

Is E-Commerce Ruining Your Bottom Line?

Introduction

The internet has turned traditional ways of doing business upside down. It has made information available on demand with a tap or swipe of a finger. This instant gratification is shifting consumer behavior as well; we now value convenience over brand. These changes have given rise to the ever increasing market share of Amazon.com while at the same time causing traditional retailers to close down at a record pace. Distribution is no longer a challenging cost center to be controlled. It is now a competitive advantage to be secured, and companies either need to step up to the challenge of omni-channel delivery or face losing customers and potentially their entire business. E-commerce is not going away. It is growing rapidly, with B2C e-commerce growing over 15% a year and B2B growing at over 40%. The purpose of this paper is to explore how market dynamics are changing distribution operations and how these changes actually create a tremendous opportunity for forward-thinking companies that embrace change. This paper will largely focus on manufacturing distribution, but many of these principles apply to retailers and wholesale distributors.

Background

There are 271,000 manufacturing facilities in the United States, and each one has a distribution center to receive unfinished product and ship finished product. The majority of manufacturers bulk ship pallets and full truckloads to retail and wholesale distributors based on relatively long lead times. Most rely on their internal ERP systems to manage inventory and shipping, and they use their ERP's limited WMS capabilities.



The rise of e-commerce has created new distribution requirements that traditional manufacturing distribution is not able to meet.

The rise of e-commerce has created new distribution requirements that traditional manufacturing distribution is not able to meet. They are:

- 1** Direct-to-retail mixed pallet shipments: Shipping mixed-SKU pallets on LTL direct to retail locations versus through traditional retail DC's. Amazon requires mixed-SKU pallets to be shipped to each of their DC's on a scheduled basis to reduce inventory on hand.
- 2** E-commerce parcel shipments: Sold by Amazon or other e-tailer but fulfilled by the manufacturer. This scenario is becoming more common. Amazon will only inventory high volume items and is pushing back on manufacturers to have them handle the fulfillment of less in-demand items. Additionally, selling through Amazon only costs 8-15% of the retail price, whereas selling to Amazon costs 35%, giving accretive lift to top line revenue.

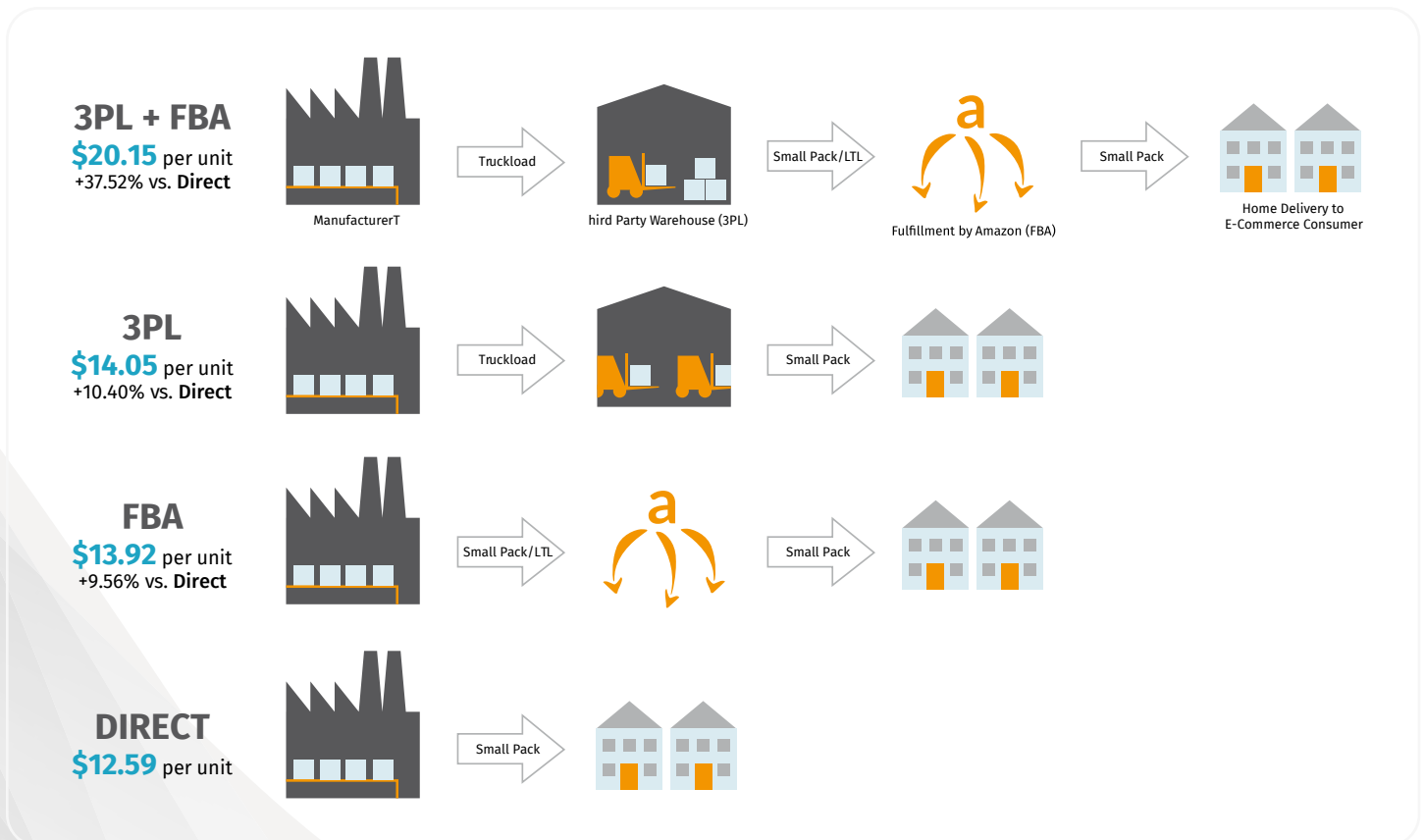
Manufacturers have responded to these requirements by outsourcing this portion of their distribution to Third Party Logistics (3PL) providers. But even with highly efficient 3PL solutions in place, profitability on e-commerce fulfillment remains elusive.

Economics

There are two sides to the unit economics equation: revenue and cost. On the revenue side, selling through a retailer but handling the fulfillment yourself or through a 3PL can lift revenues. For example, let's assume the retail price is \$100 per unit. If you sell the product to a traditional e-tailer, they will take 35% of the retail price and then assume inventory risk and all fulfillment costs. So the wholesale price to you is \$65 per unit. However, if you sell through the e-tailer but handle the fulfillment yourself, then the e-tailer will take 8%-15% of the unit price as their commission. Again, assuming a \$100 retail price, this is between \$85-\$92 to you per unit. The difference in per-unit revenue of 30.7% - 41.5% is impactful.

The cost side is a bit more complex depending on how the fulfillment is managed. Here is a cost comparison between four different fulfillment methods manufacturers are currently using. This assumes the same last mile parcel delivery price for each method (UPS, Fedex, USPS).

As you can see, direct fulfillment reduces several steps in the supply chain, and, if operated efficiently, (a very key point) can reduce overall costs.



The Challenges

Technology

The economics for managing your own direct-to-retail and e-commerce fulfillment are definitely attractive, but there are several challenges to be overcome first that will require investment.

The biggest obstacle is a data infrastructure problem. Most manufacturers we have worked with do not have a Warehouse Management System set up to handle multiple unit configurations (pallets, cases, eaches). Traditionally, product is stored as X-cases-per-pallet and is shipped bulk as pallets. Then comes along direct retail, which requires multiple SKU and case packs per pallet, with proper accounting. Then comes e-commerce, which requires shipment in eaches, i.e. a unit pulled from a case pack. Traditional ERP inventory is not set up to handle these variable types of units, and many WMS systems struggle with it as well.

Systems we highly recommend when making this transition are a robust Warehouse Management System (WMS) with the ability to pick and ship by pallets, cases, and eaches, as well as API interfaces with e-tailers and parcel shippers; and a fully integrated performance analytics system (Easy Metrics) that gives you real-time cost and performance information on employees and process.



To make the transition to e-commerce, we recommend a robust warehouse management system and a fully integrated performance analytics system.

Change Management and Warehouse Reconfiguration

The second obstacle is one of process configuration and change management. E-commerce is what we call a high velocity environment. With traditional bulk shipments, you will often have lead times of 2-4 weeks to ship the product. With e-commerce, you get the order in the morning, and it has to ship that afternoon to meet FedEx/UPS cutoff times. Shipments must be handled quickly and efficiently, or your internal costs could eat up any additional profits. Culturally, manufacturers are not used to this style of work. They are better suited towards a scheduled work flow, but e-commerce just does not function that way. The key is to get it done now and efficiently!

We also recommend operating your e-commerce operation as a warehouse within a warehouse, setting aside 2,000-5,000 square feet with properly configured pick walls to minimize travel and maximize throughput efficiencies.

Direct-to-retail can be managed within your main warehouse but will also require some basic inventory reconfiguration, such as putting full pallets on rack rows two and above, and using rack row one to pull cases for mixed-SKU pallet builds.

Reverse Logistics & Returns

E-commerce returns average 30% of shipments but can be over 50% depending on what the product category is (apparel/fashion has a particularly high return rate). Customers now expect a simple, efficient process and often want the retailer/shipper to cover the return costs. This process and expectation add the additional cost burden of the return parcel freight, as well as additional handling charges to inspect and return the product to inventory.

To handle returns effectively, you will need a WMS system that can manage reverse logistics, as well as be fully integrated into your order system, retailer API's, and parcel shipping company API's.

Operations Financial Management

E-commerce requires businesses to change the way they approach supply and distribution—a new framework. Transitioning to an Operations Financial Management (OpsFM) framework, where operations teams are empowered to be financially accountable in fast-paced and highly variable environments, may be the best option for thriving in the current market conditions. By focusing on understanding the unit economics of labor—how much labor costs, where to allocate it, how to manage it—an organization is able to leverage their data toward optimization and standards that accelerate their warehouse processes and reduce costs.

Modernizing to meet the demands of e-commerce requires modernizing the strategies employed on the warehouse floor. Shifting the focus on labor management through the use of labor management systems, data driven labor standards, and a sophisticated technology stack is the most consistent way to improve processes, meet customer demands, and maintain a competitive edge.

Conclusion

There are still tremendous inefficiencies in the supply chain. When you look at the number of touches and cost accruals on a product as it travels to get to the end customer, often the cost of distribution can exceed the actual production cost of the product by several multiples.

Taking control of your own product fulfillment eliminates several touches and steps in the supply chain and thus can save you money. Properly configured and managed, omni-channel distribution through your own distribution center is more profitable than outsourcing to a 3PL or selling to an e-tailer.

More than anything, e-commerce demands new tools and a new operating paradigm. Transitioning to an OpsFM framework and focusing on applying labor management best practices, data analytics, and a labor-focused management approach will put you on the surest path to success.

Why Easy Metrics

Easy Metrics is a leader and disruptor in Performance Analytics for Supply Chain Operations. The core technology was developed from over 20 years' experience managing complex, labor-intensive distribution outsourcing operations. Easy Metrics was built by operators for operators, yet still enables deep granular analysis for performance standards and cost analytics.

A key success driver with any performance analytics system is the ability to see the necessary information as needed to manage your operations. The last thing a user wants to do is have to sift through pages of data and try to figure out what is going wrong. Easy Metrics push technology identifies problem areas and delivers that information to supervisors and employees in an easily readable format that drives decision making and change.

Process	MT%	MT\$	IND%	IND\$	ELS	OT\$	Eff %
DC	21%	\$19,266	20%	\$29,506	94%	\$5,404	93%
Shift	MT%	MT\$	IND%	IND\$	ELS	OT\$	Eff %
1st	26%	\$17,991	17%	\$17,918	94%	\$3,085	93%
2nd	\$0.11	\$1,276	31%	\$11,588	91%	\$2,319	89%

Daily KPI

Process	Metric Name	Units/Hr	Units Processed	Total Hours	Unit Cost (burdened)	Total Cost	Productivity Score	Baseline Productivity Cost
Department: Picking			926,800	5,909.4		100,228	90.4%	86,815
Case Pick	Cases	270.69	878,820	3,246.6	\$ 0.058	\$ 50,982	96.5 %	\$ 47,448
Case Pick (Co-Pack)	Cases	243.00	5,188	21.4	\$ 0.065	\$ 338	103.3 %	\$ 353
Layer Pick (Claw)	Cases	448.21	6,588	14.7	\$ 0.033	\$ 215	50.5 %	\$ 101
Pallet Picking	Total Pallets	11.63	18,593	1,599.0	\$ 1.614	\$ 30,003	79.5 %	\$ 22,968
Pallet Picking (Co-Pack)	Total Pallets	12.55	3,402	271.2	\$ 1.566	\$ 5,326	97.7 %	\$ 5,072
Picking Non Rack	Touches	14.55	539	37.0	\$ 0.871	\$ 469		\$ 469
Staging	Total Pallets	19.01	13,641	717.7	\$ 0.943	\$ 12,861	84.9 %	\$ 10,376
Staging (Co-Pack)	Total Pallets	13.39	14	1.0	\$ 1.590	\$ 22	83.6 %	\$ 18
V Rack Picking Medium	Touches	34.20	7	0.2	\$ 0.380	\$ 3		\$ 3
V Rack Picking Medium Other	Touches	13.36	8	0.6	\$ 0.962	\$ 8		\$ 8

Total Tracked Labor Cost			
Productivity Score 90.4 %	Direct	5,871.59	\$ 86,336
	Indirect	0.00	\$ 0
	Billable	37.84	\$ 480
	Missing Hours	0.0	
	Total	5,909.43	\$ 86,815

A critical success factor for successful e-commerce operations is the ability to see your operations digitally. This enables you to react quickly to problems as they arise and to manage your operations cost effectively.

Successful e-commerce is a game of shaving pennies off of each step of the process, which then translates into major bottomline cost savings. With Easy Metrics, you will be able to see where every penny is spent and how to drive costs out of your operations.

About Easy Metrics

Easy Metrics fuels operational excellence in distribution operations.

Operations and finance leaders use Easy Metric’s API integration platform and machine learning to analyze, plan, and forecast their labor spend so they can drive operational speed and efficiency, price their products and services profitably, and drive employee engagement.

With Easy Metrics, they translate raw operations data from multiple data sources into their costs by: activity, process, facility, people, and equipment. They use actionable reports across their network, to optimize labor spend, cut waste, plan facility investments, and drive labor strategies that ultimately fuel the growth of their business.

Learn to leverage your own data, best practices, cost accounting, tools, and a curated employee culture. Equip yourself with the best tools and management solutions for the digital retail and distribution environment with Easy Metrics. www.easymetrics.com