Strategic Armoury of innovations for online retailers

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Abstract

Over the last decade, online retailing has picked up considerable traction and is estimated to cater to close to 2 T$ by 2020, , around 10% of total retail volume in developed countries and around 4% in developing economies.

In this fast-growing sector, players survive only by adopting innovative methods that enable them grab significant market share from traditional (bricks) model organized retail. The methods span the functions of marketing (including customer-relation management, product configurators, upselling and cross-selling), technology (internet, QR-codes, smartphones, payment gateways warehouse management and automated delivery), supply-chain management (eg. JIT and integrated customer-supplier pipeline), finance (managed operational leverage models, innovative payment systems and e-cash).

This paper draws from research and news published on these numerous innovations, shortlists some that are more recent and impacting, and ratifies them with primary data collected by a survey on customers. The paper also attempts to collate important strategies in a framework to show trends and prognosticate likely innovations that would yield clear sustainable advantage against competitors in the retail space.

In conclusion, the paper lists and describes selected innovations in retail (especially e-retail), recommending they be adopted as best practices in the retail industry.

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Objective of the Paper

This paper attempts to delineate and describe, based on secondary research, innovations that have impacted the retail business worldwide and selected on the criteria of being more recent and more impacting for the retail industry while carrying the possibility of adoption by current retailers to maximize their business.

Methodology

Since this was research at an exploratory stage, literature study was used as the primary method to elicit the most impacting innovations that are seen to have impacted the retail business.

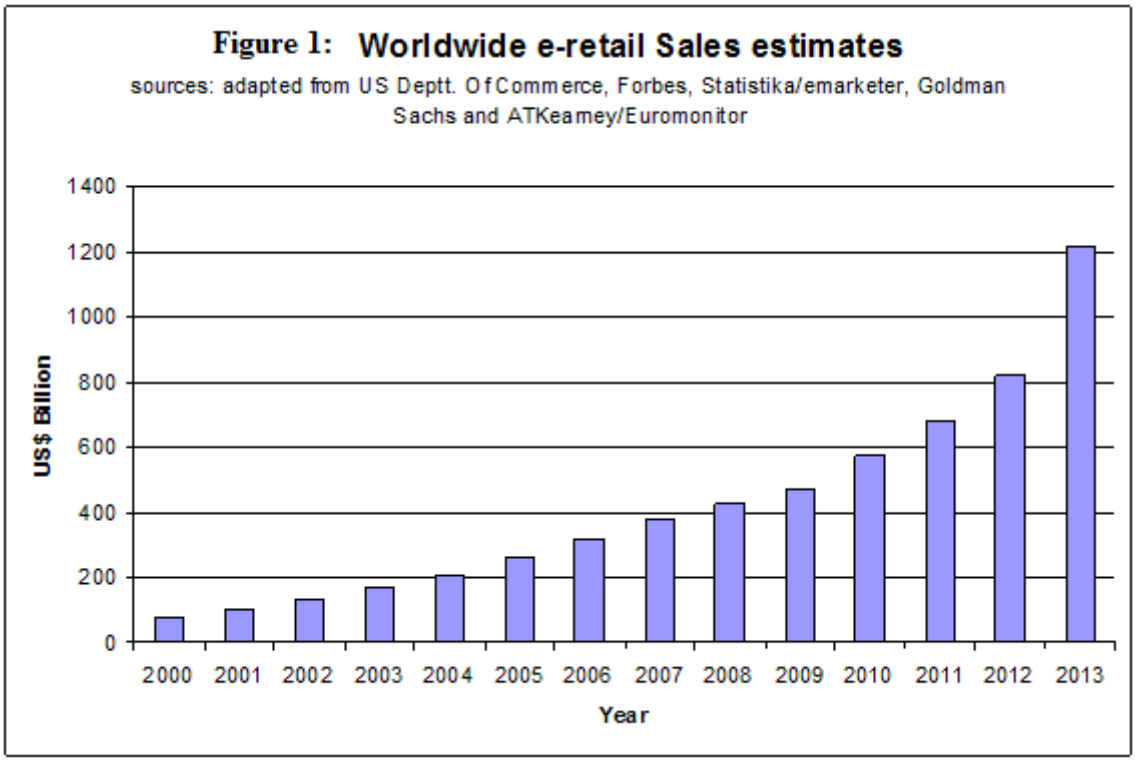
Beginning with the upcoming innovations (like the Amazon Prime-Air), literature was studied for the innovation, its impact (assessed qualitatively) and from references, other innovations were identified and studied. Each innovation was understood in terms of its technique and use. Its usefulness to current retailers of adopting it was assessed qualitatively.

A survey was carried out on few customers to validate the assessed usefulness of some customer-facing innovations in terms of their self-assessed impact on their own proclivity to buy from retailers using those innovations.

The Accelerating Dynamism of Retail worldwide.

Figure 1: Worldwide e-retail Sales estimates

sources: adapted from US Deptt. Of Commerce, Forbes, Statistika/emarketer, Goldman Sachs and ATKearney/Euromonitor



Worldwide retailing has shifted to the online mode in significant volumes. Figure 1 estimates global volume of (B2C) e-retail touching 1.2T$ as derived from current data from various sources as in figure. IMAP[1] estimates 2009 volume to be 14 T$.

Internet based sales are still estimated to be in single digit percentage fraction of the total organized retail volumes (around 10% for developed countries and barely 5% for

[1] Retail Industry Global Report 2010, IMAP, www.imap.com

developing economies like India). Indian Organized Retail is expected to grow from $300B to $637B by 2015[2].

Mobile-retailing is reported to be eating into the e-retailing share in developed economies and both are still growing in developing economies. The traditional (as around 1990s) model of retailing was as shown in Figure 2. This has got significantly

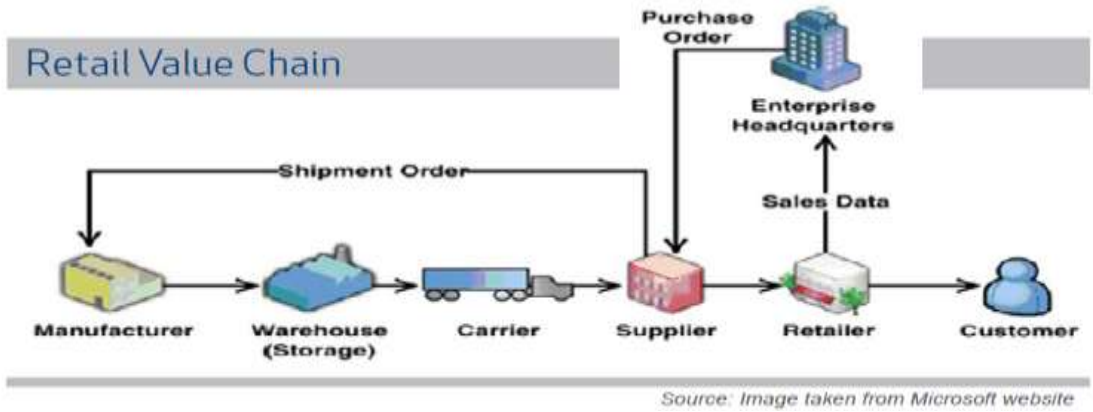


Figure 2 : Traditional Retail Value Chain
http://msdn.microsoft.com/en-us/library/aa905316.aspx reproduced in IMAP report on Retail 2010.

complicated in terms of (1) customer-end human computer interfaces (smart phones, virtual mirrors, ...) (2) logistics (various warehousing architectures, transport modes, outsourcing) and (3) payment mechanisms (POS-only to pervasive across time and space) (4) integrated software systems on the cloud driving multiple business functions.

Retailers, including the world's largest: Ebay, Amazon, Dell, Staples, HP (Ref.1), emerged from both traditional (brick-) and electronic (click-) origins. The pace at which newer models are biting into the traditional ones' shares of the markets is increasing. While it took centuries for organized retail (barcode, containerized transport, large format, volume discounts, ...) to firm up against mom-and-pop shops, it took some decades (1990+) for internet-based retail websites (e-payments, cross-pricing, home deliveries) to cut a sizeable chunk from the physical stores business, and it is taking barely a few years (2010+) for m-retail (driven by mobile devices) to grow so rapidly that it is expected to equal or exceed e-retail volumes by 2015 at least in the advanced economies and together constitute around a fifth of all retail sales.

The retailer of today has therefore to take competition and change in paradigms very seriously, adopt best practices ("strategic armoury") and keep updated on technology to enable him survive and grow.

This paper attempts to list out major innovations that have created a strategic impact on the retail sector, and suggests that retailers adopt these to be (ahead) in the race.

Indian organized Retailers

The tribe of Indian "Brick-" retailers include native biggies like the Future Group (Pantaloon, Big Bazar, Central, etc.), Aditya Birla (More, ...), Reliance (category wise chains), etc. Collaborations with international chains are also are getting established, like Tata Trent (Chroma, Westside, Star Bazaar Hypermarkets, Landmark Lifestyle), Bharti/Walmart (though their future is uncertain since Walmart's exit in 2013 end). International leaders coming in include Tesco (just entered the fray in 2014) and Ikea.

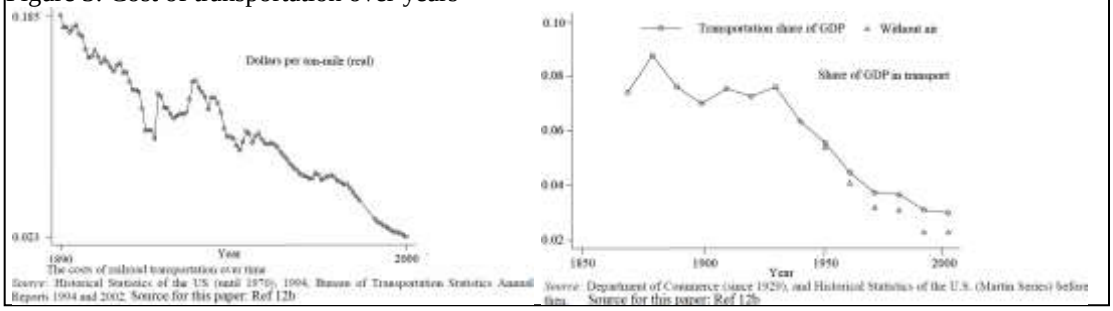
[2] Srinivas Gumparthi and T. Roopasree: "Design and Development of a Revenue Generation Model for Retail Mall: A Case Analysis, Business and Management Research Journal Vol. 2(2), pp. 61 - 76, May 2013 http://www.resjournals.com/RBM

The tribe of Indian "Click-" retailers include many natively born and grown sites like Flipkart, Myntra, indiatimes, jabong, yebhi, naaptol, snapdeal, homeshop18, zovi, minglekart, etc. besides few that got taken over and are working as part of an international chain (eg. bazee.com as ebay india).
Category specialist sites flourish like watchkart, healthkart, chipkart, dietkart, lenskart, mebelkart, safetykart, jewelskart, bagskart, sabzikart, mygreenkart, wholefoodskart, shuttlekart, wowkart.
Few C2C sites (eg. olx, ebay) facilitate retail sales of used goods (as a "market").
Retail in products and services apart from consumer-goods is well established even on internet, as with real estate, insurance (health/life/general) and banking.
Payment gateway providers like CCavenue, paypal, billpay, etc. provide robust support to online retailers[3].

Inter-operability and Standardization: The Inter-modal Container

Pre-1960s, cost of loading/unloading constituted a significant fraction (around 15%) of the cost of the goods being shipped (around 25% of the cost of goods).[4] This was because transfer of goods between different modes of transport (ship, road, rail) would typically require significant logistic effort, further aggravated by different companies (exporters, importers and transport agencies) using their own sizes and shapes for packing the goods. Malcolm McLean "invented" a standardized 20' X 8' X 8(9)' steel box (the "Inter-modal Container") in which any goods to be transported would be packed in. A container packed in at the source would be opened only at the final destination, and not at various trans-shipment points, to unload and load goods into containers of the next lap of transport. This box would be used across all players, modes of transport and geographies. McLean gave the ISO royalty-free licenses to the design and thus made it a standard. Various players therefore modified their procedures, packing and trans-shipping processes to suit this standard, and that eliminated inefficiencies of the shipping industry, such as loose cargo, irregular and unpredictable manual labour, operating control with untrustworthy dock workers, corrupt unions, poor management, inconsistent port infrastructures and procedures. By early 2000s, transportation costs had reduced to around 10% of their 1940s[5].

Figure 3: Cost of transportation over years



This innovation is not contemporary, but is among the most impacting one for the industry as a whole. The standardization and interoperability provided was key in reducing industry costs. As newer paradigms step into being a practice in the industry,

[3] http://www.era.la/top-10-best-online-payment-gateways-in-india.html, Devina, December 2012
[4] "Interoperability Case Study : Intermodal Containers and Global Cargo Transport" Research Publication No. 2012-7, March 2012, Berkman Center for Internet and Society, Harvard University
[5] Edward L. Glaeser, Janet E. Kohlhase: "Cities, Regions and the Decline of Transport Costs" Discussion Paper Number 2014, http://post.economics.harvard.edu/hier/2003papers/2003list.html, Harvard Institute of Economic Research, July 2003

the container-innovation should teach us to standardize the practice across the industry and make it interoperable across players and technologies. eg. The ordering process through clicking a smart-phone camera on a QR-code on the product or billboard could standardize across the industry in its technology and user-interface features. The first-mover would definitely reap a mega-advantage over competitors on the same lines as McLean in the shipping industry.

Bar-code

The Barcode were among the earliest innovations adopted by retailers. It enhanced the speed of identifying a product/SKU on sale, thereby expediting billing - the slowest and most painful process from the customer's point of view.
The bar-code was invented and patented in early 1950s[6] by Woodland and Silver (Ref. barcode history). It was used by retailers only in the 1970s on product packages to enable fast scanning instead of typing in product codes. The bar-code was in various forms. The industry standard for bar-code usage in retail was created by the UGPPC (Uniform Grocery Product Code Council) by choosing the UPC(Universal Product Code) barcode used by the First National Stores, whose CEO Haberman was the chairman of industry-committee that was tasked with creating the standard to be adopted by all retailers for inter-operability between various logistics systems in a supply chain. This is yet another example, like the inter-modal container, of an industry-masking innovation, with a competitive edge being taken by a first-runner who makes his implementation a standard. Bar-code systems can be used to simply communicate price, to manage inventory, reduce time and cost of billing transaction and most importantly, provide data for data mining applications.

RFID

RFID（Radio Frequency Identification Devices）utilize the coupling of electromagnetic signal between a sensor (reader) antenna and tags placed on the items to be identified, by non-contact transmission of the object information in the form of radio waves. The tags carry information about the item. When an item with the RFID tag enters the proximity area of the reader antenna, the tag is activated and transmits the stored information to the reader via built-in antenna which sends the information to a computer system for further processing.[7]
RFIDs (tags) placed on items can be scanned even more easily than a bar-code. The tag is removed at billing time, and so identify any unbilled items leaving the stores with a reader at the exit points. RFID setups can be used to take inventory "automatically" by the reader system just "calling out" to each tag in its area, and registering the presence of a tag as that of an inventory item identified by that tag.
RFID tags placed in "membership cards" given to registered shoppers identify the shopper as he physically moves in the store, and staff can read the shopper's details (name, preferences, etc.) using readers on their own persona, and thus provide personalized service to the shoppers, making the shopper's experience even better, thus increasing his loyalty to the store.

[6] http://www.inc.com/the-build-network/6-lessons-on-innovation-from-the-history-of-the-barcode.html
[7] Fugui Ruan and Daichiang Chen, Chongquing Normal University: Based on RFID and NFC Technology Retail Chain Supermarket Mobile Checkout Mode Research for International Conference on Artificial Intelligence and Software Engineering (ICAISE 2013), published Atlantis Press

COD (Cash on Delivery)

COD is the term used for payment terms where cash is collected by the courier/deliverer of the goods on delivery and remitted to the vendor.

While this feature is available across the globe from long time, it has found a competitive innovative use in select markets. This feature could useful for a customer who does not want on record the fact of his purchase or his identity. This information with details came from discussions with some market players who wish to remain anonymous.

Use of the Internet (e-retail)

Using the internet for communication by retailers with customers has contributed great value-adds of disintermediation, playing field levelling across retailer size and the benefit of perfect competition to customers[8]. However, at the time of writing the paper, usage-of the internet for retailing can be said to be a decades-old innovation. Hence specific methods employed in using the internet platform are seen to be current innovations.

Cloud Computing

The NIST (National Institute of Standards and Technology, US Department of Commerce) defines Cloud Computing[9]d as a computing model that enables ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. This cloud model is composed of five essential characteristics, three service models, and four deployment models."

Deployment of these characteristics on all service models has enabled e-retail take off with minimized capital investments. The IT infrastructure is totally outsourced, from using cloud servers for hosting and database storage, to using retail application software as a service.

Accenture defines Cloud services as configurable, adaptable and scalable models of computing offering variable pricing tied directly to use (pay-per-use), thus requiring less up-front investment and ongoing operating expenditure than traditional IT models.

Pervasive Computing

Major development in user-end computing devices has led to a significant acceptance of hand-held devices like smart-phones being used as POS (point-of-sale) interface devices for the retail phase of browsing products/pricing and ordering[10]. Extension of payment gateways and mobile-banking enable the smart-phones to complete the payment lap of retail transactions.

[8] Doherty, Neil F. and Ellis-Chadwick, Fiona (2010). Internet retailing: the past, the present and the future. International Journal of Retail & Distribution Management, 38(11/12), pp. 943–965.

[9] Peter Mell, Timothy Grant: "The NIST definition of Cloud Computing" National Institute of Standards and Technology, US Department of Commerce, Special Publication 800-145 September 2011

[10] A New Era for Retail: Cloud Computing Changes the Game

Use of smart-phones and mobile (m-retail)

In developed economies, the growth rates of e-retail are being surpassed by m-retail (using smart-phones and mobile devices). This is a contemporary field for innovation in retail. Internet sales volumes are growing in Asian economies like India and China, while sales figures through mobiles is increasing at a rapid pace along with the rest of the world. M-retail volumes are expected to match e-retail between 2015 and 2020, while both grow. Figure 4 shows the extent of mobile acceptance across the world.

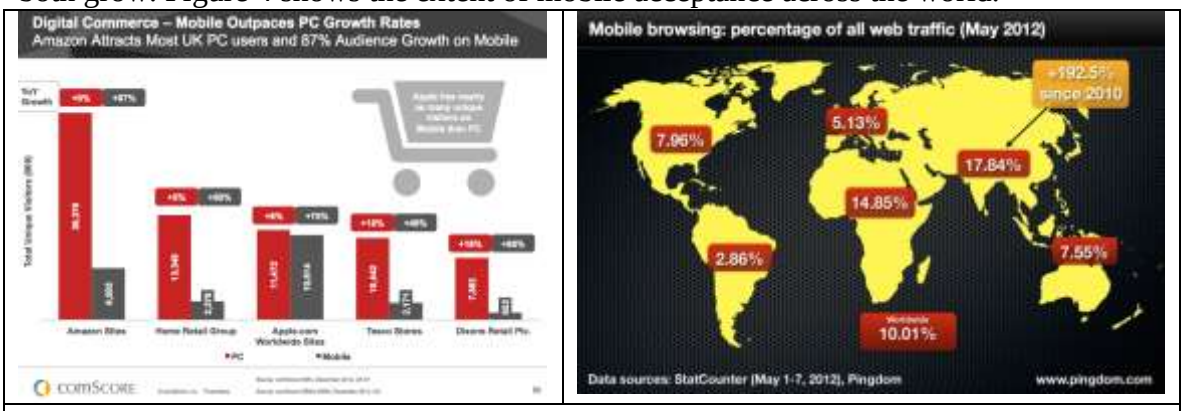


Figure 4: Mobile retailing across the world

M-retail is further aided by methods like use of QR-code "just point and click to order" (see Tesco Korea) and helps get innovative retailers gain tremendous competitive advantage. Developed economies are seeing sales through internet peak out and people are converting to mobiles and smart-phones.

QR-code

QR Code is a two-dimensional symbol. It was invented in 1994 by Denso, one of major Toyota group companies, and approved as an ISO international standard (ISO/IEC18004) in June 2000. It was initially intended for use in manufacturing, but it is now widely used in many applications including retail. Unlike the bar code, the QR-code can be clicked from any angle, even on a wrinkled surface which may even be smudged, and still read and interpreted correctly. It has features that enable certain amount of security as confidentiality and integrity better than most other bar-code standards[11].

The QR-code (aka 2-d barcode) has proved far more useful in customer interactivity both on the push and the pull side of the marketing effort, especially as the use of smart-phones has increased significantly worldwide. Smart-phones can be programmed such that if its camera clicks a QR-code (on a product or even a poster/ad/brochure), it will access a specific website for a specific function (like ordering, or sending more details).

A grand success innovation of the QR-code usage in retail was by TESCO Korea in 2010. Tesco Korea implemented QR-code based "virtual grocery stores", where busy commuters on the way back home after a busy day, would simply click their smart-phones on the QR-codes on the sample products on display in kiosks on subway stations, that would signal the Tesco website an order for the clicked products, and those will be

[11] Tan Jin Soon, Executive Director, EPC Global Singapore Council, Chairman, Automatic Data Capture Technical Committee

delivered in quick-time from a local store, possibly just as the person reaches home from the subway station.
This innovation was instrumental in TESCO achieving its objective of being the no.1 market leader.

Shopbots

Cross-retailer price viewer "shopping robot" software. It is better to support as many (popular) shopbots as possible since price levels and dispersion do not get affected significantly, especially by being on rank 2-5 of the shopbot query result shown to the customer[12] (Ref05).
Cross-retailer pricing is also put up by "brokers masquerading as retailers". eg. Vehicle Insurance cross-retailers like policybazaar.com procure pricing and other information from various insurance vendors for the user's view, and let the user compare options and buy from the broker site (like policybazaaar) rather than the original vendor. Likewise, brokers like cleartrip.com make flight-tickets from various airlines available through itself, and put in some own discounts or promotion schemes in addition.

Immersive Interaction : Look-and-feel simulators

Advanced computing machines offer "virtual reality" or electronic simulations of the products to prospective buyers who would make their purchase-decisions after looking, touching and feeling the products.
eg. Trylive and Eon Interactive (Ref.14a) systems let prospective customers "virtually try out" furniture, eye-wear, apparel and jewellery in-store, with only simulations of the products shown to the customer as they would look on her or in her house (furniture). The speed of trials would reduce, actual product need not be "used", a large number of products can be tried out in short time, without requiring any sales persons or actual products to be stored on shelf, and multiple customers can try out the same "product" at the same time, even if the product is not in stock at the retail point.
Such interactive immersion systems would offer customers a huge variety of choices, let them "try" (by simulation) various products which may not even be in stock. More advanced systems could help the customer even customize or "configure" a product that can be assembled and billed in quick-time by the time the customer leaves the store
This would on one side, reduce the need for inventory of every model of every SKU at each location, and also reduce post-purchase dissonance since the customer gets to "look-and-feel" before actually making the purchase.
This innovation is very contemporary and actually futuristic, and retailers would do well to adopt look-and-feel simulators in innovative ways to suit their business.

3-d printing

3D printing is a process of making a three-dimensional solid object of virtually any shape from a digital model by laying out successive layers of material in different shapes to "build" the product (Ref. Wikipedia).
3-d printing was conceived in 1984 and has graduated in technology and diversity to significant acceptance by the "common man"[13]. In 2014, 3-d printing is set to "breakout"

[12] Holger Schneider, Sönke Albers: "Retailer Competition in Shopbots", http://ssrn.com/abstract/1078505 September 2007
[13] Benjamin Grynol: "Disruptive Manufacturing: The Effect of 3-d printing" Deloitte LLP Canada

in a major way and blur the distinction between manufacturing and retail, by having customized manufacture of a product being done at the retailer's location itself[14].
This would enable retailers companies to "mass-customize" their products to address "market of one"[15].

Faster deliveries and remote access: Amazon drones

Jeff Bezos of Amazon published in 2013, his plans of automating the last lap in the retail workflow chain: home-delivery from local warehouse to customer. This is currently being done by courier systems which involve surface transport (road/rail) and manual work. Amazon has launched "Prime-Air" wherein they plan to use "octocopters": small self-navigated programmable aerial vehicles with eight small jet-engines that can fly a 2-3 kg payload from the warehouse to the final customer-destination. While there are technical (navigation and collision avoidance) and legal (licensing, crash-liabilities) hurdles to be overcome, this innovation is clearly the upcoming method. Arial deliveries can happen in minutes of ordering. This would probably be competing with the logistics companies, and probably those would also come up with their own versions in a bigger way.
In India, the largest three e-retailers, Amazon India, Snapdeal and Flipkart, announced aggressive delivery schedule as their last competitive weapon. Logistics thus is seen by experts as the key to market dominance in a highly commoditized market, where 90% of categories have identical offerings from all competitors[16].

Top Level Internet Domain Names: TLD

Retailers acquiring Top Level (internet) Domains hope to strengthen their brand image and recall, by having the retailer's identity being taken as the "meaning" of the word (their name).
ICANN opened up TLD registrations in 2011, but had a wave of objections by well known retailers like Amazon and Patagonia, whose claim to the .amazon and .patagonia domains was challenged by concerned governments as these names stood for certain territories in their lands. The Governmental Advisory Committee and recommended to be rejected by the full board of ICANN[17].
Retailers could use a TLD by their name, if the name would not get into a controversy on such grounds, and once they establish the name as their domain, they could utilize it to further strengthen their brand.
Even with the controversy-ridden retailers, there is still some chance that they may emerge successful from the ICANN legal battle.
Amazon has resubmitted an application seeking the TLD ".book" [18] (Ref 04) and Walmart for ".grocery". Such TLDs could put up the retailer as master of the product/category, by identifying the product category name with its TLD.

[14] Vivek Srinivasan, Jarrod Bassan, " 3D printing, and the future, of manufacturing" Leading Edge Forum Technology Program, CSC (Computer Science Corporation) USA, November 2012
[15] James H. Gilmore, B. Joseph Pine II: "Markets of One: Creating Customer-Unique Value through Mass Customization" Prod. #: 2387-HBK-ENG Harvard Business Press Books March 2000
[16] Economic Times 20 February 2014
[17] Jonathan Watts, The Guardian, 25 April 2013, "Amazon v the Amazon: internet retailer in domain name battle" http://www.theguardian.com/environment/2013/apr/25/amazon-domain-name-battle-brazil.
[18] New gTLD Application Submitted to ICANN by: Amazon EU S.à r.l. Application ID 1-1315-44051

Otherwise illegal possibilities (anonymous transactions)

Sex toys

Sale of sex toys is banned in India. Some retailers manage to sell online through their websites hosted outside India. They support their offering with customer-assurance factors like plain-packet delivery, defective return policies, online evangelization and education on product-usage. [19,20,21,22].

Bitcoin : eCash

Bitcoin, as defined by bitcoin.org, is a consensus network that enables a new payment system and a completely digital money. It is the first decentralized peer-to-peer payment network that is powered by its users with no central authority or middlemen. From a user perspective, Bitcoin is pretty much like cash for the Internet. Bitcoin can also be seen as the most prominent triple entry book-keeping system in existence. Bitcoin is a "crypto-currency", i.e. money that is maintained by a cryptographic algorithms rather than by a sovereign authority or central bank[23]. From a user perspective, Bitcoin is just a mobile or computer application that provides a user a personal Bitcoin wallet to send, receive and store bitcoins in them. At the end of August 2013, the value of all bitcoins in circulation exceeded US$ 1.5 billion with millions of dollars worth of bitcoins exchanged daily.
Bitcoin is not specifically said to be illegal by any legislation in most jurisdictions, including USA and India.
Some websites accept e-cash, notably bitcoin, thus allowing customers wanting to make untracked payments for their purchases. Some traditional business like tea-auctioneers too have started accepting bitcoins, thus supporting their customer-base wanting to purchase using e-cash[24,25]. Paying by bitcoin enables keep transactions invisible to the international financial system, and thus may get customers wanting such anonymous transactions to buy from websites, including retail ones, that accept payment in bitcoin.

Factor Importance survey

Sizeable literature survey was conducted on relevant trade articles, research papers, published research results and non-textual inputs (eg. youtube videos), all on the internet. From this emerged a set of factors that could both count as innovations (even if they were not contemporary) and as having made significant impact of building retail sales volume worldwide.
To remove personal bias on qualifying these factors as impacting innovations, a survey was done asking respondents their rating of the impact each of these factors had in their preference to buy on the internet.
A simple survey was conducted on about 50 respondents who were students of a B-school. They were all in the age bracket of 20-25 years and came from families in middle

[19] TNN "Delhi Police cracks down on sale of sex toys", http://adultvibes.hpage.co.in/faq_49713714.html 12 October 2013
[20] in.imbesharam.com
[21] http://www.indiamart.com/atoys/
[22] http://www.masalatoys.com/pages/About-Us.html
[23] Ref. www.bitcoin.org en/faq#what-is-bitcoin
[24] Krishna Bahirwani "India's first e-Commerce store to accept Bitcoin only as a payment method" http://www.dnaindia.com/money/interview-india-s-first-e-commerce-store-to-accept-bitcoin-only-as-a-payment-method-1959468 DNA web desk February 5, 2014
[25] http://tealet.com/bitcoin

to high income slabs(above 10 lakhs per annum). This demographic segment was presumed to be representative of a significant majority of the population that buys on the internet, in terms of their proclivity to buy from retail websites (at least Rs. 1000 per month on average). They were asked to rate each factor listed as being instrumental in their preferring to buy on the internet, from 0(not at all important) to 10(extremely impacting). 32 of the sample of 50 responded. Analysis on the response yielded the following aggregates. The ratings were grouped as (0-3) being low impact, 4-6 being medium and 7 or above being high.

Factor → Aggregate↓	COD	24hour Open	Home Delivery	Memor-able Name	Return policy	Cross-price	Configu-rator	TV prom otion	Rare products available
mean rating	6.00	7.22	8.03	4.50	6.88	7.34	6.66	4.65	5.53
Std. Devn.σ	3.31	2.31	2.68	2.86	2.54	2.29	2.34	2.96	3.18
Fraction(>=7)	48%	63%	81%	22%	63%	63%	59%	29%	43%
Fraction (btn4,6)	30%	34%	13%	41%	25%	31%	31%	35%	37%
Fraction(<6)	21%	3%	6%	38%	13%	6%	9%	35%	20%

Table 1 : Relevant Aggregates of data from survey

Two main limitations of the survey are borne in mind while interpreting the results:

1. The sample size was rather small for univariate analysis Z-tests (μ/π). Because of the grouping of ratings, we can assume a 30% error tolerance ($X-\mu$). Assuming σ for the world population for each factor to be around 2.6 (=sample std. dev. across all factors), the recommended sample size $n=\sigma^2 * (Z_{3\sigma}/e)^2 = (2.6)^2*(2.9/0.3)^2 = 631$. The post-paper plan is to conduct the survey over an international sample of size around 1000 to revise the inferences from the smaller survey.
2. Since some innovation factors emerged from the literature study after the survey was launched, those were not verified as being seen as impacting innovations by a sizeably high group beyond the author.

As is seen in the results table, two factors don't seem to score well on the impact: Memorable name and TV-promotion. It can be inferred that promoting the product through TV teleshopping channels does not spur viewers to buy online. Likewise, having catchy easy names or owning top-level internet domains to convert the retailer's name into a generic class (as what world-leading retailers like Amazon are trying to) may not really help increase visibility and sales on a retailer's website.

Innovations like providing cross-pricing on a retailer's page, or a third-party shopper-aid site, would possibly enhance the proclivity of the customer to access that site, and if possible, even buy through it.

References

1. Retail Industry Global Report 2010, IMAP, www.imap.com
2. Srinivas Gumparthi and T. Roopasree: "Design and Development of a Revenue Generation Model for Retail Mall: A Case Analysis, Business and Management Research Journal Vol. 2(2), pp. 61 - 76, May 2013 http://www.resjournals.com/RBM
3. http://www.era.la/top-10-best-online-payment-gateways-in-india.html, Devina, December 2012
4. "Interoperability Case Study : Intermodal Containers and Global Cargo Transport" Research Publication No. 2012-7, March 2012, Berkman Center for Internet and Society, Harvard University

5. Edward L. Glaeser, Janet E. Kohlhase: "Cities, Regions and the Decline of Transport Costs" Discussion Paper Number 2014, Harvard Institute of Economic Research, http://post.economics.harvard.edu/hier/2003papers/2003list.html, July 2003
6. http://www.inc.com/the-build-network/6-lessons-on-innovation-from-the-history-of-the-barcode.html
7. Fugui Ruan and Daichiang Chen, Chongquing Normal University: Based on RFID and NFC Technology Retail Chain Supermarket Mobile Checkout Mode Research for International Conference on Artificial Intelligence and Software Engineering (ICAISE 2013), published Atlantis Press
8. Doherty, Neil F. and Ellis-Chadwick: "Internet retailing: the past, the present and the future", International Journal of Retail & Distribution Management, 38(11/12), pp. 943–965, Fiona 2010
9. Peter Mell, Timothy Grant: "The NIST definition of Cloud Computing" National Institute of Standards and Technology, US Department of Commerce, Special Publication 800-145 September 2011
10. A New Era for Retail: Cloud Computing Changes the Game
11. Tan Jin Soon, Executive Director, EPC Global Singapore Council, Chairman, Automatic Data Capture Technical Committee
12. Holger Schneider, Sönke Albers: "Retailer Competition in Shopbots", http://ssrn.com/abstract/1078505 September 2007
13. Benjamin Grynol: "Disruptive Manufacturing: The Effect of 3-d printing" Deloitte LLP Canada
14. Vivek Srinivasan, Jarrod Bassan, " 3D printing, and the future, of manufacturing" Leading Edge Forum Technology Program, CSC USA, November 2012
15. James H. Gilmore, B. Joseph Pine II: "Markets of One: Creating Customer-Unique Value through Mass Customization" Prod. #: 2387-HBK-ENG Harvard Business Press Books March 2000
16. Economic Times 20 February 2014
17. Jonathan Watts, The Guardian, "Amazon v the Amazon: internet retailer in domain name battle" http://www.theguardian.com/environment/2013/apr/25/amazon-domain-name-battle-brazil, 25 April 2013
18. New gTLD Application Submitted to ICANN by: Amazon EU S.à r.l. Application ID 1-1315-44051
19. TNN "Delhi Police cracks down on sale of sex toys", http://adultvibes.hpage.co.in/faq_49713714.html 12 October 2013
20. http://in.imbesharam.com
21. http://www.indiamart.com/atoys/
22. http://www.masalatoys.com/pages/About-Us.html
23. http://www.bitcoin.org en/faq#what-is-bitcoin
24. Krishna Bahirwani "India's first e-Commerce store to accept Bitcoin only as a payment method" http://www.dnaindia.com/money/interview-india-s-first-e-commerce-store-to-accept-bitcoin-only-as-a-payment-method-1959468 DNA web desk, 05February 2014
25. http://tealet.com/bitcoin

Bibliography

1. http://phys.org/news/2013-12-amazon-unveils-futuristic-mini-drone-delivery.html
2. Yuvraj Samant "A Study Of The Online Retail Market With Respect To India Vis-À-Vis The United States Of America" http://ssrn.com/abstract=2231623

3. Joe McKendrick, 29 August 2013 http://www.smartplanet.com/blog/bulletin/despite-the-hype-e-commerce-still-only-a-small-fragment-of-retail-sales/
4. Global B2c E-Commerce Market Report 2013, teaser, ystats.com
5. Emek Basker, University of Missouri "Change at the Checkout: Tracing the Impact of a Process Innovation" June 2013 SSRN-id2215258
6. Lisa Shuchman, Amazon's Domain Name Troubles Threaten ICANN Program, http://www.corpcounsel.com/id=1202614276487?slreturn=20140106074208
7. ICANN GAC Early Warning – Submittal Patagonia Chile 78254, Application ID 1-1084-78254
8. ICANN GAC Advice Response Form for Applicants, Application ID 1-2064-74519
9. Jennifer Zhang (University of Texas at Arlington), Bing Jing (Cheung Kong Graduate School of Business), "The Impacts of Shopbots on Online Consumer Search" Net Institute (www.netinstt.org), Working Paper #07-34
10. Ryan Hamilton and Alexander Chernev, "Low Prices Are Just the Beginning: Price Image in Retail Management" Journal of Marketing: November 2013, Vol. 77, No. 6, pp. 1-20.
11. Matthew B. Becker, "Interoperability Case Study: THE BAR CODE/UPC" Research Publication No. 2012-4 March 2012, The Berkman Center for Internet & Society Research Publication Series: http://cyber.law.harvard.edu/publications, The Social Science Research Network Electronic Paper Collection: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2031107 Electronic copy available at: http://ssrn.com/abstract=2031107
12. Luca G Zambrelli: "Snapshot on Market Research about QRcode2013" luca.zambrelli@ideolo.it, January 2014
13. Accenture, "U.S. Consumers Receptive to Social Media Appearing on Their TV Screens" http://newsroom.accenture.com/news/us-consumers-receptive-to-social-media-appearing-on-their-tv-screens-according-to-accenture-study.htm, 16April2012
14. Alex: " QR Code Adoption: 2013 Trends & Statistics" http://www.scanlife.com/blog/2013/02/qr-code-adoption-2013-trends-and-statistics/
15. "Bricks and Clicks- study examines how shoppers use QRcode in retail settings" Package Design, Jan-Feb 2013 www.prsresearch.com
16. "A Look at Tesco Home Plus' Mobile Campaign in South Korea: A case study" http://patrickquintavalle.wordpress.com/2012/03/01/case-study-4-a-look-at-tesco-home-plus-mobile-campaign-in-south-korea/
17. " Brick and Clicks - The New Reality of Retailing" 29November2012 http://www.prsresearch.com/about-prs/announcements/article/brick-and-clicks-the-new-reality-of-retailing/
18. Mark Larson (Partner, KPMG), Matthew Shay (CEO, National Retail Foundation) "Retail Insight: Spotlight on Modern Retail" research.nrffoundation.com
19. Hanah Ben Shabat, Parvaney Nilforoushan, Mike Moriarty, "The 2013 Global Retail E-commerce Index" A.T.Kearney Global Consumer Institute
20. Worldpay "Global research project exploring consumer attitudes towards online shopping (19000 shoppers worldwide)"
21. http://www.t-immersion.com/trylive/trylive%E2%84%A2-augmented-reality-fashion
22. https://www.youtube.com/watch?v=h7HnR02kJxY