels to maximize profit within the supply chain as a whole (Lee & Rhee, 2010). Not only does the firm's profitability increase with shared financing terms

due to reduced costs, a firm's liquidity will also be in a more favorable position. Since the firm will have less cash tied up in inventory, they will have improved cash flow.

Various types of finance sharing in the supply chain can improve the financial performance of both the supplier and firm. Vendors can provide financing to other firms within the supply chain without formal agreements. One example is through a delay in payment from the firm to the vendor. To do this, vendors allow their customers to accept merchandise and only charge interest after a predetermined amount of time. This practice also allows the customers to sell more goods, while giving the vendor a competitive advantage over other suppliers and, therefore, attracting more of their own customers (Michaelraj & Shahabudeen, 2009). Delays in payment to vendors improves the firm's financial position through improved liquidity, since the company does not have to tie up its cash in inventory and will realize improved cash flow.

Other ways firms can share financing terms through the supply chain include quantity discounts, two-part tariffs (the retailer makes a fixed lump sum payment to the supplier), buyback contracts (the supplier sets a buyback value for unsold units) and revenue sharing contracts (the retailer's lump sum payment is proportional to actual sales). (Lee & Rhee, 2010) Lee & Rhee (2010) examined improved inventory financing costs from the supplier's perspective. They determined that the supply chain is better off with quantity discounts and two-part tariffs provided by trade-credit from the supplier. In addition, if the supplier has adequate internal capital, a buyback contract will improve the supply chain financing.

Another way for vendors to provide financing to other members of the supply chain is through Vendor Managed Inventory. With VMI, the supplier determines the retailer's inventory level in exchange for supplying material on credit. This credit allows the supplier to optimize the inventory levels it provides. (Michaelraj & Shahabudeen, 2009) The cost savings achieved through this strategy improve both firm's profitability by ensuring only the minimum amount of financing is utilized for inventory, as well as ensuring the financing rate is optimal for both firms. The savings that are realized can then be used to obtain new customers. (Michaelraj & Shahabudeen, 2009) With new customers, the firm will be able to increase their sales, further improving the company's profitability. The firm's liquidity may also be improved since overages in inventory levels mean more cash is tied up, reducing cash flow or cash available for other parts of a firm's operations.

When implementing a strategy to improve financing within the supply chain, there are several factors that firms should consider. Firms should consider the relationship between how they will reduce costs and how they will generate new revenue, while also maintaining a balance between agility and speed to respond to changes in demand. In addition, firms within the supply chain must have a good relationship which will allow for information sharing, trust and recognition that the supply chain is working together. In addition, companies within the supply chain must allow for delays, disruptions, forecast inaccuracies and other inventory problems that may occur and perform the necessary steps to benefit the supply chain as a whole. (Mathis & Cavinato, 2010) The approach should be applied globally to ensure that cost savings and efficiencies can be obtained across the entire supply chain.

As with all factors of improving a firm's financial performance through the supply chain, management's operating strategies are key to ensuring that the firm's financing strategies are fully implemented. Centralizing the financial management of the global supply chain is a new concept and as such, integrating a central finance function and managers within the entire supply chain has not been accomplished in most companies. (Mathis & Cavinato, 2010) Since the implementation of supply chain financing strategies is a relatively new concept, getting firm personnel to buy in on the concept will be essential. If the personnel can work toward the same goals, the firm's supply chain financing strategies can improve the financial performance of the firm considerably.

Contracting

Relationships between supply chain partners can have a significant impact on the financial performance of each firm in the supply chain. Therefore, it is important to consider how to handle these relationships to effectively integrate the physical supply chain with the financial performance of the firm. Contracting is an important part of establishing and maintaining relationships between these firms. If contracts are not negotiated and written correctly, the firm could see increased costs through poor quality, product substitutions or misunderstandings between its trading partners. Properly executed contracts can significantly improve firm financial performance. These contracts can improve sales through improved customer service and higher quality products and reduce costs through shared economies of scale between supply chain partners. In addition, good contracting practices can ensure that a firm can maintain the flexibility it needs to remain agile.

Every firm has one or more core strengths which the firm exploits to make a profit. These core strengths are what inherently make a business successful. However, in order for a business to function, it must also perform standard business processes outside of this mission. Other businesses may perform these functions as part of their firm's core mission. In addition, firms need to obtain materials, products or services from other firms. Working with these firms to improve on any task that is required in the firm, besides its core competency, or to ensure that raw materials, products or services are obtained when needed and at a reasonable price, can be accomplished through contracting.

In every transaction, there is a product or service given in exchange for a set price. Most transactions are "spot contracts" where the terms are simple, clear and quickly concluded. (Domberger, 1998, p. 33-34) However, when companies do significant amounts of business with each other or want to establish set rules for large value or large volume exchanges, contracts may be used. Contracting provides the greatest benefits when it is used for long term relationships between firms. (Domberger, 1998) The benefits that firms can garner from integrating its supply chain through contracting are improved profitability, liquidity and agility.

Contracting can improve a firm's profitability because contracts can solve problems that can arise with revenue flow. Contracts can be written to ensure that a customer will pay for a predetermined amount of sales, regardless of how much a company produces. Contracting can also be used when demand changes due to technology result in reduced revenue for the firm. (Domberger, 1998) In addition, contracts can ensure that an established level of quality of raw

materials or other product received from a vendor is received. This guaranteed quality can improve sales by maintaining a loyal customer base. Furthermore, sales can be increased through contracting within the supply chain because contracts can be written to incentivize firms within the supply chain to perform to a mutual goal. For example, the contract can require a retailer to share a certain amount of revenue, while requiring the supplier to produce a certain amount of goods. (Hou, et al., 2008) The firm's profitability is increased because the supply chain firms share in the sales revenue.

Another way that the firm's profitability can be improved by contracting is through reduced costs. Contracting can ensure a company pays the best available cost for raw materials or other items because terms, such as cost, are negotiated between two firms. In addition, contracting is an important part of establishing credit terms with suppliers. There are many methods of contracting to enhance the cooperation between firms. One method is a revenue-sharing contract. In a revenue sharing contract, the retailer shares a portion of the revenue with the supplier, so the supplier should be more willing to cooperate with the retailer. (Hou, et al., 2008) Contracting can be used to address supply chain cost issues, such as those that arise from globalization and competition from low wage countries. When cheaper labor costs or other efficiencies are identified in other countries or regions, contracts can be executed to obtain manufacturing services in these regions. (Domberger, 1998) The decreased costs realized by these strategies will improve the firm's financial performance through improved profitability.

Contracts between firms within an organization can reduce the risk that is undertaken when dealing with an outside firm. There are various types of contracts which transfer risk to the buyer or seller. For example, fixed price contracts transfer the risk to the supplier. (Seshadri, 2005) Other examples of contracting types include cost plus fixed fee, cost reimbursement, cost plus incentive fee and shared savings contracts. The type of contract that is used should match the risk that the firm expects to encounter and should include incentives for the other firm to perform the contracted work in the most cost efficient manner possible. (Seshadri, 2005) Since the risks are shared amongst multiple firms within the supply chain, the firm's costs can be reduced, improving the firm's profitability.

Successful implementation of contracting can also improve a firm's agility. When contracts are executed in such a way as to ensure that goods are delivered on time, a firm can rely on the goods to be at the predetermined point in the supply chain when they are supposed to be. For example, a buyer can contract for a certain amount of a vendor's capacity or could pay to delay capacity. (Seshadri, 2005) These types of contracts offer financial advantages to both the supplier and buyer. The supplier's capacity is known and therefore, production can be more adequately planned, and if the buyer decides to delay the production, the supplier is compensated. The buyer's financial benefit is realized through reduced transaction costs in purchasing the item. In addition, their inventory quantities will be known, allowing for them to be more agile.

Before entering into contractual relationships with vendors and other supply chain partners, firms must consider what part of their business to contract out. In general, the theory is to retain "core activities" in house and then any non-core activities can be examined for potential contracting. (Domberger, 1998, p. 35) Sometimes, a firm will have the resources available to perform certain

functions, but another firm in the supply chain may be better suited to perform the task, either because of their position in the supply chain or their particular expertise. Contracts with other firms should add value to the product, improve market access, strengthen operations, improve the firm's technology, enhance organizational skills or build financial strength. In addition, these contracts should not weaken the core competency of the firm. (Simchi-Levi, et al., 2004) The financial performance of the firm will be improved by ensuring contracts meet these requirements because this will ensure that firms only contract out services or goods that they need.

Another consideration firms must make is how to establish these contracts. Contract terms must be specifically negotiated and identified in the contract. These terms can include what the item is, when it is to be transferred, credit terms and performance measures, if necessary. (Simchi-Levi, et al., 2004) Contracts must be specific in order to ensure that benefits that are to be obtained from the contracts are actually obtained.

Management needs to integrate contracting into its operating strategies. One strategy that needs to be determined is how and where suppliers will be selected. Management must consider how to use contracting to improve relationships with suppliers, minimize costs of purchasing and improve on-time deliveries. Additionally, management must consider where its suppliers are located and how it will enforce contract compliance. Once these considerations are made, management must determine who will perform the negotiations and contract management. (Deshmukh, 2006) In all of these decisions, the location of the goods and customers must be considered. There are often cultural differences that must be considered when performing any of these tasks in foreign countries. Additionally, transportation and other costs, such as labor, should be considered.

Logistics

The goal of supply chain management is to ensure that the product arrives from the original manufacturer to the end customer when the customer wants it. There are many ways that this timely delivery can be accomplished and therefore, many ways to potentially add costs or time to market to the end product without adding value to the end consumer. Per Christopher (2005), "one capability that is now regarded by many companies as fundamental to success in the marketplace is the management of in-bound and out-bound logistics." (p. 29) Accordingly, a firm looking to improve financial performance should evaluate its logistics strategies, namely inventory management and material availability, as a means to assist the firm in improving financial performance through increased sales, reduced cost, increased cash flow and improved agility.

Christopher (2005) defines logistics as "the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfillment of orders." (p. 4) All companies must implement some form of logistics strategy in order to ensure that their product arrives at next firm in the supply chain, in order to ultimately reach the end consumer. It is

important to recognize that these strategies do not need to be implemented exclusively within the firm.

A firm's profitability can be improved through enhanced logistics services because they help improve product quality, customer satisfaction, customer loyalty and to be able to provide customized services to different customer segments. (Gotzamani, et al., 2010) A firm that can maximize these benefits will, in turn, improve the customer satisfaction and loyalty, thereby increasing sales.

An effective logistics management program can lead to improved sales through improved quality as well. Improved logistics can improve the quality of service, such as on-time delivery, accuracy of order fulfillment and promptness in attending to customers' complaints. (Gotzamani, et al., 2010) This quality of service will improve customer satisfaction and sales. Ensuring that the product is on the shelf and available when the customer wants to purchase an item can also improve sales. Evidence shows that customers are now making purchase decisions based on whether the item is on the shelf, rather than on brand names. In addition, businesses are making decisions based more on delivery lead times and flexibility, rather than the product or technical features. (Christopher, 2005) Therefore, firms that have good logistics practices will have improved sales over firms that do not. Improving a firm's sales affects the firm's financial performance through improved profitability.

In addition to increased sales, logistics management can help the organization improve its net income through reduced costs. Decreasing the costs associated with logistics is important because logistics costs are estimated to be close to 10 percent of gross domestic product across the US and similar economies as a whole. (Christopher, 2005) Logistics management affects the overall inventory levels of the firm and supply chain. When a company implements an effective logistics strategy, the inventory levels can be reduced, thus reducing costs associated with that inventory. Inventories are maintained at all levels of the supply chain. Therefore, effective logistics strategies can reduce costs for all parts of the supply chain. These reduced costs can then be passed to each firm within the supply chain.

Third party logistics providers also allow the firm to focus on its core competencies. (Simchi-Levi, et al., 2004) Removing the requirement of the firm to manage its logistics improves the firm's profitability because the firm will be able to focus on the competencies which generate the firm's revenue. In addition, costs can be reduced because it will be less expensive for the firm to pay for another firm whose core competency is logistics than to have in house personnel perform those services.

Successful implementation of logistics strategies within the supply chain can also improve the firm's financial position through improved liquidity. When effective, logistics can reduce the time from when the customer orders a product to when the goods are delivered, reducing the time until the invoice can be sent and payment is received by the firm. (Christopher, 2005) Since the invoice is sent sooner, the firms will obtain the cash from the sale sooner, improving the cash flow. In addition, since less cash is tied up in inventory, the company will have more cash available for other expenses.

Supply chains with good supply chain logistics strategies will also see improved financial performance through improved agility. Effective logistics services allow firms to meet customer's changing demands and expectations, as well as realize a competitive advantage. (Gotzamani, et al., 2010) Quality logistics programs can minimize the amount of inventory required on hand at any given point in time. Reduced inventory improves the firm's agility because of its ability of the firm to respond to changes in customer demand.

When considering a third-party logistics provider, the firm needs to consider that the provider will be positioned between the supplier and customer, which means the provider will have a crucial role in handling end-customer information and feedback. (Gotzamani, et al., 2010) If a third party logistics firm cannot meet the established standards, the expected financial improvement may not be achieved. In addition, the firm needs to identify how it will determine whether to hire and continue with the selected logistics provider. One factor to consider is the quality of the service provided. In addition, the costs of implementing an effective supply chain logistics strategy must also be considered. However, if management can integrate an effective third party logistics system, the financial performance of the firm as a whole will improve.

CONCLUSION

In order to stay in business, companies must continually identify ways to improve their financial performance. A firm can improve its financial performance by integrating innovative supply chain strategies and initiatives. Specifically, a firm can develop its inventory management, technology, financing, contracting, and logistics strategies to improve its financial performance. Each of these strategies, when implemented successfully, can improve the firm's financial profitability through increased sales or decreased costs. Furthermore these strategies can improve the firm's liquidity through improved cash flow and can improve the firm's agility by allowing for increased supply chain flexibility and reduced inventories.

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