

## BENCHMARKING IN OMNI-CHANNEL LOGISTICS

Katarzyna Anna Kuźmicz \*

\* Faculty of Management, Bialystok University of Technology, Bialystok, 15-535, Poland, Email: k.kuzmicz@pb.edu.pl

Abstract Benchmarking is a management tool successfully used by public and private sector managers and holding its important position in a management toolbox throughout the years. The essence of benchmarking is learning from others and creative adaptation of good practices. It can involve both quantitative and qualitative comparisons which enable not only to learn about the outcomes of the activity but also about the ways these results had been achieved. In the paper the possibility of applying benchmarking in omni-channel logistics is presented. The rising expectations of customers highlighting the convenience of purchase as one of the most important factors determining purchase, forces retailers to change their business strategies. One of the most important factor creating product value is flexible delivery. Therefore this aspect was chosen as an example field for a proposed reference benchmarking methodology.

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#### 1. INTRODUCTION

The rising expectations of customers highlighting the convenience of purchase as one of the most important factors determining purchase decision and rising adoption of mobile devices in shopping, forces retailers to change their business strategies. It also highly influences modern logistics. Development of retail and e-commerce, in particular moving from brick-and-mortar retail towards omni-channel model, triggered many changes in logistics such as: small orders to be delivered according to the client's desired time and place, many returns and exchanges and many others. In order to meet customer expectations in omni-channel retail where it is vital to pro-vide full, seamless continuity across all channels of operation, the competition between companies grows rapidly. Therefore there is an urgent need to use efficient management tools in logistics. Companies need to respond promptly to the changing circumstances so there is little time for experiments in management. Logistics managers therefore search for proved, recommended and effective tools to improve their operations. One of such tools is benchmarking. In order to meet customer expectations and not to be left behind by competitors, logistics has to be ready to adapt warehousing, transportation, distributed order management, inventory optimization and many others. A reasonable way to do it seems to learn from the best through benchmarking.

#### 2. THE BENCHMARKING CONCEPT

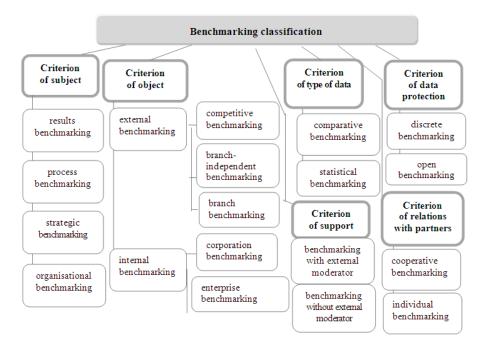
There are numerous definitions of benchmarking in the literature. According to Karlöf and Östblom (Karlöf & Östblom 1993), benchmarking is a continuing and systematic process which involves confronting effectiveness measured by productivity, quality and experience with the results of the companies and organisations which can be seen as models of perfection. Benchmarking as a process of evaluation and best practice application is described by Kulmala (Kulmala, 1999), and Pieske (Pieske, 1994) claims that benchmarking is a method of comparing with the best and learning from them in a systematic, detailed and branch independent way. In European Benchmarking Initiative (EBI) benchmarking was meant as an internal organisational activity which aims to improve the organisation's performance by learning about possible improvements of its primary or support processes by looking at these processes in other, better-performing organisations (van Vught et al. 2008).

Most of the definitions accentuate that benchmarking should be used systematically, it should be continual and improvement oriented. Its essence is learning form the best and creative adaptation of the best practice identified. Benchmarking can be perceived as a tool useful in the improvement of organisational units functioning and flexible – adapting easily in different settings (Kuźmicz, 2015a). Numerous examples support this thesis, especially benchmarking applications in Great Britain, Germany, USA and Australia, the countries which can be seen as leaders in this field.

In the literature two terms: benchmarking and benchmarks are commonly misused. Benchmarking means learning by comparisons of practices and benchmarks are measures to compare results of functions or operations with other functions or operations. They are indicators.

Benchmarks are used in statistical benchmarking. By statistical benchmarking comparing indicators is meant. Kelly (Kelly, 2005) propagates comparative benchmarking. It involves comparing processes not only their outcomes. Comparing indicators is important and it helps to assess performance but real benchmarking should not be limited to this kind of analysis. It should involve a deeper investigation to check what practices are behind the figures.

In the figure 1 different classes of benchmarking are presented. They are distinguished according to six criteria: subject, object, type of data, data protection, support and relations with partners. The detailed description of the benchmarking types is presented by Kuzmicz (Kuzmicz, 2015b).



**Fig. 1** Benchmarking classification; (Kuźmicz, 2015 on the basis of Nazarko et al. p. 2009, Kelly 2005, Mass, Flake)

In the field of logistics most often benchmarking of results or processes is performed. Private sector companies due to reluctance towards data sharing often choose internal and discrete benchmarking. External moderator means a consultant, specialist in this field who facilities the process of benchmarking. Very often benchmarking in logistics is limited to comparing indicators but qualitative com-

parisons are vital for real learning (comparative benchmarking). The last criterion – relations with partners – divides initiatives into those based on collaboration between partners and the opposite type of benchmarking where comparisons are made against data from a database. In order to protect data during benchmarking, partners sign a confidentiality agreement.

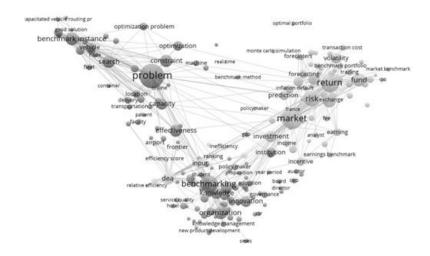
#### 3. BENCHMARKING IMPORTANACE

Although the term benchmarking as a management tool was coined in the 90's, it is still vibrant in managerial practice and in scientific research. Benchmarking is based on a human natural ability to learn from others therefore it cannot be perceived as a concept made by somebody out and quickly forgotten. The fears that benchmarking can be a management fad – a fashion for a certain management tool or method – were formulated in the literature in the 80's and 90's so in 2015 it cannot be stated that it is still "a short-lasting fashion". The common usage of benchmarking also proves that it must bring significant benefit to the companies that use it because nobody uses ineffective tools repeatedly. The fact that companies spend a significant amount of money on employing external benchmarking moderator, also proves that it is worth it.

**Table 1** Top 10 management tools; Author's elaboration based on Bain& Company website accessed: 2012, 2015.

Nr in a ranking	2000	2006	2008	2010	2012	2014
1.	strategic planning	strategic planning	benchmarking	benchmarking	strategic planning	CRM
2.	mission and vision statements	CRM	strategic planning	strategic planning	CRM	benchmarking
3.	benchmarking	client segmentation	mission and vision statements	mission and vision statements	employee engagement surveys	employee engagement system
4.	outsourcing	benchmarking	CRM	CRM	benchmarking	strategic planning
5.	client satisfaction	mission and vision statements	outsourcing	outsourcing	balanced scorecard	outsourcing
6.	growth strategy	key competences	balanced scorecard	balanced scorecard	key competences	balanced scorecard
7.	strategic alliances	outsourcing	client segmentation	key competences	outsourcing	mission and vision statements
8.	pay-for- performance	business process reengineering	business process reengineering	change management	change management	supply chain management
9.	client segmentation	scenarios and contingency planning	key competences	strategic alliances	supply chain management	change management
10.	key competences	knowledge management	mergers and acquisitions	client segmentation	mission and vision statements	customer segmentation

A research carried out cyclically from 1993 by Bain & Company (Bain & Company 2015) proves that benchmarking is one of the most renowned management tools. The Bain and Company has surveyed executives around the world about the management tools they use and how effectively those tools have performed. Their most recent study was based on a database of more than 13 000 respondents from more than 70 countries in North America, Europe, Asia, Africa, the Middle East and Latin America. In the table 1 top ten management tools indicated by Bain & Company respondents across the years 2000-2015 are presented. It should be highlighted that benchmarking remains in the first four of the management tools throughout the whole 2000-2015 perspective. It proves that although it is not so widely used in Poland it is a well-recognised tool in the world.



**Fig. 2** Benchmarking – co-word network analysis; Author's elaboration in VOSviewer programme

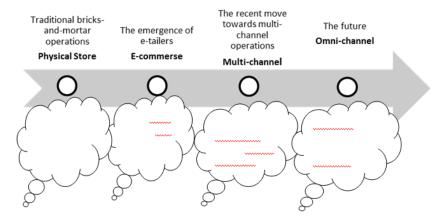
Benchmarking is also an important issue as a subject of scientific research. To perform the analysis of the usage of the term "benchmarking" and check the often related terms, a bibliographic base comprising titles and abstracts of papers listed in Web of Science database was used. The number of records included 108 652 papers. To perform the analysis the publications were limited to those published in the years: 2009-2015 and were limited to the Web of Science Categories: business, management, business finance, transportation science technology and transportation. To analyse the data a programme VoSViewer created by van Ecka and Waltman was used. Terms were extracted from titles and abstracts of the papers. Minimal number of occurrence of the terms was determined as 15 and most relevant 200 terms were taken to analysis. The co-word analysis was performed. Words of no substantial meaning were deleted first by the programme and then

by the author of this paper. The author rejected the words on the basis of her expert knowledge and semantics. The rejected words included verbs, pronouns, articles etc. Also words concerning methodology of writing a paper such as author, research problem, aim, were eliminated.

The developed map (Fig. 2) illustrates co-word network analysis. It indicates main clusters: benchmarking in knowledge and innovation management, benchmarking in solving logistics problems, benchmarking in effectiveness analysis, especially with the usage of Data Envelopment Analysis (DEA), benchmarking in market research and in finance.

#### 4. CHALLENGES OF OMNI-CHANNEL LOGISTICS

DHL in its logistics trend radar. Delivering insight today. Creating value tomorrow! (DHL 2014) indicates key social, business and technology trends that will prevail in logistics in the forthcoming years. Among the social and business trends of high relevance in less than five years the omni-channel logistics is included. It is highlighted by the authors of the study that the next generation, including cross-channel, omnichannel, social, ambient, everywhere and no-line commerce concepts require logistics network tailored to the needs to each single channel. Logistics has to answer to the challenges triggered by e-commerce, such as: higher volumes but smaller orders to be picked, packed placed and delivered as well as larger quantities of returns, exchanges, and damages of goods (DHL 2015). The authors of the research indicated, that logistic companies responded to this trend by taking up new responsibilities such as: packaging, distribution, tracking, fulfilment, setting-up online shops, multichannel management, inventory tracking and technical support.



**Fig. 3** From bricks-and-mortar till omni-channel retaining; own elaboration on the basis of Delloite 2015

Despite the rising attention to omi-channel retailing, some authors stress, that the issue has not been yet well conceptualised (Blanchard 2015, Verhoef, Kannan & Inman 2015). Blanchard claims that omni-channel is currently probably the most frequently discussed yet least implemented strategy in supply chain environment. He quotes the research made by Ernst and Young and the Consumer Goods Forum, in which 81% of respondents (senior executives at large products manufacturers and retailers) say, that their current supply chain is not fit for omni-channel.

The omni-channel concept came with the evolution of retail from bricks and mortar to omni-channel retailing (Fig. 3).

The difference between multi-channel and omni-channel logistics still remains vague. A good illustration of the differences between the two terms is presented in Table 2.

**Table 2** Differences between multi-channel and omni-channel concepts, (Verhoef, Kannan & Inman 2015, p.176)

	Multi-channel management	Omni-channel management	
Channel focus	Interactive channels only	Interactive and mass-communication channels	
Channel scope	Retail channels: store, online- website, and direct marketing (catalogue)	Retail channels: store, online-website, and direct marketing, mobile channels (i. E. Smart phones, tablets, apps), social media customer touch points (incl. Mass communication channels: tv, radio, c2c, etc.)	
Separation of channels	Separate channels with no overlap	Integrated channels providing seamless retail experiences	
Brand vs. Channel customer relationship focus	Customer-retail channel focus	Customer-retail channel – brand focus	
Channel management	Per channel	Cross-channel	
Objectives	Channel objectives (i.e. Sales per channel; experience per channel)	Channel objectives (i.e. Overall retail customer experience, total sales over channels)	

The omni-channel retail differs especially in integrated channels in opposition to separate channels and in cross-channel vs. per channel management.

# 5. PROPOSALS FOR BENCHMARKING IN OMNI-CHANNEL LOGISTICS

Since improving processes leads to the improvement of the whole organisation therefore process benchmarking is said to be the most effective type of benchmarking. Comparing processes, adopting and implementing of best practices instead of only comparing indicators enables real learning. The basic features of process benchmarking embrace (Kowalak 2009):

- Understanding key processes;
- Identification of best practices;
- Analysing processes behind the best practices;
- Comparing processes with the best;
- Implementation of better processes and standards;
- Improvement of practices and services.

Benchmarking in logistics should cover both statistical and comparative approach. The reference methodology of benchmarking delivery processes is presented in Fig. 4.

Some authors suggest (Langley & Holcomb 1992, Fairchild 2014) that the objective of a supply chain management should be synchronisation of all supply chain activities to create customer value. Product delivery comprises a part of this value. One of the most important issues in omni-channel logistics is flexible delivery. According to Fairchild (Fairchild 2015), Lambert, Stock (Lambert & Stock 1998) and Day (Day 1994), logistics flexibilities include: physical supply, physical distribution and demand management. Flexibility of delivery can be reflected in time and location.

The example fields for benchmarking can be the customer driven delivery strategies presented in Table 3.

**Table 3** Examples of customer driven delivery strategies; author's elaboration on the basis of Deloitee 2015

Customer driven delivery strategy	Description		
Drop-shipping	A customer order triggers third party logistics provider.		
Click-and-collect	The customer purchases items online and then has the option to pick ther up at a bricks-and-mortar location.		
Reserve-and-collect	Similar to click-and-collect. It allows for checkout to occur after the customer views the items in person. The customer reserves online and pays in a physical store.		
Delivery lockers	They are placed in convenient locations such as train stations, grocery stores and are only possible to open using a code given to customer in connection with a purchase online.		
Same day delivery	A fulfilment strategy meaning that the item is in stock in a bricks-and- mortar store or in a warehouse that is located closely to a major city. The delivery is made most often on bikes or scooters.		
Last mile delivery	The last link of the delivery chain, the only one with a direct contact with the customer. Often a cost consuming part of the delivery.		

The proposed methodology includes performing key performance indicators analysis and qualitative comparisons of processes. Limiting benchmarking only to comparisons of effects or indicators regardless of the analysis of the ways these results had been gained, means positioning and that is in fact ranking. Rankings should not be aliased with benchmarking. The methodology includes workshops, which require a lot of interactions between people who are the most valuable

source of knowledge. During first workshops processes behind the figures are discussed. Most important processes are later mapped and compared. Process mapping does not have to be time and cost consuming procedure. It can be done quite simply by the means of attaching colourful cards to the board (actors, actions, problem areas) by people involved in the processes. During the second workshops best practices in these processes are identified. Later creative adaptation of the newly learned practices takes place. In the next step the whole project should be evaluated. Companies undertaking benchmarking of flexible deliveries or other processes learn by comparisons with partners or inside the company. Observing competition and their ideas for flexible delivery is also the part of benchmarking if only it means analysis and creative adaptation of practices and not copying. Only systematic learning through benchmarking can bring positive change and long-lasting competitive advantage.

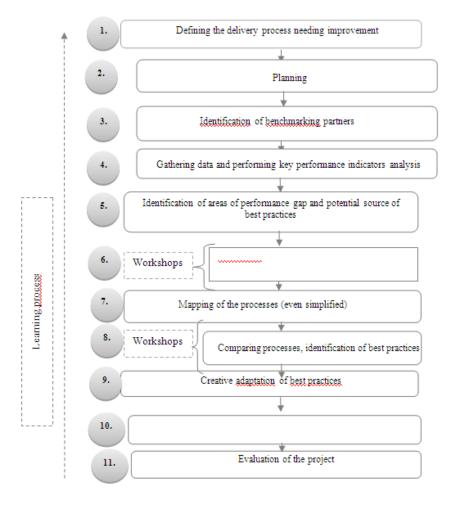


Fig. 4 Reference methodology of delivery process benchmarking; author's elaboration

#### 6. CONCLUSION

The evolution of retail from multi-channel to omni-channel triggered even more competition in logistics sector. Responding to customers preferences of time and place delivery requires flexible solutions in delivery. Therefore in the study benchmarking of flexible, customer driven delivery processes was proposed. The relevance of benchmarking application in logistics was supported by performing co-word network analysis in the VOSviewer programme. The elaborated reference benchmarking methodology involves both quantitative and qualitative comparisons. The analysis is carried out by comparing indicators and by deeper investigation in search for good practices behind the figures. The author included in the methodology workshops during which tacit knowledge of the staff members involved in the processes can be extracted. Benchmarking can help to meet the criteria of cost-effectiveness and high quality of services. By learning from the best logistic companies can face the challenges of convenience logistics and the logsumer trend (DHL 2015) – the consumer driven culture.

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### **BIOGRAPHICAL NOTES**

**Katarzyna Anna Kuźmicz** is employed in the Department of Business Informatics and Logistics at the Faculty of Management of the Bialystok University of Technology. She is also Dean's Plenipotentiary for Studies in Foreign Languages. Her research interests embrace benchmarking, productivity analysis and logistics.