



View Point

From footfalls to eyeballs and walk-ins to log-ins- Are you there yet?

A perspective on e-commerce adoption in US grocery retailing

- Shaihbaz Mastan

Introduction

Tough economic environment coupled with consumers seeking more value for money is eating into retailer's profit. They are constantly looking at finding newer ways to entice consumers wherever they are and trying to sell products through diverse channels like e-commerce, social commerce, mobile commerce etc. Grocery retailers need to adapt to the new ways of selling if they want to remain profitable. The market for grocery e-commerce is huge and likely to double in the next few years.

A study conducted by Nielsen Company and MyWebGrocer predicts an increase in online grocery shopping from \$12 billion today to \$25 billion by 2014¹⁰.

Recently, online grocer Peapod launched 100 'Virtual Grocery Stores' in commuter rail stations, which enables consumers to use smartphones to scan and buy from a limited assortment of grocery items.

However, there are some unique challenges of the grocery business that need to be understood before coming-up with an online store. This point of view will discuss the below four category of challenges and how grocery retailers can navigate them.

1 Challenges posed by grocery product characteristics

2 Challenges posed by consumer behavior / preferences

3 Technology enablement challenges

4 Supply chain operating model or delivery challenges

Challenges posed by grocery product characteristics

- **Thousands of products sold in grocery stores**

A traditional brick and mortar grocery store stocks an average of 40,000 items. This is primarily because of the huge selection of products, brands, flavors and categories within the grocery industry. So, the question is how to effectively merchandise such a huge assortment online? It is recommended to limit the online assortment to a subset that is fast moving or choose from popular sizes, brands and flavors. This will help to improve consumer perception on variety, provide better inventory tracking and control, reduce warehousing costs and increase margins.

- **Restrictions on sale of certain items (pharmacy drugs, alcohol and tobacco products)**

Alcoholic beverages, pharmacy drugs and tobacco items are bound by federal and state level restrictions which make online display, merchandising and sale of such products difficult. The e-commerce site should be able to track regulations at every level and display the required warnings, compliance and regulatory requirements for the sale of such items online.

- **Special orders – party platters, cakes, flowers etc.**

Special order requires the website to provide multiple options, choices, recommendations and customizations. Some grocery retailers have partnered with specialty retailers or websites for selling specific types of flowers, specialty chocolates, balloons etc. Pricing, payment, fulfillment and delivery in this situation requires seamless integration with 3rd party providers.

- **Special government assistance programs for low-income families**

US government sponsors special assistance programs like SNAP (Supplemental Nutritional Assistance Programs) formerly known as Food Stamps or WIC (Women, Infant and Child Nutrition) programs to support struggling families in putting food on the table. However, such programs are prone to fraud or abuse. The e-commerce website should have the capability to accept, validate and process food stamps or WIC cards for the small fraction of population eligible for such programs and shopping online.

Do you merchandise

every single SKU sold in the stores or limit the online assortment to a few categories, brands, products or variations within the products?





Challenges posed by consumer behavior / preferences

- **Consumers desire to “touch and feel” the freshness of products**

Consumers have an innate desire to “touch and feel” products, especially fresh items, before making a purchase. Though graphically pleasing images of fresh products online can be used to provide a ‘fresh’ look and feel, consumers are generally not satisfied with the experience. There is no simple solution to this except by ensuring the quality and freshness of the delivered products every time, which will give consumers the same personal “touch and feel” experience.

- **Need for nutritional and ingredient information**

Health and wellness is a primary concern for many consumers who are looking for easier ways to find healthier foods. Many consumers make food choices by reading through nutrition facts and ingredient information while others depend on nutritional rating systems implemented by their trusted grocers. Guiding Stars program by Food Lion and Hannaford, Nutrition iQ program by SUPERVALU or NuVal System implemented by a few grocery chains including Kroger, Meijer, Price Choppers etc. are few good examples of such nutritional rating systems¹¹. A robust content management system is needed to house and display nutritional and ingredient information online. Good news is that this nutritional rating data can be purchased for a nominal fee from the licensing companies of the above retailers.

- **Filtering food products based on allergens/dietary preferences**

Common list of allergens are nuts or peanuts, gluten, wheat, egg, shellfish, soy, milk (lactose) etc. Some grocery retailers like Hannaford through Guiding Stars program, Stop & Shop (Peapod) through NutriFilter program provide online capability¹² to filter products by allergens; however, it is not fool-proof and can cause health hazards resulting in significant legal implications.

- **Special promotions, cooking shows, sampling events**

Grocery retailers conduct a number of these in-store activities to promote or introduce new items as well as to educate the consumers. The online channel can be leveraged to increase awareness about the planned events to attract maximum participation.

- **Grocery Shopping, a community event**

Many people consider grocery shopping as a community event and in-store grocery shopping provides them a good platform to connect, collaborate, exchange ideas or even plan community events. Consumers are more connected with the rise of social networking sites but in-person interaction still makes a considerable impact in our lives as compared to any virtual interaction. Social media integration is a good way to simulate a community experience.



Technology Enablement Challenges

- **Fast and Robust Search capability**

Browsing through thousands of grocery products to find the exact brand, flavor and size of the required product is like finding a needle in haystack. Hence, it is very important to have a fast and robust search engine which can provide very relevant and optimal list of items for the consumer to quickly select and add to cart. A number of grocery retailers provide great features using which the consumers can quickly create a shopping list from purchase history, frequently purchased grocery items or a quick text based shopping list.

- **Integration with ad flyers online**

Most of the standard e-commerce products have in-built capability to integrate ad flyers online and the ability to add items from the flyers to the cart with a click. However, if a grocer is custom building an e-commerce website, integration with ad flyers may become complex, especially if a 3rd party provider is contracted for generating ad flyers.

- **Coupons, deals and special offers**

A significant percentage of shoppers continue to use old-fashioned paper coupons. The e-commerce site should not only have the capability to accept, validate and prevent abuse of coupons but also support targeted marketing initiatives and provide visibility to the online consumers into the in-store coupons, markdowns and special offers.

Supply chain operating model or delivery challenges

• Operating model

Choosing an operating model that is sustainable, profitable and easy to implement is key to the success of an online channel. Some of the most important factors to be considered are given below:

- What should be the model – Online order and home delivery or pickup at store?
- In case of home delivery, how much should the delivery charges be? Whether the delivery charge should be a flat monthly fee or per order fee?
- In case of store pick up, it needs to be decided whether the consumer will be able to pick up the order at his or her local grocery store or only designated locations will be available for pick-up.
- How the order fulfillment should be done – whether from a centralized location or from distributed locations?
- Optimal truck utilization, third-party distributor management, delivery route and fuel cost optimization are some of the important enablers for a profitable delivery model.
- Other factors like demand forecasting, inventory management, labor and resource management are some other obvious factors that should be kept in mind.

All these factors need to be carefully examined and weighed before deciding on the operating model. Consumer response to every model will be different based on the value, convenience, quality and pricing structure of each of these models.

Peapod has become America's leading online grocer, delivering more than 22 million grocery orders and serving 24 US markets¹³



Conclusion

While online grocery shopping remains a niche market and adoption of e-commerce is slow, there is a strong desire in the grocery industry to move towards this channel. How fast and quickly this will happen, will depend on finding the answers to the unique complexities of the grocery business.

While some grocers like Safeway, NetGrocer, Peapod (Stop & Shop) etc., have successfully implemented e-commerce channels, others have either not been able to figure out the economics of this model or are yet to take the plunge (refer **Table A below**).

For retailers who want to leverage e-commerce channel without making large investments, Infosys CommerceEdge¹⁴ platform on Cloud (SaaS model) is available as an out-of-box offering that enterprises can use and realize its value – almost immediately. Social Commerce platform¹⁵, an integral part of Infosys CommerceEdge, provides a comprehensive social shopping experience.



Table A: Current state of e-commerce adoption in US grocery retailing

Parameter	Wal-Mart	Kroger	Safeway	Ahold (Stop and Shop) ⁶	Supervalu (Albertsons)	Publix	Delhaize America	"Winn Dixie (Bi-Lo)"	Wegmans	Harris Teeter
No of Stores	3,868	2,435	1,453	756	2,434	1,046	1,650	484	80	200
Market Areas Served in US	Most States	Most States	Most States	New England, NY, NJ, mid-Atlantic	Most States	Florida, Georgia, SC, Tennessee, Alabama	North East, Mid Atlantic, South East	Eight southern U.S. states	NY, NJ, VA, PA, MA, MD	Mid-Atlantic, South East, DC, Florida
2011 World Ranking ¹	1	5	24	25	31	35	37	138	154	207
Global Annual Revenue in MUSD ²	\$443,854	\$90,374	\$43,630	\$42,103	\$36,100	\$26,967	\$29,398	\$6,881	\$6,200	\$4,286
Operating Margin ⁴	7.70%	1.41%	2.02%	4.30%	-1.44%	7.92%	3.86%	-0.48%	NA	4.22%
Pricing Strategy ⁵	EDLP	Hi-Lo	EDLP	EDLP	Hi-Lo	Hi-Lo	Hi-Lo / EDLP	Hi-Lo	EDLP	Hi-Lo
Loyalty Program ⁵	No	Yes	Yes	Yes	Yes	No	"Food Lion - Yes Hannaford - No"	Yes	Yes	Yes
Nutritional information/rating program ³	Great For You	NuVal	Simple Nutrition	Healthy Ideas	Nutrition IQ	Publix Nutrition Facts	Guiding Stars	Color-coded Nutrition tags	Wegmans Wellness Keys	Wellness Keys
Customer Satisfaction Score ⁷	69	79	75	NA - Low	74	84	Not Measured	75	NA - High	79

Parameter	Wal-Mart	Kroger	Safeway	Ahold (Stop and Shop)"	Supervalu (Albertsons)	Publix	Delhaize America	"Winn Dixie (Bi-Lo)"	Wegmans	Harris Teeter
E-Commerce site	walmart.com, grocery. Walmart.com	kroger.com	safeway.com	"StopandShop.com, Peapod by Stop & Shop"	albertsons.com	publix.com, 363green.com	hannaford.com	"bi-lo.com, The new bi-lo.com"	wegmans.com	harristeeter.com/express_lane
Ecommerce Capability ⁵	Order online, Delivery to Home or Business or Pick up in Store	Party Orders, gourmet foods, flowers	Order online, Delivery to Home or Business	Order online, Delivery to Home or Business or Pick up in Store	Party Orders only, pickup at store	Discontinued Publix Curbside program in Jan 2012	Order online, pick up at store (pilot)	No online ordering available	Catering orders online, pickup at store	Order online, pick up at store, home delivery pilot in 2 locations
Order Online, Pick up at Store ⁶	Yes	No	No	Pilot at Chelmsford store	Yes, in specific locations	No	Yes, in pilot locations	No	No	Yes, in specific locations
Order Online, Home Delivery ⁸	Yes, pilot in 2 locations	No	Yes	Yes, through Peapod	No	No	No	No	No	Pilot in 2 locations
Online Party Orders, pick up at store ⁸	No	Yes	No, only home delivery	Yes	Yes	No	Yes	No	Yes	Yes
Gift Card Online Order ⁸	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Pharmacy Refills online ⁸	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shopping List ⁸	Yes	Yes	Yes	Yes (Beta version)	Yes	Yes	Yes	Yes	Yes	Yes
Promotions - Weekly Ads, Coupons, deals ⁸	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes through e-Vic
Content - Recipes, meal ideas, videos ⁸	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Blogs on their website ⁸	Walmart Blogs	No	Today at Safeway Blog	No	No	No	No	No	Fresh Stories Blog	Dr. Russ Blog
External Collaboration / Ecommerce ⁸	Number of different collaborations for various products and services	"FTD.com for floral ordering, gourmet gifts, softcoin.com for online coupons, elsstore.com for specialty grocery"	FTD.com for floral and gift delivery	FTD.com for floral ordering and delivery	Giftcardmall.com for other retailers giftcard	"1-800-flowers.com for floral ordering and delivery, 363green.com allows you to purchase Publix branded merchandise"	elsstore.com for specialty grocery	Peoplestring corp to leverage social network and "Share it Up" social coupon platform	Giftcardmall.com for other retailers giftcard	Information Not Available
3rd Party Tools / platforms being used	Custom developed website	mywebgrocer.com, softcoin.com, elsstore.com	Custom developed website	peapod.com	Custom developed website	Used mywebgrocer.com for Publix Curbside	ePharmacy for pharmacy orders, fry platform at hannaford	Custom developed website	Custom developed website	mywebgrocer.com, htmobile
Social Media ⁹	FB page contains events, videos, games, local ad, meal solutions	FB page contains mykroger app, promotions, photos and videos, charity events and polls	FB page contains product ratings and reviews, promotions, videos, various competitions, community events	Has a FB page but not leveraged much	FB page contains weekly savings, videos and events	FB page contains savings, recipes, products, events, clubs and programs, baby item sale	FB page contains videos, events and recipe contest (Hannaford)	BiLo Media offers consumer prepaid gasoline cards	FB page contains events	Custom FB tabs by Synchronicity, offers coupons, videos and contests
Mobile Capability ⁸	Shopping lists, buy walmart.com products, track orders, Rx refills order, online photos	Shopping list, weekly ads, coupons, store locators, view rewards savings	Shopping list, weekly ads, store locators	Scan IT! Mobile is an in-store scan and bag solution	Shopping list, weekly ads, store locators	Shopping list, weekly ads, BOGOs, store locators	Shopping lists, weekly ads, coupons, recipes, gift cards, party platters, store locators	Shopping list, weekly ads, coupons, store locators, redeem fuelperks rewards	Shopping lists, recipes, videos, pharmacy refills, product scanning	Pharmacy refills, shopping list, e-Vic coupons and special offers, weekly ad

Table A

1. World ranking is taken from 2011 Top 250 Global Retailers List (<http://www.stores.org/2011/Top-250-List>)
- 2, 4. Global Annual Revenue and Operating Margin numbers are taken from the Retailer's Annual Reports for 2011 (wherever available publicly, references provided under point 8) and considering US revenues only. Some retailers have different fiscal calendar and hence the revenue numbers will be for different calendar periods. Wegmans is a privately held company and hence the financial numbers are not publicly reported or available
3. Nutritional information / Rating program data is obtained from the retailer's website or specific chains under a group where such programs have been implemented
5. Pricing Strategy information is based on the strategy applied by retailers. Though most of the Retailers have a combination of EDLP and Hi-Lo strategy, the dominant strategy is being reported
6. Loyalty program information is based on the retailer's strategy for Consumer Loyalty. Some banners within a larger group may have different loyalty program strategy
7. Customer Satisfaction data is taken from ACSI Feb 2012 report published on February 21, 2012 (http://www.theacsi.org/?option=com_content&view=article&id=147&catid=14&Itemid=212&i=Supermarkets)
8. All the information above is collected from the individual retailer's website and based on the author's review of the website against the above parameters. The data captured in the above table is purely the work of the author and the accuracy of the information is only limited to the knowledge of the author and the state of the retailer's website at the time of capturing this information. The retailer websites used as reference for collecting the above data are provided in the below.
 - Wal-Mart websites - <http://www.walmart.com/>, <http://grocery.walmart.com/usd-estore/index.jsp>, http://www.walmartstores.com/sites/annual-report/2012/WalMart_AR.pdf
 - Kroger websites - <http://www.kroger.com/Pages/default.aspx>, <http://giftcards.kroger.com/>, <http://www.thekrogerco.com/finance/documents/proxystatement.pdf>
 - Safeway websites - <http://www.safeway.com/IFL/Grocery/Home>, <http://216.139.227.101/interactive/swy2011/>
 - Ahold Group websites - <http://www.stopandshop.com/>, <http://www.peapod.com/?001=464&006=10019&linkid=L>, <http://2011yearreview.ahold.com/downloads/Ahold-Summary-2011.pdf>
 - Supervalu Group websites - <http://www.supervalu.com/sv-webapp/>, <http://www.albertsons.com/>
 - Delhaize America websites - <http://www.hannaford.com/>, http://annualreports.delhaizegroup.com/data/pdf/delhaizegroup_annualreport2011.pdf
 - Publix websites - <http://www.publixstockholder.com/files/2011AnnualReportonForm10-K>, <http://www.publix.com/>, <http://363green.com/>
 - Winn-Dixie and BI-LO websites - <http://phx.corporate-ir.net/phoenix.zhtml?c=78738&p=irol-reportsannual>, <http://www.bi-lo.com/>, <http://www.bi-lo.com/whats-new/the-new-bi-lo.com>
 - Wegmans websites - <http://www.wegmans.com/>, <http://www.wegmans.com/pdf/CompanyOverview.pdf>
 - Harris Teeter websites - <http://www.harristeeter.com/>, http://media.corporate-ir.net/media_files/IROL/99/99283/2011_Annual_Report.pdf, http://www.harristeeter.com/express_lane
9. Social media data is collected from every retailer's Facebook page
10. <http://www.shoppertech.org/ecom082211.html>

Other

11. Nutritional and ingredient information systems related information is taken from the retailer's websites as given below:
 - <http://www.hannaford.com/content.jsp?pageName=GuidingStars&leftNavArea=HealthLeftNav>
 - <http://www.nutritioniq.com/content/components/corporate/media/pdf/niQ%20launch%20Program%20Backgrounder.pdf>
 - <http://www.nuval.com/location>
12. Allergen filtering capability for Hannaford and Stop and Shop (Peapod) is taken from the retailer's websites given below:
 - <http://www.hannaford.com/content.jsp?pageName=GuidingStars&leftNavArea=HealthLeftNav>
 - http://www.peapod.com/site_frameset.jhtml;jsessionid=UXPFNCOPNRVOGQCQBD0XCFEQ
13. <http://www.peapod.com/site/companyPages/our-company-overview.jsp>
14. <http://www.infosys.com/commerceedge/platforms/Pages/index.aspx>
15. <http://www.infosys.com/commerceedge/platforms/social-commerce/Pages/index.aspx>

About the Author

Shaihbaz Mastan is a Senior Project Manager in Retail, CPG, Logistics & Life sciences Unit of Infosys Limited. He has more than 12 years experience in IT project delivery and more than 10 years of retail grocery industry experience. Shaihbaz has managed several large strategic / transformational programs in merchandizing, supply chain and e-commerce areas of retail grocery domain in the US.

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