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## The Role of Knowledge Diffusion in Innovations in Retail Chains

### Summary

Knowledge diffusion is the basis for innovation processes in business. In the Polish retail industry, the expansion of foreign commercial chains has contributed to a dynamic knowledge transfer in the sphere of management of buying and selling processes. The standards appropriate for global and international commercial chains have been introduced within several years as a result of integration, concentration and globalisation. Retail trade is a sector of high capacity to implement innovations. In their paper, the authors are planning to verify the phenomena associated with knowledge diffusion on the example of retail chains and to characterise its role for their innovation processes. Therefore, the areas related to knowledge diffusion in retail chains on the selected examples constitute the subject area of the paper.

In the study the selected commercial enterprises were research entities.

The analyses included in the paper concern the years between 2009 and 2014 that were the period of unstable economy development (time range). The presented results of conducted analyses concern Poland (spatial range).

In the paper, the following goals of cognitive and descriptive character are assumed:

1. The cognitive goal of the proposed paper is to identify the key stakeholders (external) who are the source of knowledge diffusion for retail chains.
2. The descriptive goal of the paper is to indicate innovations, applied by the selected retail chains, based on knowledge diffusion coming from customers, competitors, and suppliers.

In the paper, the assumption has been made that customers and suppliers as well as the providers of IT solutions are the main sources of knowledge diffusion that allow for implementation of innovations. Also competitors are an important knowledge source for innovation while using benchmarking procedures.

The following research methods were applied for the purpose of implementation of assumed goals: critical analysis of the literature of the subject, results of own research method concerning the impact of knowledge diffusion on innovation processes in the selected retail chains, and the case study method that showed the best marketing practices associated with developing innovations by retail chains on the grounds of knowledge diffusion.

**Article category:** research article

**Key words:** retail chains, knowledge diffusion, key stakeholders.

**JEL codes:** D12

## Knowledge diffusion as the basis for innovation in retail industry

Knowledge becomes a resource for commercial networks, which is compliant with the resource theory of management and also refers to the positional school while assuming that knowledge determines the source of competitive advantage for commercial networks.

Knowledge diffusion (knowledge transfer, knowledge sharing) is the key element of the process of knowledge management in an organisation/network. It consists in its dissemination within or outside the organisation. Knowledge transfer is a complex process because it concerns:

1. knowledge found in human resources of an organisation as well as tools, tasks, and their relationships (Argote, Ingram 2000, pp. 150-169);
2. a large amount of knowledge in an organisation is implicit or difficult to articulate (Nonaka, Takeuchi 1995).

We can find opinions indicating a broad specification of knowledge management in commercial networks where diffusion proceeds from “a larger number of stakeholders” because of location of trade between suppliers/producers of goods and customers, and because of “only” intermediation in the flow of goods (Knowledge Management 2014)

Under conditions of growing competition, retail chains search for new strategies of functioning in the market. Developing innovations of functioning of these networks is the expression of implementation of these strategies. Implementing innovations is accompanied by the necessity of knowledge acquisition and knowledge transfer.

There are several reasons developing innovation processes in retail sector:

- 1) the trade sector was first to be fully privatised between the years from 1990 to 1993;
- 2) expansion of foreign commercial chains contributed to dynamic knowledge transfer from the sphere of management of the processes of buying and selling, the result of which is the affluence of formats and qualitative changes in channels of distribution as well as modernisation of commercial premises and the process of sale;
- 3) the standards of global and international commercial chains were introduced in Poland within several years as a result of integration, concentration, and globalisation;
- 4) the pace of quantitative and qualitative changes between the years from 1990 to 2013, which are broadly described in literature, proves that it is the sector of a high capacity to adapt knowledge.

## Innovations in commercial chains – specific character and sources

Innovations in retail trade enterprises concern the solutions that differ from the existing methods of acting and are implemented by retailers deliberately, purposely and often also durably (Chwałek 1992; Kucharska 2014).

The range and nature of implemented changes remarkably depend on the size of enterprises. We can adopt general guidelines of Eurostat and the OECD in the sphere of innovations in the case of retailers conducting activity within multi-branch companies, that

is, commercial chains. They state that innovation concerns changes that are fundamental, significant, new or remarkably improved, developed for the first time, but also adopted from other enterprises. Innovations must be associated with uncertainty, they demand investments, they are related to transfer, and result in using new knowledge or new application, or in combining existing knowledge. Innovation ought to aim at improvement of efficiency of enterprise activity through acquisition of competitive advantage or maintenance of competitiveness thanks to moving the demand curve on the enterprise products or increase in the enterprise innovative capability (Oslo Manual 2008).

New, original solutions in a commercial chain are innovations if they bring positive results – firstly for the retailer, but they can also generate profits for the consumer, enterprise, trade sector or economy.

Implemented innovations can refer to all types of retailer's activity – both fundamental and auxiliary. In commercial trade chains, innovations may concern the business model – the way of creating the value (innovation of sales channel, for example online sale, a new format of the selling post within a particular enterprise, original concept of the store format, combining commercial activity with services and/or production) (Białoń 2011; Trias de Bes, Kotler 2013; Kowalski 2011). They may also be associated with shaping the commercial offer for customers, shaping relationships with suppliers and customers, among others, and also organisation and management.

Innovations in retail trade are rarely creative innovations. Original innovations are a result of work conducted almost exclusively by the largest commercial enterprises, which have appropriate research and development resources and which have resources that allow for implementation of innovative solutions. The predominant group of medium-sized and small enterprises take over, imitates and adapts solutions that can be applied in their activity. Technological barriers and high costs of implementation of changes, particularly in the case of crucial solutions for commercial trade, are most frequently a barrier for imitation of solutions applied by retailers. Streamlining innovations (evolving, modifying) are typical of retail trade. They can be implemented by small enterprises predominant in the structure of retail trade.

The degree of novelty (first in the world, first in the sector, first in the enterprise) allows distinguishing creators and pioneers of innovations in retail trade and imitators of innovative solutions. It also makes it possible to conduct research of innovation diffusion.

Diversity is characteristic of the sources of innovations in retail trade chains. New solutions applied by retailers are both a result of research conducted by the largest enterprises, and ideas generated by workers as well as a result of changes taking place in the multidimensional environment of retailers.

The sources of innovations applied by retail trade chains most generally can be divided into internal and external. The scope and possibilities of using external sources significantly depends on the chain's potential, and first of all on inventiveness and creativity of workers and on appropriate resources retailers have at their disposal to conduct research and devel-

opment activities. In the case of chain enterprises solutions developed by head offices are copied by other outposts belonging to the chain.

External sources of innovations include entities from the market environment of the retailer (the so-called external market), commercial sources, sources of the public sector, and general sources of information.

Among external sources of innovations those that are associated with such entities of retailers' environment as customers, competitors and suppliers, are particularly significant. As it is assumed in the article, they constitute fundamental points of reference in undertaking innovative activities in commercial chains.

These entities contribute to implementation of innovative solutions in retail trade in a different way:

- changes occurring in behaviours of entities in the environment inspire retailers to develop and implement new solutions. Observations of trends and megatrends in consumer behaviours that become the reason for implementation of many significant solutions (including comfort appreciated by the customers contributed, among others, to development of online trade) are an explicit example here;
- entities in the environment force retailers to implement innovative changes – for example, suppliers expect more effective and efficient logistic solutions;
- retailers involve customers and suppliers in the process of innovation, while engaging them in generation of new ideas, testing and assessment of prepared offers. Involvement of other entities in innovative activity of the enterprise is described with the notion of open innovation (Nambisan, Sawhney 2008; Sawin, Rudolf 2008).

Innovations in retail trade may also come from leaders – the largest commercial enterprises create innovative solutions that are copied by other enterprises or applied by them in the range that allows them to solve the problems of their customers or satisfy their needs.

Furthermore, depending on financial capabilities, commercial chains in different degree make use of commercial (paid) and public (often free) sources of innovations. The examples here are innovations associated with diffusion of knowledge of commercial chains. As it has been mentioned the elements of close environment of commercial chains are very important sources of knowledge acquisition.

### **Examples of application of various sources of innovations by commercial chains**

In the case of customers constituting the point of reference for activities of marketing-oriented enterprises, we can observe activities associated with dynamic acquisition of knowledge about customers where customers are its important source. This knowledge is acquired for the need of construction of a particular commercial offer. Apart from such concepts as CRM (Customer Relationship Management) and CSR (Corporate Social Responsibility), CCR (Customer Centric Retailing) is gaining importance. CCR represents a strong focus on

customer's needs (Consumer Goods and Retail Insights 2011, p.7). We can distinguish four degrees of retailer's involvement in creation of orientation focused on customers.

1. Firstly, it is necessary to create a database of customers (the initial stage – retailers start to notice the importance of possessed information and apply it in the process of sale and offer creation).
2. The second step in development of the concept is sorting out the information about customers, considering the criteria associated with transactions (by means of what channel the sale was conducted, whether the payment was made in cash or by card), demographic criterion and data associated with the customers' approach to purchase.
3. At the third stage, the data about customers are treated as an important hint concerning future sale, there occurs integration of knowledge about the customers with strategic profile of the retailer.
4. At the last stage, we have to do with full integration of possessed knowledge about the customer, and retailer's strategy. On the grounds of acquired information decisions concerning applied channels of distribution, sold brands and policy in the sphere of Category Management are made (Smith 2009).

In the case of the approach associated with CCR, the attitude to understanding the customer (on the grounds of segmentation based on behaviour patterns), the decisions concerning assortment (based on quantity data about customers and their behaviour patterns), the sphere associated with pricing policy (based on the basket of needs typical of distinguished segments), management (goals concerning customers are defined in the whole chain of values and patterns of customer behaviours are assessed on a current basis) is changed (Consumer Goods and Retail Insights 2011, p.12).

Using the example of Tesco we can indicate segmentation procedures that allow for better recognition of target customers' needs and for stating that they are consistent with the CCR concept (Sonneck, Cirk Sören Ott 2010, p.190). Segmentation in Tesco takes place on the basis of "Club Card" Tesco database including the holders of loyalty cards. In the case of Great Britain, the number of card holders is assessed to be 10,000.

In the segmentation procedure, economic criteria were adopted, and with reference to them, 6 market segments were distinguished: Finer Food, Healthy, Traditional, Mainstream, Convenience and Price sensitive. Specific brands satisfying customers' expectations, and providing them with value, were addressed with reference to these market segments. From the point of view of marketing innovations, implementation of new brands constitutes product innovation and additionally allows for implementation of CSR assumptions (Fair Trade brands).

The Tesco chain is also an example of application of knowledge about customers and its implementation in the sphere of creation of hybrid distribution systems and application of social media in communication with customers. The Tesco chain started e-shopping in Poland in 2012 and the dynamics of sale through this channel is still observing a growing tendency<sup>1</sup>.

<sup>1</sup> <http://www.tesco.pl> [access: 13.12.2013].

Recognised, changing consumer behaviours are the reason for implementation of new forms of communication between retailers and customers. The importance of the Internet channel is growing; it is used both as a sales channel and as a communication channel. According to the analysis, Polish customers increasingly more often apply mobile devices while doing shopping, and this tendency has a growing nature (Report m-commerce in practice, for m-Generator.pl, praktycy.com September 2013, access: 12.06.2014). Development of m-commerce associated with the growing number of mobile devices the customers have access to, constitutes the area of innovation in retail trade in the sphere of communication with customers.

Applying FB in promotional activity is a very good example of formation of relations with customers through involving them in the chain activity. The customers become loyal proponents of a particular chain and often lobby in its favour while encouraging friends to like it (Fanpage Trends, June 2013, access: 12.05.2014).

Retail chains apply new technologies in various areas related to management processes. The IT knowledge comes from IT providers (suppliers). The following technological solutions are most often applied:

1. ERP solutions – serving management of enterprise resources,
2. Business Intelligence – tools of business analytics and reporting,
3. CRM – tools of management of relationships with the customer.

Tesco managers declare purchase of the following IT solutions associated with the declared needs of representatives of commercial enterprises in the next two years (Computerworld Poland, Ranking of Information and Telecommunication Companies, IDG Business Media 2007-2012) (Sztangret, Bilińska-Reformat 2014, p. 55-68):

- Supply Chain Management Software,
- Warehouse Management,
- Analytics,
- Financials,
- HR/benefits,
- Merchandise Allocation,
- Network Infrastructure.

Knowledge diffusion related to undertaking innovative activities is strongly associated with the orientation of commercial chains on competitors. Solutions applied by the Biedronka chain<sup>2</sup> that followed the Lidl chain in many areas<sup>3</sup> are very good examples here. The examples may include:

1. Change in the selling area, the so-called remodelling of the selling area;
2. Development of the category of non-food products and “upscale exclusive” products;
3. Implementation of similar promotional activities (the so-called National Day, for example selling Italian food).

<sup>2</sup> <http://www.biedronka.pl> [access: 05.05.2015].

<sup>3</sup> <http://www.lidl.pl> [access: 05.05.2015].

In the authors' view, the Lidl chain was also the source of inspiration for Tesco in the sphere of introduction of promotional activities with the use of social media and celebrities (famous cooks). In the case of Lidl, currently the chain cooperates with Okrasa and Pascal and Tesco's offer is promoted by Robert Makłowicz.

## Summary and conclusions

Development and implementation of innovations in commercial chains becomes possible thanks to knowledge diffusion. Such entities in the retailers' environment as customers and competitors are particularly important as its sources. Information concerning trends in consumers' behaviours and their current purchasing decisions allow for development of both innovative business models and new solutions in the sphere of currently applied form of activity. Competitors, particularly key stakeholders whose innovative activity can be copied by retailers (if their potential allows for that) are particularly important in knowledge diffusion in retail trade. Key stakeholders can also inspire retailers to search for and implement their own, innovative solutions.

IT providers also perform a special role in knowledge diffusion in retail trade. Modern information technologies significantly enable application of innovative solutions in the sphere of management of commercial enterprise, management of relationships with customers and virtualisation of sale.

The knowledge sources presented in the paper are varied and they make innovative changes in retail trade dynamic while overlapping and supplementing each other.

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## Rola rozpowszechniania wiedzy w innowacjach w sieciach detalicznych

### Streszczenie

Rozpowszechnianie wiedzy jest podstawą dla procesów innowacyjnych w biznesie. W polskim handlu detalicznym ekspansja zagranicznych sieci handlowych przyczyniła się do dynamicznego transferu wiedzy w sferze zarządzania procesami kupowania i sprzedawania. W ciągu kilku lat zostały wprowadzone standardy właściwe dla globalnych i międzynarodowych sieci handlowych jako wynik integracji, koncentracji i globalizacji. Handel detaliczny jest sektorem o wysokiej zdolności wdrażania innowacji. W opracowaniu autorki zamierzają zweryfikować zjawiska związane z rozpowszechnianiem wiedzy na przykładzie sieci handlu detalicznego i scharakteryzować jej rolę dla procesów innowacyjnych w nich. A zatem dziedziny związane z rozpowszechnianiem wiedzy w sieciach detalicznych na wybranych przykładach stanowią zakres przedmiotowy opracowania.



Jednostkami objętymi badaniami w opracowaniu były wybrane przedsiębiorstwa handlu detalicznego.

Analiza włączona do opracowania dotyczy lat 2009-2014, które były okresem nie zrównoważonego rozwoju gospodarki (zakres czasowy). Prezentowane wyniki przeprowadzonych analiz dotyczą Polski (zakres przestrzenny).

W opracowaniu założono następujące cele o charakterze poznawczym i opisowych:

1. Celem poznawczym proponowanego opracowania jest zidentyfikowanie kluczowych interesariuszy (zewnętrznych), którzy stanowią źródło rozpowszechniania wiedzy dla sieci handlu detalicznego.
2. Celem opisowym opracowania jest wskazanie innowacji zastosowanych przez wybrane sieci detaliczne na podstawie rozpowszechniania wiedzy pochodzących od klientów, konkurentów i dostawców.

W artykule założono, że klienci i dostawcy, jak również dostawcy rozwiązań informatycznych są głównymi źródłami rozpowszechniania wiedzy, które pozwalają na wdrażanie innowacji. Również konkurenci są ważnym źródłem wiedzy dla innowacji w trakcie stosowania procedur komparatystycznych.

Dla celów realizacji założonych celów zastosowano następujące metody badawcze: krytyczną analizę literatury przedmiotu, wyniki własnej metody badawczej dotyczącej wpływu rozpowszechniania wiedzy na procesy innowacyjne w wybranych sieciach handlu detalicznego oraz metodę analizy przypadków (*case study*), która wskazała najlepsze praktyki marketingowe związane z rozwijaniem innowacji przez sieci handlu detalicznego na podstawie rozpowszechniania wiedzy. Artykuł ma charakter badawczy.

**Słowa kluczowe:** sieci detaliczne, rozpowszechnianie wiedzy, kluczowi interesariusze.

**Kody JEL:** D12

## Роль распространения знаний в инновациях в сетях розничной торговли

### Резюме

Распространение знаний – основа инновационных процессов в бизнесе. В польской розничной торговле экспансия зарубежных торговых сетей привела к динамичному трансферу знаний в сфере управления процессами покупки и продажи. На протяжении нескольких лет были внедрены стандарты, свойственные глобальным и международным торговым сетям, в результате интеграции, концентрации и глобализации. Розничная торговля – сектор с большими возможностями внедрять инновации. В своей разработке авторы намерены верифицировать явления, связанные с распространением знаний, на примере розничных сетей, и охарактеризовать его роль для инновационных процессов. Следовательно, сферы, связанные с распространением знаний в сетях розничной торговли на избранных примерах, представляют собой предмет разработки.

В разработке избранные коммерческие предприятия представляют собой субъектов обследований.

Анализы, включенные в разработку, относятся к годам 2009-2014, которые были периодом непостоянного развития экономики (временное выражение). Представленные результаты проведенных анализов касаются Польши (протранственное выражение).

В статье приняли следующие цели познавательного и описательного характера:

1. Познавательная цель предлагаемой статьи – выявить основных стейкхолдеров (извне), которые являются источником распространения знаний для цепочек розничной торговли.
2. Описательная цель статьи – указать инновации, применяемые избранными сетями розничной торговли, на основе распространения знаний, поступающих от клиентов, конкурентов и поставщиков.

В статье приняли предпосылку, что клиенты и поставщики, а также провайдеры информатических решений – основные источники распространения знаний, которые позволяют внедрять инновации. Также конкуренты являются существенным источником знаний для инноваций по ходу использования процедур бенчмаркинга.

Для осуществления принятых целей применили следующие методы изучения: критический анализ литературы по предмету, результаты метода собственного исследования, касающегося влияния распространения знаний на инновационные процессы в избранных розничных сетях, и метод анализа определенной проблемы, которые указали лучшие маркетинговые практики, связанные с разработкой инноваций сетями розничной торговли, на основе распространения знаний.

**Категория статьи:** исследовательская статья.

**Ключевые слова:** сети розничной торговли, распространение знаний, основные стейкхолдеры.

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