European Commission

Six perspectives on Retail Innovation

Expert Group on Retail Sector Innovation

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Six perspectives on Retail Innovation

Expert Group on Retail Sector Innovation

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Contents

Introduction

As part of their deliberations, members of the Expert Group agreed to focus their attention on a series of issues that they felt merited further investigation. These six perspectives on retail innovation are included as an Annex to the main report. Individual themes represent the views of the authors. Selected themes and case studies have been summarized in the main report from the Group.

Theme 1 – Reducing effort for customers

João Gunter Amaral, Innovation Director, Sonae Distribuição, Portugal &
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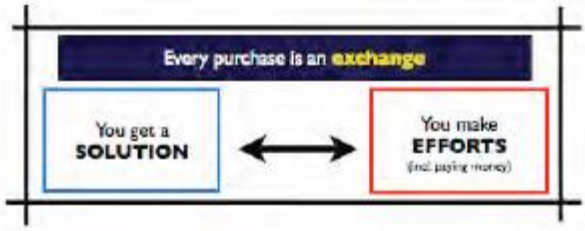
Introduction and scope

Retail innovation may exist both in the front-end of the retail operation, through what is visible to customers (in order to create sustained customer preference), as well as in the back-end (to increase productivity, efficiency, and achieve a faster time to market). The main aim of retail innovation at the front-end is to improve customers' quality of life in their shopping process. This means that innovation may be better devised by putting the customer in the centre (so-called 'customer-centricity'). Innovation through substantially reducing customers' efforts is based on the idea that, if the retail firm makes the shopping experience much easier and more comfortable, customers will return to the chain's shops. As a result of customers preferring the retail chain, future cash flows & profitability are more likely.

From the customer's point of view, any purchase is an exchange: a solution that they obtain in return for efforts that they do not necessarily like making, but that they still consider to be worthwhile.



Customers not only have to make efforts within the shop (or on the website), but also before and after it. The retail innovation scope should entail the entire purchasing process.

What's an effort?

Taking into account this perspective, an effort is any inconvenience, trouble, endeavour, worry, distress, activity, annoyance and pain (including payment), a customer must face to get their desired solution. These efforts are sometimes perceived, but also sometimes not perceived by the customer. For example, customers do not always correctly value the cost of their time, or of their transportation, in comparative shopping activity. Effort is a subjective term: what could be an effort for one person, may not be the same for another. To match up items of clothing could be an effort for some men, however it could be a pleasure for women, for instance.

Some examples of efforts

There are many efforts customers have to make when shopping. Going to the shop (or e-shop), finding it, parking, being there at the right time, finding what they are looking for or asking for assistance, paying, or bringing the purchased items home. But there are also other rather less visible efforts such as: customers perhaps feeling lost or ill-informed during the shopping process. According to the European Consumers' Organization (BEUC) there are three main types of effort faced by today's consumer:

- Information overload: there has been a increase in the volume of decisions consumers must make for purchasing the simplest items;
- Increasing complexity of decision-making: there are a growing number of products and services and customers have to choose between options they may not understand sufficiently well; and

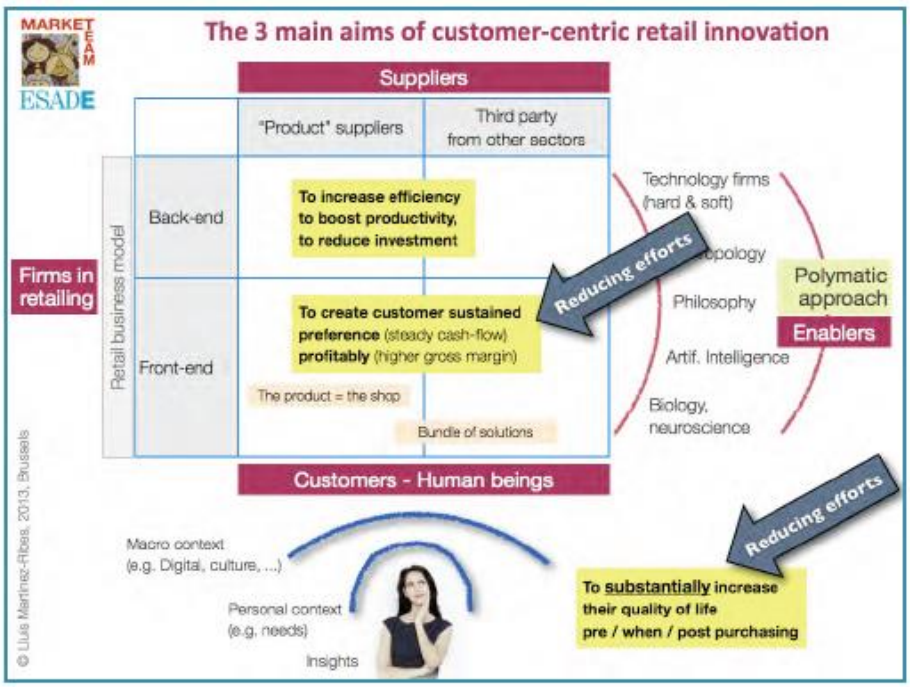
- Communications difficulties.

Even in e-shops there are many efforts customers have to face when shopping, such as logging on to the web site, reading and confirming the purchasing terms and conditions, verifying that they are a real person by typing combinations of letters and numbers into a captcha field, etc. Reducing efforts implies that the customer is the main source of inspiration.

Reducing efforts should be integral to retail innovation aims

There are three main aims of customer-centric retail innovation:

1. For the customers: to substantially increase customers' quality of life when purchasing, including the pre- and post-shopping experiences. This must take into account the macro context (the fact that customers live in an "information-rich" society, the impact of digitalization, the impact of different cultures, etc.) and the customer's personal context (their current constraints, needs & worries). Capturing customer insights and understanding the profiles of the main customer segments becomes crucial for the retail innovation process.
2. For the retail firm: To have an appealing and no-nonsense front-end, in order to create customer sustained preference towards the shop (financially translated to a steady cash-flow) and profitability (through an achieved higher gross margin). In retailing the main "product" is the shop, as no item can be sold unless a customer decides to go to this store (or to its digital equivalent).
3. Also for the retail firm: There may be also innovation focused at the back-end. Retail innovations' aims, when focused on the back-end, is to increase efficiency, boost productivity, speed processes up, and/or reduce investment.



Devising an innovative customer-centric retail formula requires a holistic, polymathic approach that uses as enablers not only the technology (hardware & software) but also people with expert knowledge from other disciplines such as anthropology, philosophy, artificial intelligence, biology, neuroscience, etc.

Drivers for retail economics

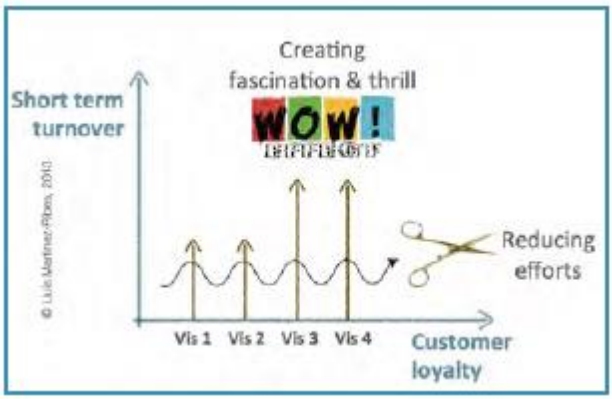
The majority of retail chains in the world prioritize two retail economic drivers: (1) to foster customer loyalty, and (2) to achieve sales volume and growth. From the financial point of view, we can say – in a simple way – that the purpose of any retail company is to "grow customers", i.e. to increase their economic value to the firm. This is measured through an important metric: the Customer Lifetime Value. CLTV is an indicator for measuring the present value of the future cash flows attributed to each customer's purchasing pattern. It helps to focus on long-term customer equity, rather than simply maximizing short-term sales. This enables retailers to know how much each customer is worth and how much future cash flow will likely be.

This metric allows retail firms to see each new customer as a "seed" to take care of, with the intention of "bearing fruit". An important research study indicates that delighting customers does not create much more loyalty, but reducing their efforts does (Dixon, Freeman & Toman, 2010). In short, reengineering the purchasing process in order to create an almost effort-free customer experience is an important opportunity on the road to retail innovation.

Drivers of retail turnover

There are two types of drivers that can work to boost turnover.

1. Creating fascination and thrill through a "wow effect" in the shopping experience. This results in short term turnover increase, as well as less price sensitivity in customers.
2. Reducing efforts to create customer loyalty and future cash flow. By reducing efforts shoppers will feel more comfortable and at ease in the shop, so they would like to come back.



By providing a meaningful customer experience, both fascinating and effortless retail firms "grow" their customers, so they make their CLTV grow.

Reducing efforts in a retail innovation case: Victorio & Lucchino Men

Understanding and trying to substantially reduce customer efforts is not a road towards simple and incremental improvements, it is a highway towards more radical innovation. The retail innovation example explained here is a holistic one and it conveys a breakthrough in the retail concept, even in the retail business model. It includes reengineering of the shopping process, taking action both in the front-end and in the back-end. It starts from detecting and understanding customer insights, but it also includes the usage of different technologies.

The Victorio & Lucchino Men case (V&L) is a good example of retail innovation driven by the aim of reducing customer efforts. The concept of this retail formula was created through a customer-centric retail innovation approach. The basis of the project was that this retail formula must be

grounded in the understanding of the generally not very enthusiastic relationship between most men and fashion.

The customer insights gathered through qualitative market research indicated that some (Spanish) men feel that shopping for apparel is a time consuming activity, not pleasant, and a source of feelings such as ignorance and doubt about colors and texture combination. In addition, they hate to try on garments in the fitting room. In short, it was perceived as an unpleasant and effort-demanding activity. The V&L retail concept was devised specifically to provide men with a new shopping process able to substantially reduce those efforts, while also reflecting the values of the V&L brand. As these men disliked fashion shops, the new store was themed as a living room, expressed with the particular imagination, style and liveliness of the two Sevillian designers. The products are displayed therein, sorted by user context such as formal work, casual moments, etc.

The shop maximizes customer convenience by mass-customising the shopping process while reducing substantially customer efforts in a fun way, namely through two steps: first "pinpoint profiling", where customers are invited to enjoy a free diagnosis of their aesthetic preferences. Customers can discover, with the help of a touch screen and a stylist, which style fits best with their personal taste. The information is stored in the cloud. The second step is the "Canvas", a 40" touch table-tablet that proposes three coordinated outfits taking into account previously detected personal preferences. This is also a good example of a technology used as an enabler of a devised solution.

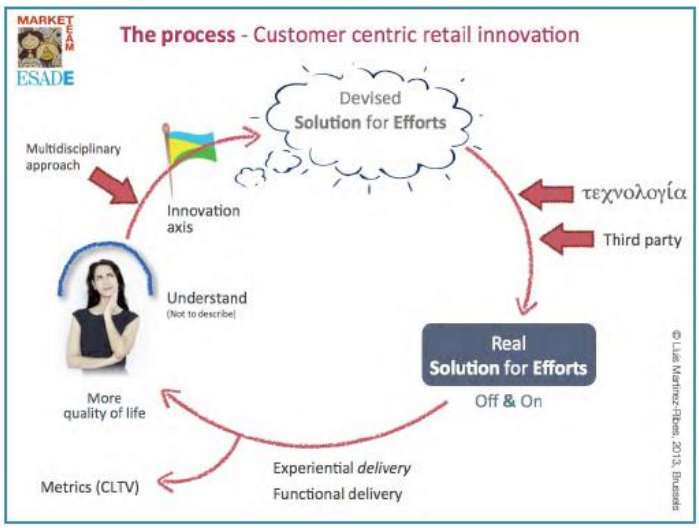
V&L Men is an innovative retail ecosystem, created to foster customer loyalty through substantially reducing efforts, in order to yield sustained cash flow. At the end of 2013, an online store will be available to customers who have completed the pinpoint test.

The main barriers to fostering retail innovation through effort reduction

Based on our experience and research, the main barriers to retail innovation and the ability to substantially reduce customer efforts include:

A. The lack of a sufficiently customer-centric attitude in many senior retail managers, board members, and entrepreneurs, to put themselves in the customer's shoes and understand customer needs and wishes from their perspective, depending on the frame of mind and context the customer is in, at each moment.

B. A lack of skill in detecting efforts. Sometimes, the invisible must be made visible. The described approach requires innovators to hunt for efforts that may not be immediately apparent to customers.



C. To use unconventional managerial tools. Here we show two examples: to use quantitative market research to understand customers and detect their insights. To ignore scientifically how human beings make decisions in their brain so many mangers still only use the retail mix

traditional instruments, instead of the "non-consciousness marketing" (85%-95% of human decisions are non-conscious or implicit).

D. As customers do not realise when they are online and offline, the boundaries between these two worlds get diluted. Nowadays the customers are "on-off", a new experiential dimension. But many retail managers have not perceived it, so they still think in terms of "multichannel" or "omnichannel".

E. Many companies use traditional short term metrics (such as average basket spend, etc.). The CLTV metric is used by few retail firms. Many retail managers get their bonuses based on the chain's short term performance.

F. Once the retail manager has envisioned the retail solution, sometimes it is difficult to find the proper technologies to bring the solution to fruition.

G. Many find it difficult to locate third party experts in different fields of expertise who may assist in some part of an innovation process, or to have enough resources to afford such experts (crucial for SMEs).

H. As the road to retail innovation is strongly based on customer centricity, it must have a polymathic approach, with strong multidisciplinary interaction. Many SMEs find it very difficult to develop such a process without financial support.

I. The most crucial barrier in order to trigger retail innovation is top manager's mindset. If they ar enot prone to innovation, the result is simply improvement or – being more optimistic – an incremental innovation. This mindset transformation cannot be done through training medium level managers by the tradicional education methods.

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Theme 2 – Consumers as innovation drivers

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Introduction

In the retail sector, consumers play perhaps the most important role as being innovation drivers. Today the development of how and from where customers shop is governed by emerging technology and innovation, incurred by consumers. The challenge for retailers is how to deliver customer satisfaction whilst also being focused on their core business. At the same time, retailers also need to prepare for a changing consumer market. European countries are facing **demographic, societal, and economic change** that will have a significant impact on the outlook for growth and consumption in the coming years. A few major **trends and insights** are dictating those changes and are posing new challenges and opportunities for consumer-facing companies. The European population is growing **older** and the share of population older than 55 years old will represent more than a third of total population in 2020. It will be a **more educated** population that, because of that, will arrive later at the labour market, will **have less or no children** and, more frequently, will **live alone**.

The budget consolidation process will continue to put **pressure on private consumption.** Consumers who have been adopting more rational behaviours (such as planned shopping, trading down, etc) will likely retain these behaviours even when and if the economy recovers. A further consequence of the sluggish economy is that youngsters in a number of markets are finding it hard to get a stable job, meaning that many of them are seeking to emigrate and many others to depend on their parents who themselves, when reaching retirement age, will face lower pensions. **Technology is empowering the consumer** who now has more access to information - and that knowledge is power. Being always connected, consumers can have current, timely information right when they need it, conveniently, in the palm of their hands. But technology will also act in favour of the retail industry, allowing for service to reach levels unimaginable today. People are living stressful times: uncertainty regarding the future is a heavy burden. But, or because of that, there is a growing concern with work/life balance and life quality. That is reflected also in a growing collective conscience regarding environmental and social issues, particularly amongst younger generations.

Scope and definition

As a consequence of these trends and insights the European consumer over the coming years will be **older**, **lonelier** and **poorer**, more **urban**, and at the same time **environmentally & societally concerned and more educated, connected & informed.**

1. The European **population** is ageing, due to a combination of increasing longevity, lower fertility rates, and the ageing of the large baby boom generation. Ageing will bear down on per capita GDP growth, purchasing power, and consumption. Mature households will become the largest and fastest-growing pool of consumers, dictating a change in the consumption basket and in the value proposition offered by retailers.
2. A range of **societal** shifts are also rolling out to reshape the consumption landscape which include rising educational attainment and a growing number of smaller households as less couples live together and households have a smaller number of children.

3. Over the last 20 years, with the consolidation of the European Union and the advent of the Euro, emergent European **economies** have expanded significantly and allowed successive generations to become more prosperous, to earn more, and to accumulate greater wealth than did previous generations. Today, the burden of debt, together with budget consolidation measures, have stopped that process. In addition, a lower overall economic participation rate due to ageing, slowing productivity gains, and limited resources will continue to bear down on economic and consumption growth. Ageing will increase the strain on public-pension financing, thereby adding another source of downward pressure on the region's consumption.
4. All of these trends, together with the **massification of technology** will lead to shifts in the consumer needs and in the composition of consumer segments and, consequently on the factors determining success and failure that retailers must obey in order to remain relevant.

External and internal drivers

Being able to cope with the above mentioned **demographic, societal, and economic drivers** will be of fundamental importance for the success of any retailer. Retailers will have to develop strategies to satisfy a customer that is expecting **value, convenience** and **wellbeing** and demanding **social responsibility**, seamless **omni channels, transparency** and **honesty**.

Driver 1: Older population with higher life expectancy and decreasing fertility

Retailers will have to develop new products and packaging, develop new store concepts, design new business models, establish new partnerships, acquire skills to be able to analyze the customer and customer journeys in order to reduces customer efforts and adopt new technologies. Consumers are looking for simple processes, great communication, good promotion, easier to park, easy to find articles, and easy to walk and rest, **and**:

(1) Product range: from family to individual;
(2) Growing importance of food as home segment means less eating out;
(3) Products: an elder orientation;
(4) Convenience having a key role: store locations, parking, shopping paths, store equipment and packaging; on-line shopping;
(5) Bigger demand for health products and healthy food to remain mobile and independent; and
(6) Service is crucial: no waiting in line; seating available in stores; Familiarity in service (one to one)

Impact on Retail: Simplicity and Convenience are needed; time is in excess allowing for more visits per month, more time to explore the store and less quantities bought per visit.

Driver 2: Enabling Technology

(1) Smaller packaging and longer expiry dates;
(2) Ready to cook; ready to eat; home deliveries;
(3) Easier to access products;
(4) M-Commerce, E-Commerce; Phone Commerce; Home Deliveries; New services; lighter materials for packaging
(5) Emphasis on health and nutrition;
(6) Vitamins and supplements integrated in food; and
(7) New payments models; Self Service Checkouts; taking groceries to the car/home; placing orders by phone familiarity and personalization but with difficult financials)

Driver 3: More small families with decreasing family size

Simplicity and Convenience are needed; time is in demand and consumer demand will require:

(1) Smaller packaging sizes due to smaller buying units also due to greater aversion to waste;
(2) Smaller houses, smaller fridges, more shopping trips;
(3) Need for quicker and simple shopping experience (a huge challenge for hypermarkets and on-line shopping for grocery);
(4) Various stores inside the same store as a possible solution?
(5) Increased importance of social responsibility and an emphasis on community; and
(6) Stores as a meeting place for lonelier consumers

The driver will also lead to specifically applied technology:

(1) New product development of smaller sizes and a supply chain that better manages waste and recycling;
(2) Shopping from home: today water, electricity, books, music arrive at home without problems (and beer, wine, food) or even collecting from centrally located places;
(3) Shopping experience: a more automated shopping experience concept; automated picking
(4) Focus on ready solutions: take away, ready to cook
(5) Focus on the individual: time for him/her self and interests: new hobbies; DIY;
(6) Queuing is a big issue: single queuing; self scanning; self check-out; automatic payment systems; 'Drive'/click-and-collect; in-store picking; queue busting;
(7) Using social networks to pair up consumers to share leftover food (e.g. http://www.springwise.com/lifestyle_leisure/farmers-cooperative-pairs-singles-leftover-food/)

Driver 4: Decreasing household and disposable income

Consumers behave with more frugality, using mature buying processes and seeking value for money, rightsizing their purchases with no overspending while still looking for simple pleasures.

(1) Reinforced Cost Consciousness among customers: Value is, and is reinforced as, King;
(2) Decreasing consumption (crisis) and fewer purchases per visit
(3) More sensitivity to price and promotion
(4) Increased share of private label (with additional pressure on top line for retailers due to trading down)
(5) Planned shopping to control spend
(6) Shopping smarter: cherry picking; deal finding; informed shopping; no temptation;
(7) Growing importance of stores as "decompressing" places, where people can feel more at ease

The driver will also lead to:

(1) Own brand development having to give more value to customers;
(2) Retailer as the key to innovation and the life quality of consumer: an entry door to new products and products made more generally available;
(3) Spending control through store organization and mobile technology;
(4) Stores as the living place
(5) Mobile technology to allow price comparison between chains: no need to do the maths for the price per kg, etc.

Driver 5: Environmentally & socially concerned

Consumer honours the "local": importance of the community; local production; natural. S/he participates in socially responsible movements and seeks out more and more responsible companies, brands, products and actions. Looks for fairness and fair deals.

(1) Consumers and issue groups alike will be looking for retailers to operate their stores in a more responsible and sustainable way, taking an explicit stewardship role for the items they sell. This should gain further emphasis as generation Y begins to take the wheel of consumerism.

(2) A more critical consumer who will call attention to products and brands that are less well aligned with these values. Demand for coherent brands that speak the truth. Authenticity and transparency valued as never before.

(3) Promoting the environment can also be synonymous with buying local. In this case, nationality could be a strong axis to capitalize upon. If, local goes further, regional specificities would demand for greater power to the store manager (decentralization).

(4) Use of eco-friendly store equipment.

(5) Ensure products sold come from sustainable productions and supply chains – product origin and sourcing under growing scrutiny.

(6) Obligation" to use part of the profits to social responsibility

The driver will also lead to:

(1) Retailers monitoring waste, energy, water consumption (and other resources) to identify ways to be more sustainable;

(2) Full transparency being required for products consumed, supported by appropriate societal values on ethics, CSR etc.;

(3) Stores & equipment identifying areas to improve eco-friendly status, including less use and waste of natural resources;

(4) Retailers considering further integration with the local community, including getting involved with social events and charities and supporting socially responsible activities;

(5) Developing of 3D printing capability that could be adapted to produce only the food on demand (disintermediation of retail: Traditional agriculture, manufacturing and distribution would become obsolete, replaced by information-driven systems completely decentralized); (See 'Dinner is Printed' http://www.nytimes.com/2013/09/22/opinion/sunday/dinner-is-printed.html?_r=0). Technology to make good food out of rotten food, in ways similar to water recycling: http://www.youtube.com/watch?v=rXepklWPhFQ

(6) App connecting consumers with discounts to reduce food waste: http://www.springwise.com/eco_sustainability/app-connects-consumers-discounts-reduce-food-waste/

Retailers need to provide environmentally and societally-related innovation and illustrate solutions to broader environmental and contemporary challenges that societies face (see columns above 1-4)

Driver 6: Educated, connected and informed

Consumer are increasingly demanding: information; transparency; 24h availability; experience; "right here, right now"; Hi tech: digital store; Intelligent buying process; Opinion: needs to have a voice and to hear other opinions.

(1) Increasing transparency and lack of tolerance for distortion of information

(2) Conventional forms of advertising (TV) will become more and more marginal in their returns.

(3) Possible greater involvement of the consumer in the development of new products (examples: Asda's customer panel, with 7,500 participants - https://pulse.asda.com/Portal/default.aspx);

(4) With the internet available at work, at home, and on the go, consumers will be full-time shoppers, not distinguishing on- and offline and demanding a seamless relationship with the brand

(5) Importance of generation Y (25 to 40 years old in 2020 accounting for 18% of total population):

a) they are completely technologically integrated (83% sleep with their mobile)

b) one in four lives in a single-parent household and are used to get everything anytime (value: speed, efficiency, convenience)

c) they integrate causes into their lives (social responsibility)

d) they will face high unemployment and precariousness

f) they value work-life balance, sustainability and life-quality

"I want my friends opinions + I want to express my opinion + I want convenience + I want to have fun + I want to be heard + I want to have an impact"

The driver will also lead to:

(1) Full information availability (what, where, when, who)

(2) Emphasis on new communication channels that are the only mediums to attract future shoppers

(3) Retailers in the future will not compete on prices for similar products but on value proposition

(4) Consumer co-create products and services aiming for larger customisation (e.g. Second Life)

(5) E-Commerce; 3D E-Commerce

(6) Devices 'learning' about its users' shopping habbits and suggesting purchases, alerting for items running out and expiry dates

(7) Internet of Things: dawn of the 2nd CPU generation resulting in smaller, thinner, always connected, less power-hungry devices

(8) Smartphones potential: Mobile phones today have server-scale capabilities in terms of hardware, processing power and network.

(9) Commodity CPUs will create swarms of connected intelligent devices. Sensors are going to be embedded in almost every object we use: sensors that make anything smart; embedded sensors that can see everything; sensors that display your emotions.

Theme 3 – Business model innovation

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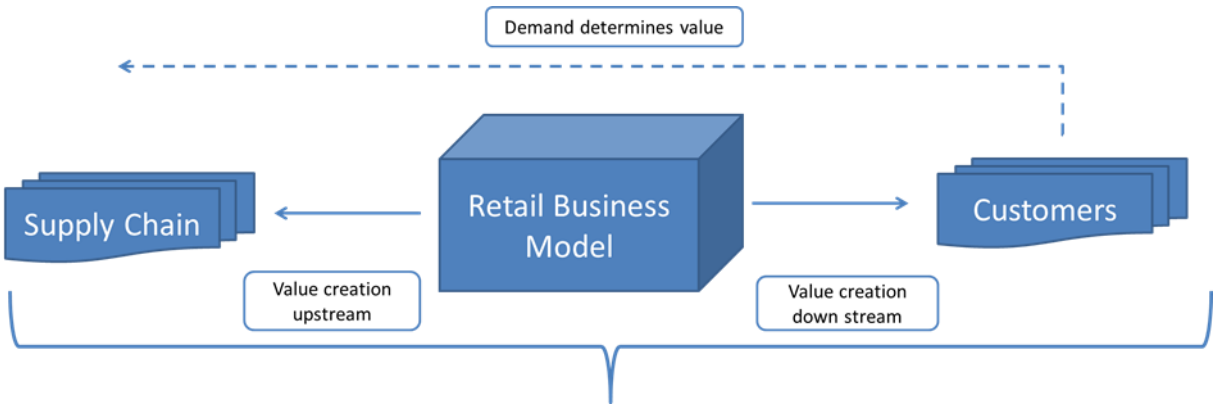
Scope and definition

A business model articulates the value proposition of any firm, its sources of revenue, the resources used to extract rents and the governance mechanisms that link the firm's stakeholders. Sorescu et al., (2011) propose a definition as follows:

A business model is a well-specified system of inter-dependent structures, activities and processes that serves as a firm's organizing logic for value creation (for its customers) and value appropriation (for itself and its partners).

A retail business model can be described as how a retailer creates value for its customers and for the firm.

Customer demand determines the value of the retail business model and its related supply chain. Customers shop at multiple retailers and find it easy to switch. Switching rates in retail are much higher than in sectors such as energy and financial services; some markets are more transparent and customers find it easy to make informed purchasing decisions. The precise mix of what customers want varies over time and is different in different markets. But it's always more than just price. Range and product availability are ranked at #1 and #2 amongst customers' motives to switch. Other drivers to switch are quality, store atmosphere, cleanliness, queues and staff helpfulness. Getting better on many of these dimensions depends on how retail business models work within the supply chain. Innovative retail business models introduce or build new sustainable (not easily copied) advantages, either to improve sustainable profitability or to improve efficiency, in order to give better service and / or products to consumers, to give better quality of life. Figure 1 captures the creation of value in the retail sector.



Changing a business model or creating a new business model is not pain-free: existing activities are streamlined or can become obsolete, or activities move up or down the supply chain.

Drivers

Global societies are currently changing fast, driven by population growth, an ageing population in many areas, mass migration and urbanisation, resources becoming more scarce, trends in skills and education, new government regulations and of course the pace of economic growth and decline. Technology develops rapidly and is responsive to the changing needs of societies. Societal signals guide the innovations that are made possible by new technologies. Digital technologies will disrupt and revolutionise the retail sector. It will enable existing supply chains to re-invent themselves and for new business models to start up. But what technologies will drive innovation in retail business models?

Fast internet (4G and in the future 5G), will enable true mobile connectivity everywhere, which will allow new business models to grow, in medical, transport, commerce or many other sectors. Developments in mobile payments will further develop the way global commerce is arranged. The arrival of cloud computing will have the ability to change the business models even further, with more and more people - also those with modest means - getting access to software and data technology. With the digitalisation of business and services, customer personalisation becomes possible and more sophisticated. Collection of 'Big Data' can, especially in commerce, be very helpful for business models to help customers make better choices. Another new disruptor we can expect is 3D printing. 'Just as nobody could have predicted the impact of the steam engine in 1750—or the printing press in 1450, or the transistor in 1950—it is impossible to foresee the long-term impact of 3D printing. But the technology is coming, and it is likely to disrupt every field it touches. Companies, regulators and entrepreneurs should start thinking about it now.

The way we innovate will also change. Innovation often is not controlled by just one company, or one operator in the supply chain. Nowadays, operators in the (retail) supply chains are cooperating together to innovate. Operators in supply chains integrate more and more and share risks in developing new processes or products. Moreover, customers are often involved in the innovation process as well. Besides cooperation with other companies or other parties, 'open Innovation' ask the help of customers for their input or design of products. In this way, customers are actively involved in creating value in the supply chain. Societal changes, technological advancements will change the retail sector unrecognisably and innovative business models will emerge. What stays the same though, will be the focus on the customer and the competition that will drive the changes.

Examples

New business models will blur traditional boundaries in the supply chain: boundaries between channels and formats and between retailers and brands. Some recent examples of disruptive business models might give the reader a clue what to expect in the future.

Several retail sectors have been disrupted recently or are in the process of being disrupted. Firstly, the advent of Apple's iTunes disrupted the music industry, by completely changing the way in which we listen to and buy music. Second, Amazon led the revolution in the digital book market. Thirdly, eBay led the way in mobile commerce. The travel industry and other industries are on the way of being revolutionised through the rise of the 'Share Economy', where the internet makes it easier to share under-used capital (room, DIY appliances, labour, etc.). We will see many more industries being disrupted as a result of innovation in digital technologies, where new business models will emerge. The traditional design sector is being disrupted by new business models using crowdsourcing: for example, DesignCrowd's website functions as a marketplace between designers and people with design needs.

It is interesting to see that the many of the most disruptive innovations in retail have occurred in the USA. An example of commercial 3D printing is the company www.shapeways.com, where people

can design products themselves and have them printed without the high up-front costs or the use of capital such as machines. 3D printing will also be game-changing for retailers in the form of making spare parts and otherwise.

In the retail sector innovations are sometime big step changes, for example the introduction of grocery home delivery, or the creation of entire new product categories. An example is Groupon. Based on assurance contracts, Groupon offers group coupons (only) if a certain number of consumers sign up. It thereby integrates web and real-world experiences, changes consumer behaviour and creates value for many small businesses. Other grocery retail innovations are-Self-service check out. Customers purchase items by scanning barcodes at a terminal in store without check-out staff directly present. This has reduced check-out times for customers and reduced cost for retailers. New forms of self-service checkout will arrive with the advent of innovative mobile payments, further easing the shopping trip.

One of the big game changers in retail for the coming years is of course 'multichannel-retailing.' Customers want to shop differently (in store, online, mobile, interactive TV). Business models that can offer consistency between these channels will have a winning business model. They can achieve that through development of easy to use mobile apps, efficient delivery systems and easy and secure payment options.

As we have suggested in the main report, innovation in retail is incremental and more difficult to see: an example of incremental and less visible innovation is when checkout-staff raised the issue that some barcodes are difficult to scan. The retailer then worked with packaging companies and suppliers to change the barcode location. As a result, the retailer saved € 3 million per day by making each checkout transaction 1 second faster. Small improvements have major impacts. Many times, these innovation processes are supported by customer insights that help retailers understand what customers want. Incremental innovations can, over time, become big and revolutionary. Retail is at the forefront of driving sustainability, making sustainable lifestyle accessible and affordable, and applying energy-efficient technologies throughout their own operations and through their logistics chains, cooperating with their supply partners. Some other examples of small innovations that have made a big difference in the past are:

- *Continuous replenishment.* Daily exchange of stock information between a retailer and supplier means faster replenishment, giving better availability to customers

- *Reducing waste.* Driving down (food) waste means driving down costs and reducing the impact on the environment. Often, retailers work with supply chain partners to reduce waste in the supply chains. For example: innovative packaging that keeps fruit and vegetables fresher for longer. The packaging contains a strip that absorbs ethylene – a hormone that causes fruit to ripen and mold.

Moreover, innovations in the retail sector are often a result of partnerships in the supply chain (co-creation) or active participation by customers (open innovation). Shelf ready packaging – working together with category suppliers and packaging suppliers to design packaging that is easy to recognize in the warehouse within 2 seconds, easy to open in less than 5 seconds, easy to replenish with only one touch, easy to shop and easy to collapse/break down in 2 seconds.

Spanish footwear-company Munich launched its 'Munich My Way' –website, where customers can personalize their sport shoes with colour and materials. The shoes are then manufactured and sent to the customer within 2 weeks. In the past, Nike has launched a similar scheme with NikeiD. The hackathon is another form of open innovation; several UK retailers, including John Lewis, ASOS and Tesco opened up their systems and data to the wider world. Hackathons are staged to develop new

technologies and generating new ideas. They last a day and free beer and pizza is included. It is a great way to speed up innovations, such as app developments or API's, and finding new talent.

Crowdsourcing is more and more used by existing retailers to generate ideas for new business models. Starbucks, for example, launched 'My Starbucks Idea' five years ago for customers to provide ideas for better products or a better shopping experience (http://www.starbucks.com/coffeehouse/learn-more/my-starbucks-idea). Starbucks takes many of the ideas on board and feeds back to its customers at which stage of development they are.

Naturally, there are also examples of failed retail concepts and business models. Failure should be seen as feedback. Not as dismissal. Failure is important in the innovation process. New business models should remember to fail fast, learn and start again.

Barriers

There are several barriers that may hinder innovation involving retail business models. As mentioned before, the main drivers for innovation are the focus on the customer and the ability to compete for customers. Any hindrance to those two drivers is in principle a barrier to innovation. In this respect, the European Single Market is a great driver for innovation. The main barriers are those that hinder the completion of the Single Market. Fully harmonising the rules across the EU will bring great benefits to the retail sector and will help them innovate. Especially retail business models need scale to succeed. If the European market remains fragmented, retailers will not be able to be successful. Physical, technical, regulatory and fiscal barriers still remain.

Physical barriers

Space investment by retailers is huge. High fixed costs mean volume and growth is critical. Space (online and offline) is carefully allocated and the whole retail operation is geared to using space efficiently to create a consistent customer experience. Often, a lack of transparency and a lack of legislative harmonization at national, regional and local/municipal level form a barrier to facilitate retail expansion. It is difficult for companies to establish and build stores in particular Member States. In some markets, it is still difficult for retailers to establish themselves or for new businesses to start up.

Technical barriers

Due to legal uncertainties concerning new technologies, retailers cannot or are hesitant to develop applications. For example, 'Google Glass' is not yet available in the EU, because patent law currently restricts it. Consequently, retailers cannot start developing apps to make use of Google Glass. In general, sectors need standards. Successful future business models need standards for them to use or work with new technological developments. For example, 3D printing currently lacks proper standards and legal clarity. Innovative retail business models will be wary of using these new technologies. In general, setting up a business selling online content is very difficult, complex and costly.

As retail innovation is often non-technological in nature, initial investments are low and often invisible to the public eye, retail is not optimally integrated into the EU's innovation system. Many customers don't want to shop online because they feel it is unsafe; their identity or their funds may be stolen. Online fraud is growing rapidly. For retailers, it can become punitive to open e-commerce in new markets or other member states. This hinders the setup of new business models.

Regulatory barriers

The retail sector is very diverse and complex. It is therefore sometimes difficult for regulators to understand and devise proper regulations. The 2013 report on the state of the Single Market

recognizes these barriers and states: “The European retail and wholesale sectors are characterized by unequal levels of economic maturity and saturation of many markets. Competition in retail is hindered by remaining barriers such as burdensome legislation, which may have protectionist motivations, or disproportionate restrictions imposed on store formats.” Red tape is an often-cited barrier to innovation. Forms and procedures to get approvals cost the commerce sector vast amounts of time and money. These are resources that could alternatively be used for innovation purposes. Examples are compliance with environmental regulations, customs, national control and inspection requirements and VAT.

Fiscal barriers

The commerce sector (retailing, wholesaling) receives only €2bn out of the €53bn (3%) of funding for innovation, which is hardly proportional to the scale and role of the sector. Two specific examples illustrate the fiscal barriers, which can work to constrain innovation potential amongst retail firms. R&D tax credits are a potentially attractive way for stimulating certain types of innovation in retailing. The nature of larger retail firms as ‘innovation hubs’ increases the possibility of attractive spillover effects, with retailers acting as a catalyst for innovation within the value chain amongst suppliers, and with benefits for the sector as a whole: thereby enhancing productivity and competitiveness. Some reasons for limited participation include: a ‘manufacturing mindset’ in relation to R&D tax credits, making them less appropriate for some kinds of innovation, particularly the wider innovation practiced by retail firms, and by suppliers on their behalf. The result is exceptionally poor levels of take-up of tax credits by the sector; high rejection rates of applications which do not conform to relatively restrictive rules and lack of appropriate training amongst inspectors to recognize legitimate claims from more ‘intangible’ applications nevertheless involving technology.

A second barrier, especially for retail SMEs developing as e-commerce businesses across Europe, is not so much the difficulty of VAT on transport charges but more the complexity of the distance selling regimes requiring them to account for VAT on a destination rather than origin basis. Many customers require certainty of price before ordering and it is difficult for the e-tailer to price goods consistently where there is such a significant range of VAT rates (i.e. 15% to 27%.) This becomes even harder to manage when different countries apply lower or even zero rates to certain products. VAT payments for parcel deliveries within the EU are also high and cause a huge administrative burden for retailers. In some cases, sending parcels to Australia and the USA can be cheaper than sending parcels to other EU countries, such as Malta or Cyprus.

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Theme 4 Brand Development – Own brands as innovation drivers

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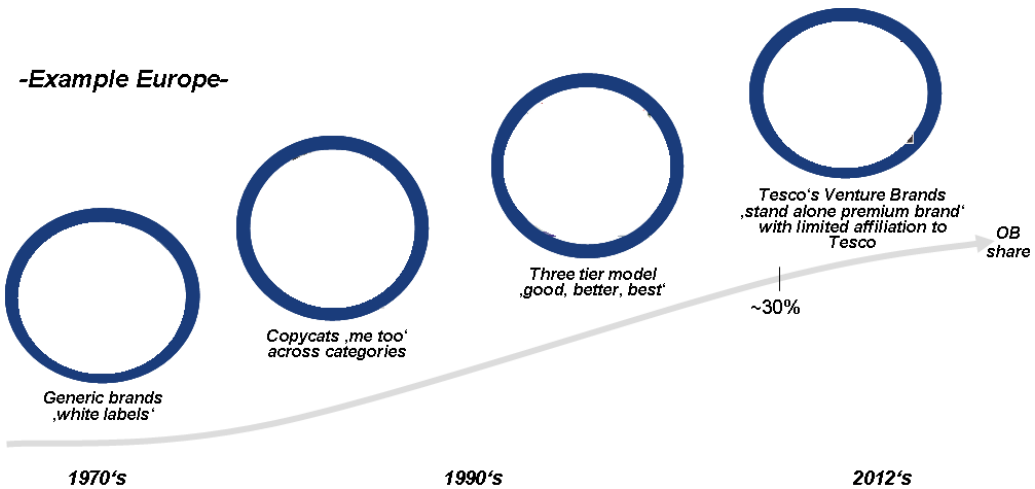
Scope and definition

Product innovation is one of the most important aspects of retail innovation. This could be either assortment innovations (product innovations introduced by brand manufacturers) or the development of own brands (Zentes & Krebs 2009, p. 53). Brand development in the context of this theme report refers to the issue of own brands and their contribution to retail innovation and consumer welfare.

The Private Label Manufacturers Association (PLMA) defines retailers' own brands, also called 'private labels' as following:

"Private label products encompass all merchandise sold under a retailer's brand. That brand can be the retailer's own name or a name created exclusively by that retailer. In some cases, a retailer may belong to a wholesale group that owns the brands that are available to only the members of the group."1

Whilst most retail chains offer own brands, both in food and in non-food, the focus in this report is primarily upon food retailing since the majority of own brand innovation takes place in this sector. In this definition there is no distinction between the term "brand" and "own brand". The reason is: there is none (anymore). During the last 40 years, the private label market moved from a product- to a solution driven approach. The market for own brands is highly dynamic nowadays and can be characterized by a high degree of professionalization, competitiveness and innovation. Own brands developed from me-too's and copy cats to real brand alternatives, in some cases even being the innovation leader in niches and segments, e.g. organic, free-from etc. (De Jong, 2007, p. 49)



[1] http://www.plmainternational.com/en/private_label12_en.htm

A brand is a basically a promise to its customers of relevant and differentiated benefits. Its differentiated benefits make it the brand of choice each time a customer is making a purchase decision. Some describe this as the brand's unique value proposition. Brands survive if they deliver consistently each and every time the customer experiences them. Failure to be consistent causes a loss of trust, which is the bedrock of all brands. This applies to classic brands as well as to own brands. Retailers consider their own brands to be just like the "classic" brands that are clearly positioned to provide a point of difference and contribute to the reduction of duplication and increase in real choice for customers.

As the own brand market was evolving, so did the market share of own brands, which was steadily increasing over the past years, though varying from country to country. Europe leads private label globally. Private label accounts for over 41% of volume in five European countries, with Switzerland, Spain and the UK leading Europe's private label market. In 2011, 11 countries posted market share increases of more than 1%. Penetration increased substantially in Germany, Poland and Turkey, and continued to grow in Central and Eastern Europe. (Source: PLMA Yearbook 2012).

There is a consistent sentiment across the world: consumers purchase more and more own brands since the economic downturn (Source: Nielsen Q3 2010) As the economy improves, so virtually all consumers continue to buy private labels (Source: Nielsen Q3 2010). Retailers have also started to distribute their own brands within other retail companies. For example at Carrefour there is a central distribution center where other, mainly small retailers, can order and purchase their own brands.

Drivers of own brand innovations

One can say that there are three basic drivers of own brand innovation in a competitive environment:

The customer

The basis for own brand development is purely the needs and demands of the customer. Retailers are close to the consumer, they have comprehensive information on the demand side of the market, they are able to participate in the R&D effort so they are able to introduce product improvements and new innovative products much quicker than the big food manufacturers (Bergès-Sennou et al. 2004, p. 20).

There is no justification for an own brand without customer demand. This is different from large FMCG manufacturers, where putting products on the market also creates demand. In some cases customers are even part of product development: for example in METRO Cash & Carry certain customer panels discuss what would help customers in fulfilling their needs. One product that was developed in this way was a ready-made cake base that is especially made for professional gastronomy, larger than the normal household one – a product that was not available before. This resulted in a lot less effort for the customer and increase in sales for METRO Cash & Carry.

Customers vote with their buying decision every day for a product and the increasing popularity of own brands speaks for itself: they more and more prefer value own brands to B- and C-brands. Grocery product innovations are introduced and honored at the Paris food and beverages trade fair SIAL (Salon International de l'Agroalimentaire). It could be determined, that the amount of PLs winning awards for product innovation has been increased strongly and such brand categories made up 21.3 % of awards in 2008 (Zentes und Krebs 2009, p. 54).

Own brands therefore contribute to a larger variety of products and product competition, forcing traditional brand suppliers to keep up which turns out for a better choice and price-value-relation for the customer.

The retailer

In order to really understand the advantages of own brands for retailers one ought to understand a retailer's business model compared to the one of a manufacturer. A retailer needs to maximize the return on investment in the selling space, whereas manufacturers want to sell as much of their product as possible by claiming the largest amount of space.

There is more than one economic reason for a retailer to enlarge its own brands portfolio. Margins tend to be higher for own brands (which is also relative because in absolute terms profit might be higher with branded products) and retailers also have more influence on the product and the supply process itself.

Moreover, by providing product innovations and creating new categories of products that brand manufacturers have not investigated before, retailers are able to increase consumer loyalty as well as attract new customers (Bergès-Sennou et al. 2004, p. 18). High quality and exclusive own brands are increasingly helping retailers to provide points of differentiation (PlanetRetail 2013, p. 7). Customers choose "their" store based on the product range available therefore high quality own brands foster relationships with customers (customer research, IfH, Cologne 2012).

In the last decades, new market entries, ongoing M&A activity and ongoing internalization of large multi-nationals have all encouraged new product innovations. Innovation in terms of packaging, function and design helps own brands to stand out on the shelf (Berg et al. 2012, p. 40–41).

There are market characteristics that foster own brand innovation in some segments. Retailers have inherently greater flexibility in terms of adapting to specific local needs regarding their assortments than do large brand manufacturers, so if there is a customer need, retailers are able to respond quickly and develop new products. This could be also explained with different margin calculations: own brands are evaluated by their range performance, manufacturer brands are instead evaluated by their individual (item) performance. Finally, niche product innovation for a brand manufacturer is not always profitable enough with all the R&D and launch costs to be considered.

The supplier

The increase of own brands fostered the formation of a new sector of its own: the own brand industry. There are now thousands of SME manufacturers focusing on retailer brands (De Jong, Koen, 2001, p. 64). As EU retailers grow across the world they open new routes to growth for these suppliers. In fact, a structural change in the supply chain has evolved over the last 15 years where it has become common practice to outsource manufacturing. Thousands of food manufacturers and SMEs have created strong businesses by manufacturing on behalf of retailers as well as big brands.

Retailers guarantee with their name for the quality of the own brand – therefore their quality demands are high. This in turn improves the quality standards of suppliers. Retailers help suppliers to meet those standards especially in countries where those are not established yet. Retailers also help small suppliers to increase their capacity utilization and make sure they sell everything they produce. As a result, outsourced manufacturing is thriving:

- Better future with retail brands
- Easier access to new markets
- Entering a new market without brand investment
- Access to more than1 retailer brand
- Opportunity to grow
- Allow investment in new technologies
- Cover more of the market
- Fill excess manufacturing capacity

Retailers' own brands do not compete with the vast majority of suppliers, instead, they provide them with a well branded and lower cost route to market and give especially small- and medium-sized suppliers access to large national and international markets and a long-term perspective for growth.

It is true that retailer brands present competition to the largest and most powerful international "Power Brands". This is good for consumers because without own brand, the Power brands would have absorbed the B- and C-brand producers through either competition or acquisition, as can be seen in most emerging markets. By providing an umbrella branding service called "own brand", all manufacturers, large and small are able to reach market at lower cost.

International power brands have continued to grow their market share: with the sales of the largest FMCG manufacturers experiencing a 8.1% growth in 2011 (2010: 7.9%) (OC&C FMCG Champions August 2012). And, depending on the country, 60-80 % of the product range in the average supermarket is still determined by classic brands – customers still demand A-brands.

Examples

All in all retailers are better able to respond to changing consumer priorities. Innovations include:

- Removal of e-numbers
- Reduction in salt
- Nutritional labelling
- Shelf Ready Packaging
- Prominent Sell by Dates
- Packaging reduction initiatives
- Sustainable sourcing
- Animal welfare
- Producer Clubs
- Removal of Mechanically Recovered Meat (MRM)
- Safe EPP products
- Lifestyle ranges (Organic, Free From, Healthy Eating)

In some areas brand manufacturers were the ones leading innovation in terms of own brand products, e.g. through organic, packaging etc.

Case Study Isfi Spices

Isfi Spices is a small company specialized in the development of innovative own brand products in the category herbs and spices. Founded in 1983, Isfi employs 70 people and generates a turnover of €28mn, 22 % of which is exported. The company's business model is solely targeted to developing innovative own brand products together with retail companies. Isfi is an innovation leader in own brand development for herbs and spices. It takes 3-4 weeks to develop and introduce an innovation and a new product – for a big company the same process would take at least 6 months. Innovation can be in products, packaging, new mixtures and solutions for consumers etc.

Isfi's success benefitted a lot from the cooperation with METRO Cash & Carry Belgium, which started at the very beginning of Isfi Spices. Both companies work together very closely to develop new products and mixtures: METRO's key accounts are very close to the customer and their wishes and needs are evaluated on an ongoing basis.

Together with METRO Isfi developed various innovations

- Gastronomic spice mixes – unique spice mixes to be added after cooking developed by the Swedish cook Christer Elfving

- Dessert mixes
- Herbs in oil: natural ingredients, herbs in sunflower oil, Unilever had similar product – Primerba – which was 50% more expensive. The result was that Unilever had to decrease their price in the end.

The long-term relationship with METRO had a significant impact on Isfi's success and its export numbers: Today Isfi produces about 350 different articles for METRO Belgium and METRO France generating a turnover of 3.5 Mio Euro. Isfi is also producing for other major retail companies like Colruyt, Delhaize, Carrefour, Lidl and Spar. With Delhaize, Isfi developed a special retail concept, which offers 260 new SKUs to the customer

- Smaller sizes, single households
- Square boxes – more efficient for displaying
- Single use mixes – sachets for smaller households

By switching to this concept Delhaize increased turnover in this category from €450,000 Euro to €4.5mn in 3½ years. The products are available at 620 stores in Belgium. Innovation is based on a long-term, trustful partnership with the retail companies, a minimum contract duration being 1-1.5 years. Isfi does not need to invest in marketing to create its own A-brand. The investment focus can be on innovation development and it is easier to follow and implement trends - the retailer then does the branding and marketing. Consumers benefit from this state of affairs: more choice, better prices and a high degree of innovation.

Barriers

Retailers' innovations and own brands contribute substantially to the consumer's welfare. There is nevertheless the fear that the increasing success of own brands might result in retailers' growing bargaining power vis-à-vis suppliers, which may lead to unfair trading practices. The European Parliament, consumer organizations, national competition authorities and food producers claim that this limits investment and variety in the food supply chain, ultimately to the detriment of the final consumer (European Commission: http://europa.eu/rapid/press-release_IP-12-1356_en.htm).

In fact, the Group feels strongly that it is quite the opposite: retailers have a strong interest in stable and sustainable supplier relations, especially for own brands. The brand promise is a certain standard and quality that has to be kept otherwise the risk of losing reputation is enormous. Instead of potentially limiting the development of own brands, policymakers should bear in mind their contribution to innovation, competition and customer welfare. It would be much more important to focus on the realization of the single market which would in turn help the development of own brands.

Conclusion and summary messages

Given the positive market dynamics for own brands and their proven benefits for their main stakeholders (consumers, retailers and suppliers), it would be unfortunate if regulations constrained their development. For example, the development of innovative products and own brands require intensive collaboration across the supply chain. The tendency of competition authorities in Europe to limit collaboration between manufacturers and retailers is going in the opposite direction. Cooperation and collaboration in a constructive way is a crucial factor for the enhancement of innovation and consumer welfare.

Summary messages

- Own brands increase the variety of products and are therefore beneficial for consumers and suppliers - in particular SME suppliers.
- Own brands promote competition by driving innovation and forcing traditional brand suppliers to keep up.
- Own brands are innovation leaders in some segments – consumers would not have access to niche products if there was no incentive to develop own brands.
- Own brands support supplier SMEs with long-term relationships, partnerships and mutual challenge.
- Own brand innovation demands cooperation and collaboration between retailers and suppliers.
- Given the driving force own brands have on innovation the regulatory framework should bear in mind supporting rather than constraining the scope of own brand development.

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Theme 5 – Education, Training and Skills

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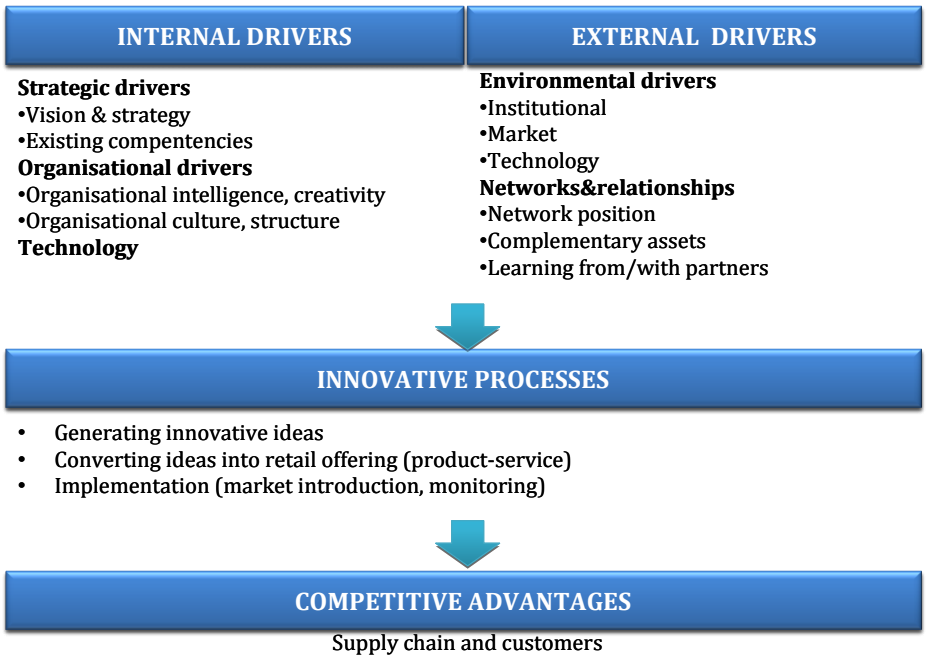
Introduction

According to the European Retail Action Plan, a better support to training needs of retailers shall substantially contribute to the increase of innovation activity in the retail sector2. Retail innovation has education & training implications, because:

- New retail concepts change business and technological processes that lead to the introduction of new knowledge and skills into the retail company,
- Technology-based innovation requires also new and special skills from retailers,
- Creative thinking, inspiration and entrepreneurship are important components of innovative behaviour that can be improved by education and training.

Since knowledge and skills regarding innovation varies considerably within the retail sector, recommendations for education & training should take into account these differences. There is a clear difference in type and scale of innovation activity between large retailers and retail SMEs. Since small- and medium-sized retailers have a very high share within the sector (more than 95% in 2010)3, we put a special emphasis on possible educational support of retail SMEs.

Figure 1: Innovative behaviour of companies



Based on Lawson & Samson 2001, Eriksson 2013

[2] Summary of 2nd ERAP Workshop Brussels, 2 March 2012, p. 4
[3] Eurostat (2010).

Scope

Particularly, external and internal drivers of innovative behaviour and innovative processes can serve as a basis for education and training to motivate innovation in a retail firm. Now, we outline the innovation drivers and innovative processes in more detail accompanied by best practices and examples to illustrate successful education and training approaches in retail innovation.

Internal drivers

Developing strategic, organisational, and technological skills considered as internal drivers can increase innovation activity of a retailer.

a) Strategic and organisational drivers

Strategic drivers comprise corporate strategy and vision emphasizing innovation within the company. Furthermore, existing competencies of a retail company could be a basis for developing new solutions. Retail innovation is highly supported by organizational drivers such as effective information sharing within the retail company, culture that supports creativity and new ideas, and a lean, flexible organizational structure.

Senior management has usually a profound impact on shaping the firm's strategy and organisation. Therefore education targeting senior managers strongly influence innovation of a retail firm.

ESADE Business School organizes workshops "3.5 days immersion in retail innovation" every year. The training has a polymathic approach including different disciplines (marketing, neuropsychology, data science, philosophy, etc.) that inspire participants to develop new innovative retail formula in their own company. The workshop offers a creative vision on both consumer and supplier solutions. In the view of the business school, the most effective way to induce innovation is to target senior managers because the return on resources is the highest on top managers.

b) Technology drivers

In modern retailing, technology plays an important role on both ends of the retail activity. Technological solutions connecting retailers and suppliers hide many opportunities for innovation. Similarly, serving customers becomes more and more technology-intensive. The widespread use of e-commerce, m-commerce, and interactive retail marketing tools has a huge potential for retail innovations. Developing competencies that help to identify innovation opportunities from existing technology can serve as an innovation basis.

Consumer identification tools (loyalty schemes, e-commerce, m-commerce) combined with channel integration provide various business opportunities (new retail offers, customized solutions) for retailers. Customer Relationship Management applications might also contribute to retail innovations, since more frequent and seamless interaction with consumers can generate feedbacks that trigger innovative retail formula. Consequently, learning about how to engage customers, how to motivate them to co-create new offerings might lead to a more intensive innovation related to retail marketing.

The Oxford Institute of Retail Management organises Loyalty Marketing Workshops focusing on managing customer relationships, creating cost-effective, well-designed loyalty programmes that help achieve purchasing loyalty of the best customers. In the workshop, directors and senior managers with customer relationship responsibilities - from retail, consumer service and other retail professional services businesses - can explore the latest thinking in customer relationship management.
(www.sbs.ox.ac.uk)

According to the global survey conducted by MIT Sloan Management Review (2011), the biggest obstacle of extracting useful information from the collected data is the lack of understanding how to use analytics to improve business. Retailers are no exception in having to respond to the trend that information must become easier to understand and act upon. In consequence, they need modern data analytical expertise (such as Big Data, predictive modeling skills) coupled with data visualization, process stimulation, text and voice analytics, and social media analytics (La Valle et al 2011). Education combining IT and statistical-mathematical, and thus data science, skills could contribute largely to developing innovative new retail offerings. Higher education and research institutes with well-founded business, IT and mathematical education could cover the education in data science.

External drivers

External factors cover changes in the retailer's environment (i.e. institutional, market, and technology changes) and innovation drivers coming from co-operations and relationships with other companies.

a) Environmental drivers

Environmental drivers include changes in institutional, market conditions, or new technology trends.

Change in institutional factors (EU, country level regulations, public policy related to the retail sector and innovation in general) can induce retail innovations too. A prior environmental driver is the increasing concern about sustainability, energy consumption and CO2 reduction. Institutions such as the European Union (Roadmap to a Resource Efficient Europe4, Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan 2008), member states, but also regional and local agencies encourage companies to use more environmental-friendly solutions. Leading European retailers are already involved in innovation projects where alternative energy sources play an important role in replacing unsustainable sources.

In 2010, Tesco group opened its first zero carbon store as part of its bid to be a carbon neutral company by 2050. The shop, in Ramsey, Cambridgeshire, is timber-framed rather than steel, and uses skylights and sun pipes to cut lighting costs. It also has a combined heat and power plant powered by renewable bio-fuels, exporting extra electricity back to the national grid. In addition the refrigerators – one of the biggest blackspots for food retailers trumpeting their green credentials – have doors to save energy and harmful HFC refrigerant gases have been replaced. The new store, costs 30% more to build, but it uses 50% less energy and with oil at $70 a barrel it is a business case in itself.

Tesco has been at the forefront of the grocers' race to be green. The UK's biggest supermarket has provided Ł25m of funding for the University of Manchester to set up a sustainable consumption institute, and has a 10-point community plan, with pledges to increase local sourcing and to consult local communities in an attempt to be viewed as a good neighbour.

Source: Julia Finch: Tesco opens first zero carbon store. (www.guardian.co.uk, 2 February, 2010)

Similar to the Tesco's zero carbon store example, successful projects can be developed into business case studies that are highly effective tools of learning from other companies.

Based on the research of Booz & Company (2012), innovative companies generate their new ideas mainly from external market sources, especially from direct consumer observations, traditional market research and feedback from sales and customer support. Knowledge and skills in how to

[4] European Retail Action Plan – 3rd Workshop, 30 March 2012, Brussels European Commission DG Internal Market and Services

use sales and consumer data in a more effective way and how to turn them into business opportunities can be the subject of innovation-related education.

Technology-driven innovation needs development of skills related to info- and telecommunication, supply chain solutions (logistics and purchasing), and interactive retail marketing technologies. The near future of retail technology will be influenced by the developments of m-commerce, online channels, integration of brick & mortar stores with new channels (omnichannel), cloud solutions, vendor managed inventory systems. Education focusing on business, especially retail applications of new ICT technologies can accelerate technology-driven innovations.

*The Institute of Retail Management of St. Gallen University offers a one-year Cross-Channel Management programme for managers in retail or FMCG sector. The non-degree program includes several fields of cross-channel management (creating cross-channel strategy, configuring channels, the IT and technological aspects of channel integration, controlling, leadership & organisation, and implementation of the strategy.) The training is based on a network of European business schools (*http://www.irm.unisg.ch/en?sc_lang=de).

b) Networks & relationships

The environment of retailers includes networks, partnerships and supplier relationships that might serve as an innovation pool. Therefore co-operations are formed to develop a new solution with joint forces. Complementary resources can be used to create new value for customers or for business partners. Retailers can learn new skills, competencies from and with their partners including suppliers, service providers, and consumers.

Collaboration with suppliers and partners from different sectors can be the outset of new innovations too. Large retailers often play the role of innovation hub (Hristov & Reynolds, 2007) connecting suppliers, IT, telecommunication firms, and market research companies to work on more radical innovations to pull necessary expertise and share the risk and cost of innovation as the example of METRO shows.

METRO AG created the Future Store Initiatives that cover interactive or customized IT solutions developed for retail stores. More than 90 partners (retailing, consumer goods, IT, service sector) collaborate in modernizing various retail processes. The goal of the initiative is to improve both customer in-store experience and operating efficiency. Various developments of the test laboratory had been put into practice. For example, information terminals are applied in Galeria Kaufhof department stores. Based on multimedia information system, terminals provide information about new offers using touch screen technology. In Metro Cash & Carry stores, customers might benefit from the "Metro Shopping Assistant" (mobile computer) solution that offers tailored price and sales information. Customers of some Real hypermarkets can use self-checkout systems where scanning and payment of the merchandise is based on self-service. Furthermore, the application "Music Genome" recommends music for the customers based on their previous evaluation of different *tracks. Source:* Metro Future Store Concept (www.futurestore.org).

Education and training focusing on innovative processes

Innovative processes include idea generation, converting innovative ideas into actionable projects and rolling out that innovation to the market (commercialization and implementation). Innovative ideas can be created based on internal resources and methods like brainstorming, job rotation, and providing financial and non-financial incentives for employees; or pulling external expertise to put

multidisciplinary, cross-functional teams together or give training to employees on how to develop new ideas.5 The next example shows an external method to boost creative thinking and innovation.

KPMG Academy provides multidisciplinary course for managers (from different industries) on Creativity and Innovation collaborating with the Hungarian Museum of Fine Arts. The course is an inspirational training for participants to come up with new creative ideas related to their business (www.kpmgakademia.hu).

Hristov & Reynolds (2007) identified skills related to retail innovation where (among others) skills in innovation management and skills of fostering innovative culture were emphasized. Those capabilities are highly important to generate creative ideas, convert them into actionable innovation projects, and to rolling out promising innovation projects to the market.

Leading retail companies are very active in developing innovative solutions and rolling them out to the market. These retailers have their own R&D divisions, and have expertise in how to manage multiple innovation projects. In contrast, retail SMEs are more likely to limit their involvement, if at all, to short-term, small-scale innovations related to retail specialization, customer service, and personalized retail offerings.

However, innovative processes could be reinforced to an even greater extent if retail SMEs possessed a more in-depth knowledge in project- and innovation management. Hristov & Reynolds (2007) stated that supporting retail SMEs' innovation tended to be provided at a regional or local level in the UK. Regional Development Agencies were responsible for fostering innovation and providing education for small- and medium-sized retailers.

In the United Kingdom, Skillsmart Retail has identified the importance of local context in assisting retail SMEs. The council's 'location model', developed by its in-house research team, has proved an useful vehicle for focusing awareness relation to skills and personal development at the local level when it has been conducted. For example, following a mystery shopper exercise and local market review in Colchester, 35 independent retail businesses attended a discussion of opportunities to improve their performance. A significant proportion of these firms subsequently engaged in training initiatives. Skillsmart Retail's 'Location Wise' and 'Skill Shops' initiatives – outlined in its most recent Sector Skills Agreement report – seeks to consolidate the learning from the location model as a mechanism for providing "practical advice and best practice for those wishing to design interventions that are relevant for their locations" (Skillsmart Retail, 2007b).

The skills council's proposed Coaches and Mentors 4 Retail scheme seeks to build upon the preference for mentoring amongst SMEs by coaching smaller retailers in "bite-size chunks to match the phasing of the retail year". This complements its online RetailDetail toolkit, launched in 2005. However, replicating skills support and mentoring activity at the local level nationwide presents a number of resourcing challenges and it would seem sensible for a further degree of integration and collaboration between providers to be encouraged, to improve the clarity and accessibility of support on the ground. (Hristov & Reynolds 2007, p. 72).

In summary, the examples (Table 1) suggest that education & training related to retail innovations should focus on following skill groups:

- Skills for integrating business and retail knowledge with different disciplines (IT, mathematics, philosophy, neuropsychology, aesthetics etc.) to be able to import new knowledge and generate innovative ideas

[5] Community Innovation Survey (2010) measures methods stimulating new ideas or creativity applied by innovative companies. Brainstorming, job rotation, financial and non-financial incentives, multidisciplinary and cross-functional teams, training on creativity are considered as tools for idea generation. (Eurostat)

- Skills for modern data analytical expertise (Big Data applications, predictive modelling, data visualization, process stimulation, text and voice analytics, and social media analytics), to be able to generate business insights from consumer and sales data, then turn them into innovation that help to retain and engage customers
- Skills for integrating existing and new channels to enhance customer experience to be able to create a seamless channel experience (omnichannel applications)
- Skills for green operation to reduce energy consumption (green skills)
- Skills for co-operation with suppliers and IT companies to build up ground-breaking technology-based innovation
- Skills for co-operation between academic organisations (educational and research organizations and retailers) to exchange experiences and share knowledge
- Skills for effective management of innovation projects (idea generation, turning creative ideas into actionable projects and rolling them out to the market)
- Skills in retail marketing and management to be able to operate retail SME businesses more effectively and efficiently

The examples also suggest that universities, research centres focus mainly on the training of top managers, managers of retail firms. Retail SMEs seem to be targeted by education provided by the governmental, regional development offices, or workshops provided by consultant companies. Leading retailers can provide case studies of retail innovations for smaller players or retailers in different merchandise group. The methods of education & training programmes range from one-year non-degree curriculum to highly interactive workshops.

Table 1 Summary for retail innovation-related education and training examples

Example	Knowledge provider	Target group	Knowledge	Skill	Method
3.5 days Immersion in Retail Innovation	ESADE business school	senior managers	marketing, data science, philosophy, neuropsychology	Creative vision using polymath approach	interactive workshop
Loyalty Marketing Workshop	Oxford Institute of Retail Management business school and research centre	directors, senior managers with customer relationship responsibilities	Customer Relationship Management Loyalty Programme	Retaining and engaging customers	workshop
Zero Carbon Store	Tesco leading retailer	retailers	sustainable retail operation by using alternative energy sources, decreasing carbon emission	sustainable retail operation	business case
Future Store Initiative	METRO leading retailer	Suppliers, IT companies	Logistics, IT including RFID technology, retail marketing	effective warehouse operation, interactive communicationwith consumers, ICT skills	business case
Cross-Channel Management programme	St. Gallen University, Institute of Retail Management, business school and research centre	managers in retail or FMCG sector	cross-channel strategy, IT and technological aspect of channel integration, organisational consequences, implementation	Omnichannel skills, ICT skills, leadership & organisational skills	one-year non-degree programme
Creativity and Innovation	KPMG Academy consulting	managers	aesthetics, innovation management	creative thinking and implementation of innovations	workshop
Skillsmart Retail	UK government, Regional Development Offices	retail SMEs	retail marketing, retail operation	Marketing skills	consultancy

Identifying and addressing barriers to education and training

Barriers of education and training related to retail innovation can be traced back to three main areas. First, there are information barriers regarding skills of retail information and the pooling of non-business related knowledge. Secondly, the limited co-operation that presently exists between retail and non-retail companies, research and education organizations. Finally, we identify barriers specific to retail SMEs.

1) Information barriers

Barrier 1: Within the frame of EU Skills Panorama, there is a strong commitment to assess and monitor skills including sector-specific skills, green skills, ICT skills, "skill catalogue" describing retail, retail-innovation-specific knowledge and skills could be important for future retail-innovations.

The European Union has already a strong focus on identifying sector-specific skills within the frame of EU Skills Panorama Programme that ensures healthy operation and competitive advantage within the given sector. This initiative could be developed further for the retail sector. **Knowledge, skills related to retail-innovation** (skills for integrating retail business knowledge with different disciplines, modern data analytics, integrating online and offline channels, sustainable operation, co-operation with companies from different sectors, educational and research organisations, innovation management), **should be assessed on a regular basis, and communicated towards retailers** providing important feedback to market players, providers of education on skill levels, mismatches between education needs of retailers and offering of knowledge providers (higher education, research centres, consulting firms, chamber of commerce, development agencies, etc).

To import new skills into the retail company, **reverse mentoring** could be adopted as an effective training tool. During reverse mentoring the younger generation (young employees or students) share experiences, knowledge with senior management about new technology trend, and the way their generation uses that technology. Reverse mentoring is not only beneficial because it is closing the gap between generations but it is a mind-refreshing exercise for the senior managers that might result in new, innovative ideas.

2) Barrier of limited co-operation

Barrier 2: The near future of retailing is shaped by the developments of infocommunication, sensory marketing, and omnichannel solutions that require not only business, but knowledge in other disciplines. Retail education & training have traditionally focused on a more business-oriented knowledge but new trends adopted by retailing are not necessary coming from business-related areas rather from ICT sector, neuropsychology, mathematics, biology or aesthetics.

Examples in education of external drivers of retail innovation and innovation processes suggest that knowledge pulled from other disciplines (ICT, mathematics, neuropsychology, philosophy) has a very fruitful effect on creative processes including retail innovations. Therefore providers of education and training should import knowledge from disciplines and that pave the way of the future of retailing. The European Commission might support **education & training initiatives that strive for a polymathic approach** (integration of different disciplines) in retail education and favours more **interactive form of education & training**.

Another possible approach is **to support companies in hiring doctoral students** who have an up-to-date knowledge of their research field. Doctoral students involved in industrial, ICT, data science, or psychological research could add significantly to the innovation potential of a retail firm.

Furthermore, it would be a great opportunity to bring scientific research closer to business innovation needs.

Barrier 3: Successful innovation projects are often based on co-operation between retail businesses, firms from other sectors, or organisation involved in scientific research. However, there are still plenty of room left for co-operation in retail innovation-related education and training. In line with the strategic framework for European cooperation in education and training6, enhancing creativity and innovation, including entrepreneurship, at all levels of education and training – the acquisition of transversal competences should be promoted and the functioning of the knowledge triangle (education-research-innovation) should be ensured. Partnerships between enterprises and educational institutions as well as broader learning communities should be promoted.

Retail companies might learn new skills from other retailers, from companies of different sectors, research centres, consulting firms, etc. to boost their own innovation activity. Co-operation might also be enhanced by establishing an **information network related to retail innovation research** across Europe that would strengthen the relationship between retailers and educational, research, and consulting organizations. The network could contain abstracts about finished or running (business or academic) research projects dealing with retail innovations. The information network could function also as pool of experts, benchmarks, case studies that helps accelerating the information exchange and co-operation between organizations involved in retail innovations.

3) Retail SME-related barriers

Small- and medium-sized retailers play an important role in the European retailing but they face several barriers in terms of innovation. Based on UGAL7, retail SMES face numerous problems (scarce financial resource to buy and implement technology related to the innovation, scarce human resource to employ qualified staff to design and implement innovation projects, etc.) that prevent them from being more innovative.

Barrier 4: SMEs are often less informed where they can find knowledge and research related their innovation idea. A UK research (Hristov & Reynolds 2007) showed that retail SME's are characterized by a general reluctance to participate in formal trainings. Reluctance might come from low motivation but also from limited information.

The above mentioned **information exchange network** would help also retail SMEs to find the link to the knowledge providers, benchmarks, best practices.

Very often, the formal educational programmes focus on the needs of large retailers that do not necessarily overlap with the needs of retail SMEs. Small retailers roll out small-scale innovation projects related to retail specialization, customer service, and personalized retail offerings that education and training should account for. The European Commission could dedicate resources to **developing educational programmes that focus on the special needs of innovating retail SMEs**. The programmes could integrate knowledge related to retailing, creative thinking, project management, technological trends. Special courses in innovative retailing for retail SMEs could be designed by higher education or vocation education organisations.

Barrier 5: Retail SMEs have scarce financial resources not only managing and implementing technology-based innovations (i.e. efficient multichannel approach), but having a limited access to

[6] Education and training 2020 (ET 2020), http://europa.eu/legislation_summaries/education_training_youth/general_framework/ef0016_en.htm

[7] Union of Groups of Independent Retailers (UGAL) is the European association that acts as an umbrella organisation for the main groups of independent retailers in the food and non-food sectors. (www.ugal.eu)

professional services (e.g. business consulting, project and innovation management). The European Commission could consider the use of **innovation vouchers** where retail SMEs are supported to acquire the missing expertise, tools for their innovation project. This financial incentive can work as an effective tool for small retailers as the example of Enterprise Ireland shows.

*Enterprise Ireland, a governmental organization responsible for the development, growth of Irish enterprises in world markets offers innovation vouchers for small firms. Innovation vouchers give access to knowledge, skills (consultancy in innovation, project management, technical and IT services, laboratory experiments, etc.) not available for the firm. The amount of the voucher can be redeemed by a knowledge provider contracted to Enterprise Ireland. Knowledge providers consist mainly of universities, research centres, laboratories that offer their capacity in market research, technology research, technical problem-solving, innovation strategies, project management and troubleshooting, new product development, consulting, applied research. (*https://innovationvouchers.ie/*)*

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Theme 6 Emerging Technology Systems

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Scope and Definition

Here, we consider technology systems that can improve retail operations, enhance retailers' interaction with consumers and support retail innovation. Consumers are at the core of these systems and, therefore, these smarter and interconnected technologies are very much influenced by the increasing role of consumer: the "empowered" consumer.

Specifically, these systems support the following four areas:

- Traditional formats or stores / E-commerce (internet / online, mobile etc) / Omni-channel (that implies the integration of customer experience across all relevant channels),
- Inter-firm retail functions (store operations, logistics and supply chain, marketing and merchandising, information technology etc)
- Business analytics (data aggregation to gain business insights such as mobile and social analytics, customer analytics)
- Intra-firm business to business marketplaces (software platforms where retailers, suppliers and other business partners share information and data and manage processes and relevant activities such as purchasing and sourcing / negotiation of products).

In relation to the first area, the key innovations relate to the mobile channel, which has been very popular as it can reach many consumers (who use tablets too and download various user applications) and, at the same time, it boosts productivity and efficiency of organisations. We have also witnessed the increasing role and importance of online retailing at the expense of, and simultaneously as a complement of, traditional store retailing thus enabling omni-retailing becoming a top priority for retailers. Technology systems play a major role for inter-firm retail functions and many "intelligent technologies" (e.g. RFID, telematics, mobile payments etc) have emerged during the past few years supporting various retail functions (e.g. transport, inventory management etc).

Business analytics generate business intelligence and, therefore, new value is created by establishing the appropriate infrastructure to obtain the right amount of data and, as a result, be able to predict future scenarios more accurately. This involves mobile and social analytics (based on the use of mobile, social media) enabling retailers to analyse consumer patterns in the relevant channels. The key issue is that data generated from Internet devices and applications will increase exponentially as the number of connected nodes increases too; hence, we are experiencing the emergence of the "big data" phenomenon where there is an urgent need for business analytics applications and skills. Knowing what to ask demands new and more creative skills (creativity scientists). Using the right emerging technologies (big data) and the right knowledge (data scientists) to provide the right answers in the right timing is becoming a critical success factor for successful retailers.

Finally, the B2B marketplaces have been an excellent medium for bringing retailers and suppliers together and to improve efficiency in relation to purchasing and sourcing products under a more open and transparent manner. They also boost innovation by supporting the creation of closer partnerships between the firms involved.

External and Internal Drivers

- Popularity of the use of these emerging technology systems between industrial users (to boost effectiveness and efficiency) and consumers (for simplicity and convenience).
- Consumers use technology to redefine the way they interact with retailers and with each other (social media, smart devices). They are connected within social networks and virtual communities. There are more than 1.5 billion social networking users globally, 80% of them are online interacting with social networks regularly and 70% of global companies using social technologies.
- Consumers expect retailers to provide shopping processes that are continuous (from deciding what to buy until final consumption as well as after sales support), convenient and consistent and demand more personalisation and customisation. Subsequently, consumers shape retailers' processes and strategy further via providing input in relation to collaboration and innovation issues.
- Emergence of mobile trends and technologies (including the large use of tablets) whilst cloud computing becomes a mainstream computing delivery option.
- Strong, interconnected links between various technologies as adoption of one technology influences the demand for another one. For example, a mobile adoption strategy can be largely based on cloud technologies
- Increasing use of "intelligent technologies" within the supply chain (e.g. RFID, telematics) as well as other retail operations (in-store etc).
- Increasing role and importance of online retailing at the expense of traditional store retailing. Therefore, there is a new role of the retail store resulting in greater pressure on store location policies and technologies. Major retailers provide dedicated store areas which are focusing on "click and collect" and product returns.

Examples

- H&M has recently started experimenting with virtual reality applications aiming to identify how consumers will employ virtual technologies in the future
- Metro Group uses thousands of online reverse auctions (internet-enabled) to purchase products (value: more than 1 billion euros). It forces buyers to engage in better negotiations, reduces negotiation time, provides fairness of sourcing whilst suppliers from all over the world can get involved and get connected online.
- ASOS' (online retailer) customers can track deliveries in real time using live mapping "Follow my parcel".
- Tesco, Wal-Mart and Amazon have made use of big data / business analytics tools to gain a competitive advantage in areas such as marketing (e.g. cross-selling, in-store behaviour analysis, customer micro segmentation, multi-channel experience), merchandising (e.g. assortment and pricing optimisation), operations and supply chain (e.g. inventory management, logistics). Both Tesco and Wal-mart are acquiring "big data companies". For example, data mining specialist dunnhumby - owned primarily by Tesco - has bought Standard Analytics which specializes in assisting retailers towards better understanding customer purchasing patterns and behaviours through predictive sales modeling and real-time out-of-stock alerts. Equally, Wal-mart is expanding its e-commerce capabilities with the acquisition of big data start-up company (Inkiru). That company focuses on real-time predictive analysis and will join Wal-mart Global Ecommerce's technology arm (Wal-martLabs). The acquisition will give access to analytics and big data that will enable Wal-Mart to accelerate its big data capabilities in terms of site personalization, search, fraud protection and marketing.

- Carrefour made use of 3D printing extensively. This technology has actually supported many customising initiatives for designing a range of appropriate products.

Barriers

- Europe provides a fragmented market in which various operators favour various systems (e.g. Mobile Android vs. iOS etc). This creates a challenge for systems harmonization and requires continuous, and considerable investments by retailers to keep up to the new challenges.
- Security and privacy are still major concerns for further mobile adoption and other emerging technology systems. These concerns are shared between industrial users and consumers.
- The high cost for implementing this infrastructure is a key concern. Recent concerns relate to the extra cost of high speed Internet.
- Interoperability between systems is another barrier and this is related to the use of various systems.
- Different technology and systems adoption rates and trends across countries that creates major challenges for multinational retailers.
- The use of technology systems can be problematic for adoption by SMEs due to high costs.
- Many senior managers are technophobic and, due to that, they may be less open to innovation. Hence, it is difficult to appreciate the increasing role of technology systems.

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The Expert Group on retail sector innovation was established in 2013 to identify the main innovation drivers and barriers in the European Retail sector and recommend possible short to medium-term priority actions to help increase the sector's competitiveness through innovation. In order to provide a thorough overview of retail innovation in Europe, the Expert Group went in depth in six areas considered as crucial to understand what drives innovation in the retail sector. This analysis shows how consumers are crucial drivers of retail innovation but also the great importance of skills and technologies from the supply side and how retailing and manufacturing can work closely together to provide new products to consumers.

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