

THE NEW STRATEGIC ORIENTATION IN INNOVATING HOSPITALITY LOGISTICS SYSTEM

Christian Stipanović
Elena Rudan

Preliminary communication

Received 9 July 2014
Revised 21 August 2014
1 September 2014

Abstract

Purpose – This paper investigates ways how to innovate logistics processes in the hospitality industry aimed at achieving spatio - temporal transformation of resource base into competitive advantages based on innovation and quality. Economic goal of modern logistics based on knowledge is to provide a unique experience for tourists at minimum cost in order to multiply operational profit. Operational profit has to be largely reinvested in the new strategic orientations as well as in new intangible resources generating excellence and recognizability of hospitality services.

Design – The paper defines current and future ways of logistics processes optimization as well as strategies in the hospitality industry aimed at generating excellence both for tourists and sustainable development. It analyzes the role of knowledge management in the reconception of logistics processes based on the new strategic orientations in synergy with other business processes involved in the transformation of a classical company into a learning organization

Methodology –Recent scientific literature is critically analyzed in the paper (hospitality logistics systems, new strategic orientations) and practical examples (various forms of Croatian hotels and hospitality companies) and determines the views of the authors referring to the new qualitative trends of modern logistics and sustainable value chain and excellence as a prerequisite for the development of a hospitality company. The causal loop model is used for generating significance of new strategic orientations aimed at innovation of logistics processes in the hospitality industry in a dynamic environment.

Findings – The paper emphasizes the importance of intangible resources and new strategic orientations in new qualitative trends used in logistics management processes. It presents a starting point for the future research works to solve specific problem situations in practice.

Originality – The paper suggests and provides arguments for concrete proposals applied in optimization of logistics processes based on knowledge and information (risk management in generating business decisions) and new strategic orientations and it also raises questions to anticipate future changes in the development of logistics processes and strategies.

Keywords strategic orientations, innovation, logistics processes, knowledge

“This work has been fully supported by the University of Rijeka under the project titled Supply chain management in hospitality, number [13.03.1.2.01.]”

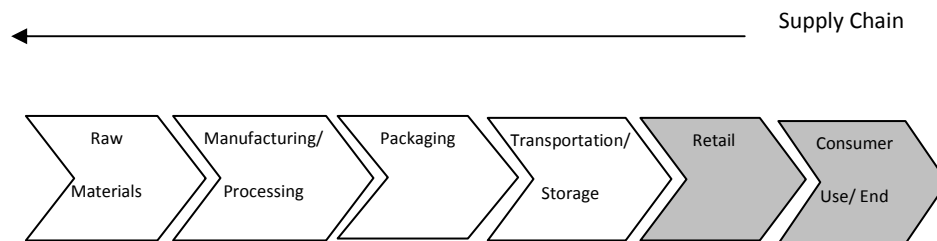
INTRODUCTION

The dynamics of the globalized tourism market and the negative economic trends set challenges to the entire business operation of the modern hospitality company. At the same time logistics processes and value chain undergo rapid changes in generating excellence of hospitality services. The only thing that is certain in the future are the changes that are getting faster and stronger than ever and they emphasize the distinction in logistics in the past, present moment and in the future. In the past logistics was based on conventional resources, while the logistics of today and tomorrow relies on intangible resources (knowledge and information) in generating business decisions with a greater chance of success in a turbulent environment. Logistics based on innovation of logistics strategies has to connect synergetically all flows within and outside the company to create higher value in achieving operational goals and development of the hospitality company as well.

1. THEORETICAL DETERMINANTS OF LOGISTICS PROCESSES

Logistics involves management of procurement processes, production and distribution of products to the final user. It becomes a new business philosophy whose main task is displacement management of resources and potentials from their source, through the process of production and distribution to the final user (Zelenika, Pupovac and Pavlič, 2001, 270). Furthermore, Segetlija (2005) states that logistics plans and organizes, leads and controls product stocks and information flows within and outside the company. According to Kovačić (2001, 325) the purpose of the logistics strategy is a continuous improvement of material and information flows, which connects procurement markets supported by business transformation processes with consumer sites in accordance with the company's goals. In the modern business operation logistics is being transformed into the initiator and creator of the processes starting with procurement and production, and ending up with the use provided by the final consumer. In addition to logistics modern market has an inseparable bond with a value chain. According to Gudehus and Kolazab (2009) value creation chain or value chain is a chronological flow containing processes performed in the logistics chain that consists of organizational units and logistics sites whose result is a product or service of a particular value. Sustainable value chain represents a connection that ensures continuous carrying out of all connected links of the chain provided that the value distortion of a link does not affect other links (figure 1).

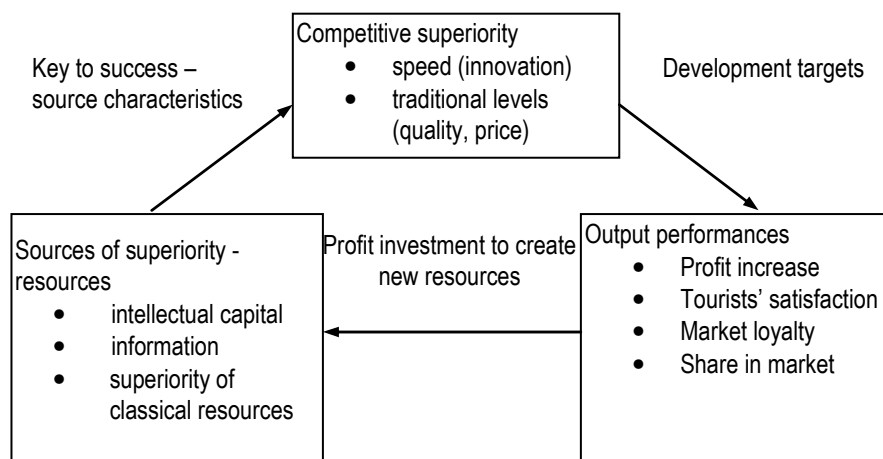
Figure 1: Sustainable value chain



Source: UN Global Compact Office and Business for Social Responsibility 2010, 26.

In reconception of the development a systematic approach to logistics is crucial (logistic model) which includes the necessity of continuous changes and improvements as well as the complexity of interactions. According to Mrnjavac and Ivanović (2007) the modern approach to logistics deals with certain other elements, which are considered the elements of the logistics system, such as: consumer or customer service, packaging (for tangible products), processing and transmitting information, demand forecasting, production planning, supplying input materials and services for producing and logistics product, the location of logistics infrastructure, and other elements. Value chain can be identified with a model of competitiveness aimed at making use of resources in profiling competitive levels based on innovation that helps to multiply profits. Profit has in its larger part to be reinvested in the creation of information and knowledge through the new strategic orientations. Knowledge and ability of its implementation involves creation of logistical competing models which on the contemporary market are ready to timely satisfy guests' needs. Accordingly, the model is being accelerated and is getting more complex as a result of the turbulent tourism market.

Figure 2: **Model of competitive superiority**



Source: Made by authors according to Day & Wensley, 1988, 1-20.

In the contemporary business operation a key determinant of competitive superiority becomes speed (innovation). The key question becomes how to innovate the value chain and to improve the logistics system that supports the development of the company.

Logistics processes end up with control in order to perform efficiency measurement aimed at setting targets and defining corrective measures aimed at operational optimization of logistics processes. At the same time control represents the beginning of a new cycle of time in order to optimize the processes.

2. SPECIFICITIES OF LOGISTIC PROCESSES IN THE HOSPITALITY INDUSTRY

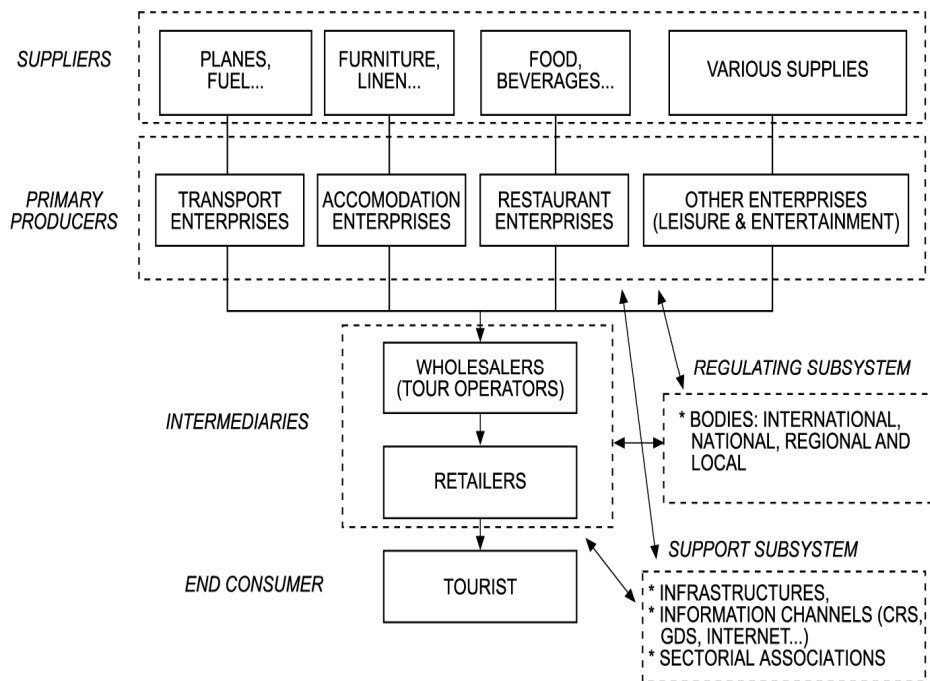
Logistics systems in the hospitality and hotel industry can be defined as a system of interrelated and inter-influenced logistic knowledge and logistic activities which supported by certain elements of production in the hospitality and hotel industry support and promote the production of hospitality and hotel products (Zelenika, Grčić and Skender, 2008, 128). Mrnjavac (2010, 251) considers the hospitality logistics subsystem a subsystem in tourism and defines it as the optimization of information and goods flows, as well as capital, knowledge and visitors with the view to producing a high-quality hospitality product that satisfies the needs of the user. Specificities of the logistic processes in hospitality industry arise from fundamental specificities that are typical for (identified in) tourism, hospitality and hotel industry:

- Specificities of services: intangibility, inseparability, perishability, simultaneous preparation and consumption.
- Behaviour of tourist supply and demand: it is not enough to only adapt the supply to demand, moreover supply has to precede demand, i.e. anticipate future demand requirements, to design an innovated product and through proactive marketing attract potential tourists with the aim of a leadership position.
- Globalized characteristics of hospitality industry: linking, networking and merger of hospitality companies is requested. Innovations and new scientific solutions are not always easily accepted by hospitality industry, employees in the hospitality industry are poorly paid and educated, hospitality industry and tourism are highly sensitive to changes in the environment (political, social, economic environment).
- Tourism, hospitality and hotel industry are big environment polluters and therefore it is necessary for the logistics systems to be directed to new green technologies and new solutions that will open up the possibility of creating an environmentally friendly business concept.

Specificities of the logistic processes in the hospitality industry depend to a large extent on the characteristics of the provider of the hotel and hospitality services (a family hotel, a national hotel chain, foreign hotel chain and hotels in the majority state ownership) and on their value system (corporate culture) and business philosophy (focus on development, learning and innovation). With reference to start up items each form has its advantages and disadvantages oriented to the future innovation of logistics processes in the competitive contest. Small family run hotels recognize the importance of investing and innovating all logistics processes, but are limited through their financial (dis)ability. Technology has further differentiated small hospitality companies that struggle to manage their supply chains with limited resources and budget from large, multi-unit chains that can afford to invest in solutions to gain visibility and control (Terry, 2007). Foreign chains continuously invest in the innovation of logistics processes in order to reach standardization and excellence and to offer superior quality and distinctiveness. National chains are trying to respond in terms of quality through reshaping business based on new strategic orientations and expertise. Hotels in majority state-ownership open the key question of whether to enter the privatization process and restructuring with a positive repercussion on the innovation of logistics processes.

Logistics processes of a hospitality company have to meet in terms of quality the challenges of environment and globalization processes (a company has to follow the vision of the destination and emphasize own peculiarities). The structure of the tourism sector determines the value chain and the interaction of all stakeholders in the destination attractiveness, especially those who are important for the hospitality company and who make up the supply chain in order to achieve excellence for tourists.

Figure 3: Structure of the tourism sector



Source: Claver, et. al. 2006, 190.

According to Stipanović (2006, 123) during their stages of development, hospitality and tourism industry takes on new forms and satisfies very stringent criteria of the assortment of tourist and hospitality products and services as well as logistics processes. Hospitality and tourism industry is constantly enriched by new motives which leads to decisive changes in the purpose and way of spending holiday outside the usual place of residence. Imagination and the desire for something new, different, unfamiliar will set the new criteria of tourism demand and supply.

Logistics aimed at the development of a tourist destinations should evolve into a responsible logistics branching in three directions: the preservation of the environment, life quality improvement of the local population and economic effects which should also be reflected on the logistics processes of hospitality companies. In addition to the qualitative and quantitative development of the tourist and hospitality product and supply, special attention is paid to the sustainable development and ecology. Nowadays

the leading providers are eco-companies (hotels, campsites) that implement ecological component in waste management, in the orientation towards alternative energy sources, rational use of energy... An ecologically oriented supply chain is focused on zero waste, i.e. maximum waste recycling, i.e. the results of the business operation of hospitality companies and tourism itself must not be harmful to the environment and the local community.

A hospitality company has to be different than the competition which is achieved through the innovation of logistics processes. The global economy has dramatically increased the number of competitors offering similar products, which is particularly important for the supply in tourist destinations. According to Cooper (1994) a number of key, but interdependent, factors has been responsible for reshaping the activities of major companies including: globalisation of markets, cheaper communication, removal of barriers to trade and foreign investment, achieving economies of scale in business, innovation in logistics.

3. INNOVATION OF LOGISTICS PROCESSES IN RECONCEPTION OF COMPANY DEVELOPMENT

Reconcepted development of a contemporary hospitality company based on situational analysis and anticipation of changes in the micro and macro environment redefines the target system and innovates operating strategies. The aim of logistics in the hospitality industry is a continuous optimization of flows of goods, people, information, energy, knowledge, capital, waste in order to establish excellence of the hospitality service and a maximum satisfaction of clients' needs. According to Mrnjavac (2010, 195) in the hospitality industry two levels of objectives and strategies are set:

- strategy of lowering logistics costs (due to the large share of logistics costs in the modern hospitality industry for the procurement of a large number of different resources, it is necessary for managers to perceive the possibilities of lowering logistics costs which will not have a negative impact on the quality of the process);
- strategy of increased client's satisfaction (in the hospitality industry the client's satisfaction is of highest significance (e.g. manner, time, quantity, quality of service); therefore it is necessary to build an maximum efficient organization at no additional costs).

The investment in the optimization of logistics processes is profitable as long as the level of income based on the innovation of logistics processes is higher than expenditure. According to Tigu and Calaret (2013, 106) supply chain performance in tourism, but also in hospitality industry, is measured through both financial indicators and the non-financial ones. So besides profit, costs, market share, etc. the performance indicators have also to be reached in terms of customer satisfaction, efficient internal process, degree of innovation, employee satisfaction and other indicators related to movement of tourist. Hotel companies must think of their performance in a wider sense (from the point of view of employees, customers, suppliers, management etc) and not only from a merely financial perspective, which is only the epitome of all the aspects of success (Ivanković, Janković and Peršić, 2010, 13).

Logistic objectives have to follow the overall company goals which are achieved by the synergy of all the processes of the value chains and operating strategies (the goal is not the best supplying function but the best supplying function in interaction with the best operating strategies), taking into account the particularities of procurement, supply and distribution in the hospitality industry in terms of the challenges of new trends in supply and demand.

The basic tenet of SCM (supply chain management), and correspondingly of food supply chain management, is that competitive advantage is derived from companies managing and enhancing the total performance of the supply chain, for the purpose of delivering improved value to customers (Fearne and Hughes, 1999, 123). According to Vouk (2005, 1013) the structure of the supply chain is largely defined by technology, especially the electronic data exchange, the system of fast responding delivery and the system of the efficient adjustment to the supply. As we move into the middle of the first decade of the 21st century, we are seeing another shift in focus - from supply chain management to strategic supply chain management (Waters, 2010). It is necessary to the assertion that there are strong social, economic, organisational and market rationales for a more concerted effort to promote higher levels of direct supply chain relationships in the hospitality sector (O Donovan, Quinlan and Barry, 2012, 500).

The traditional concept of procurement, where the company concentrates on cheap suppliers has been replaced by a strategy of just-in-time procurement that is based on quality and that concentrates on the development of long-term relationships with suppliers, on establishing partnerships, on continuous improvement of the product quality and on cost lowering. Procurement in the hospitality industry (small family run hotels as the most propulsive form) have to rely on local agriculture (family farms), on indigenous varieties offered in local specialities in contrast to the globalized cuisine and fast-food restaurants (connecting local agriculture and hospitality sector through the procurement function, joint promotion and entering the market - vertical linking of stakeholders). According to Randić and Rittig Beljak (2006, 12, 101), regional and local dishes emphasize the difference, bring together cultural markers as a part of the cultural identity of each region. The advantage of the Croatian hospitality sector must be based on local values, local dishes, decoration style, local coloring (no copy at all can be better than the original). In the continuation of the logistics chain, it is necessary to innovate all processes (production/supply, distribution) ending up with a promotional strategy by using new media, social networks in order to reposition and recognize companies and destinations as well as distribution channels (e-distribution, reservation information systems).

Reconception of the development of logistics process should be based on a new business culture featured by learning and knowledge, visionary mind and leadership of knowledge management as well as self-realization of employees. Through the transformation of the organizational structure, authorization and teamwork all employees should be included in the concept of development and key business decisions making process, so that they get more motivated to meet the business goals. According to Brownell (1990, 194) the key implication here is that managers should seek to create an organizational atmosphere which supports efforts to improve quality and enhances the nature of communications between employees and customers.

Organizational culture in hospitality companies is very important because the result of these mutual norms, patterns of behaviour makes an impact on tourist's satisfaction who always recognizes satisfied employees which is a result of set behaviour patterns. In order to make a progress in all logistics processes, innovations based on creative ideas and new strategic orientations are indispensable.

4. STRATEGIC ORIENTATIONS AIMED AT OPTIMIZATION OF LOGISTICS PROCESSES

Development reconception raises two key questions that are typical for the entire operational model of a contemporary hospitality company:

- How to identify and meet the needs of the modern client to the highest extent?
- How to be better and different in comparison to competitors?

Qualitative responses to the challenges of turbulent tourism market can be based only on the knowledge and information as a result of new strategic directions oriented to clients (TQM, CRM) and competitors (benchmarking and business intelligence) which supports strategic decisions and innovation of strategies.

- Dynamic benchmarking is based on continuous comparison of all logistics processes in order to detect their weaknesses and strengths compared to the ones of competitors as a source of a continuous improvement in order to identify opportunities, to emphasize own strengths and to eliminate weaknesses.
- Business intelligence is based on the legal and ethical way of gathering key data about competitors (and their logistics processes) at the present moment and future as well, transformation into information and knowledge with the aim to surpass the competition. It is necessary by anticipating the model of development concept and logistics processes of competitors to improve the own conception of business development in order to remain a step ahead of the competitors.
- TQM is based on the Deming cycle quality on how to anticipate customers' needs today and in the future and improve business (logistics processes) to achieve business excellence (tourist is a king in the quality system).
- CRM is based on identifying the needs of each individual client (segmentation 101) and providing personalized services to the maximum satisfaction (adjustment of logistics processes to each client).

The new strategic orientations (besides the described ones are standardization, informatization, knowledge management, reengineering) must generate innovations of value chain (how to improve existing solutions - concrete improvements to all elements of the value chain. Intelligence of a supply chain gets a key importance - creation of business intelligence related to the various functions of the supply chain management. It requires a tight linking of analytical activities and production activities (Liautaud, 2006, 47). According to Panian (2008, 30) the main goal of creating intelligence of a supply chain is the storage technology of the data and analytical tools at the strategic level of corporate actions throughout the life cycle of the supply chain and products. All strategic goals are based on a man (knowledge) and software (storage, ETL, OLAP,

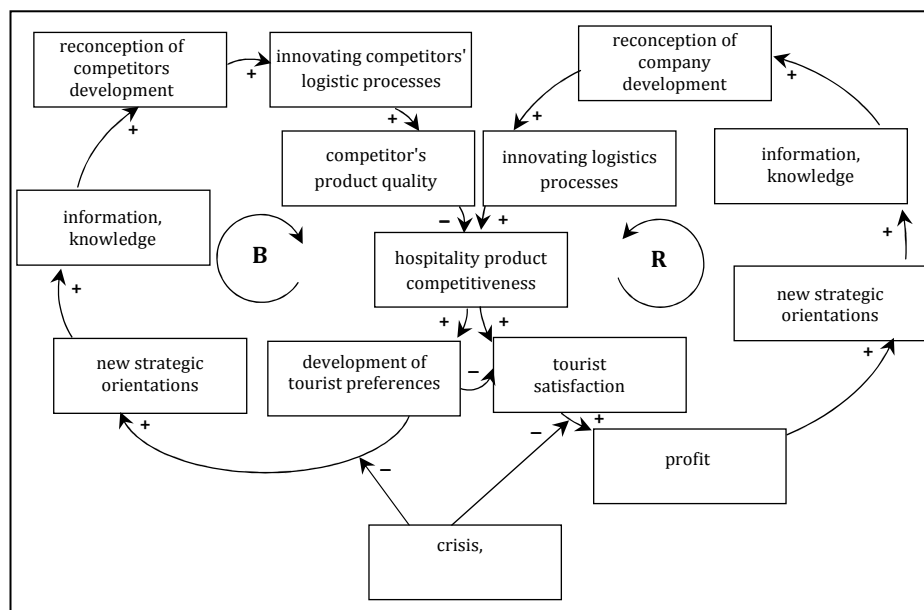
dashboards, ad hoc queries, data mining). Information and expert systems that transform the abundance of data in key information and knowledge for the purpose of business decision-making and development reconception are elaborated. Information technology provides a feasible way of harnessing the full operational capability (Teare, 1996, 63). Recognizing the importance of information systems in logistics and its implications in the modern business contributes to the creation of companies able to respond to different market challenges and to identifying the recent features in dealing with production, suppliers and customers using the services. According to Aghazadeh (2004, 267) a strong LMIS (Logistics Management Information System) provides data to: improve client service by accurately forecasting demand, procuring the products and quantities in demand, and monitoring to maintain adequate stocks, reduce costs by reducing loss, damage, and waste of supplies, improve policy decisions and management through better reporting and analysis and identify when immediate supervisory action is required.

Best decision today is already an outdated solution tomorrow, so that you need to constantly build new solutions based on new information and knowledge. The key is to abandon outdated knowledge that limits innovation and open up possibilities for new ideas and creative techniques in order to minimize risk and optimize processes. The average company uses only 10% of their own information so that it is necessary through management information and knowledge to multiply their use and application. A hospitality company must abandon outdated paradigm of business operation through reengineering business, opening to changes in the active shaping of future. Reengineering involves change of the development concept, way of thinking, management, leadership, corporate culture, organizational structure and resources, product range, technology ... It is necessary to create awareness of the changes and innovations, that is to create economic aspect of the new strategic orientations (costs can be quantified - staff, software, implementation), but it is very difficult to quantify revenue - the result is knowledge and information that can not be presented in the accounting form, except by the balanced scorecard). Knowledge and information are embedded in the business decision which is implemented in the business, but it is impossible to quantify the role of the new strategic orientations in generating a better decision, that has a greater chance of success in the future. Research works show that the most cost-effective investments in new strategic orientations (the funds are returned in the period of 1-4 years) so that in conditions of crisis and recession a priority is given to investment in knowledge and information with the aim of generating innovation). According to Sarkis (2012, 206) knowledge and learning management activities are also critical in determining, defining, and expanding informational boundaries. Collaborative supply chains are noted for knowledge-sharing activities, such as workshops and seminars, which can help in supplier training and development efforts in environmental issues.

The significance of the new strategic orientation in innovative logistics processes in a turbulent environment (changes in the activities of competitors, customer requirements, negative macroeconomic trends, the crisis) can be represented by causal loop method. It is an excellent tool for modelling a complex system and thus strategic decision making (Jere Lazanski, 2009, 10) Causal loop diagrams consist of variables (things, actions or feelings) connected by causal links (arrows) with polarities (+ and - signs)

and delays (I) to describe the causal links, and feedback loops to describe the circles of cause and effect that take on a life of their own (Zhou, 2012). They show capturing the feedback processes, stocks and flows, time delays and other sources of dynamic complexity (Sterman, 2001). Causal loop diagrams are helpful in evaluation of the consequences caused by new policies and new structures we might design. Casual loop diagrams provide a high level means of conceptualising models in terms of their feedback loop structure (Wolstenholme,1999).

Figure 4: **Casual loop diagram of the significance of the new strategic orientations in the competitiveness of the hospitality product**



Source: author's elaboration

Logistics processes have to be transformed into intelligent logistics as a part of a learning organization, which is based on new knowledge and insights implemented in improving all the business segments. A key question for future research is how to transform the classic Croatian hospitality company in the learning organization, i.e. traditional logistics in intelligent logistics in order to generate new value and to multiply profit.

CONCLUSION

A modern hospitality company has to continuously innovate the concept of development as a response to the challenges of an increasingly turbulent tourism market. Improvement of logistics processes must be a part of the overall objectives of a company that is generated through the synergy of improvement of all business segments. In the value chain primacy is taken by knowledge and information which

make use of a resource basis that relies on a sustainable and responsible development. Knowledge and information must evolve into a competitive advantage of 21st century based on innovation. Crucial become new strategic orientations (business intelligence, benchmarking, TQM, CRM) aimed at making strategic decisions in order to optimize logistics processes and evolve into intelligent logistics as a generator of transforming traditional hospitality companies in the learning organizations.

Further research works should determine the key information and knowledge (to quantify and qualify the importance of new strategic orientations in the development of logistics processes in order to multiply profit) in anticipating changes and making use of opportunities to generate innovations (to define concrete improvements of logistics processes).

REFERENCES

- Aghazadeh, S.D. (2004), "Improving logistics operations across the food industry supply chain", *International journal of contemporary hospitality management*, Vol. 16, No. 4, pp.263-268.
- Brownell, J. (1990), "Hospitality managers' communication practices", *International journal of hospitality management*, Vol. 9, No. 3, pp. 191-205.
- Claver, E., Andreu, R. and Quer, R. (2006), "Growth Strategies in the Spanish Hotel Sector: Determining Factor", *International journal of contemporary hospitality management*, Vol. 18, No. 3, pp. 188-205.
- Cooper, J. (1994), *Logistics and distribution planning: strategies for management, 2. ed.*, Kogan Page, London.
- Day, G.S. and Wensley, R. (1988), "Assessing advantages: a framework for diagnosing competitive superiority", *Journal of marketing*, No. 52, pp. 1-20.
- Fearne, A. and Hughes, D. (1999), "Success factors in the fresh produce supply chain: insights from the UK", *Supply chain management: an international journal*, Vol. 4, No. 3, pp. 120-131.
- Gudehus, T. and Kotzab, H. (2009), *Comprehensive logistics*, Springer Verlag, Berlin.
- Ivanković, G., Janković, S. and Peršić, M. (2010), "Framework for performance measurement in hospitality industry – case study Slovenia", *Ekonomika istraživanja*, Vol. 20., No. 3, pp. 12-23.
- Jere Lazanski, T. (2009), *Sistemski pristop in modeliranje kot metodi za oblikovanje strateških odločitev v turizmu*, Visoka šola za turizem, Portorož, Javna agencija za knjigo RS, Ljubljana.
- Kovačić, M. (2001), "Logistička strategija i logistika pomorske tvrtke", *Pomorski zbornik*, Vol. 39, No. 1, pp. 303-326.
- Liautaud, B. (2006), *E-poslovna inteligencija*, Prudens consilium, Varaždin.
- Mrnjavac, E. and Ivanović, S. (2007), "Logistics and Logistics Processes in a Tourism Destination", *Tourism and hospitality management*, Vol. 13, No. 3, pp. 531-546.
- Mrnjavac, E. (2010), *Logistički menadžment u turizmu*, Fakultet za menadžment u turizmu i ugostiteljstvu, Opatija.
- O Donovan, I., Quinlan, T. and Barry, T. (2012), "From farm to fork direct supply chain relationships in the hospitality industry in the south east of Ireland", *British food journal*, Vol. 114, No. 4, pp. 500-515.
- Panian, Ž. (2008), *Poslovna inteligencija – studije slučajeva iz hrvatske prakse*, Narodne novine, Zagreb.
- Randić, M. and Rittig-Beljak, M. (2006), *Svijet hrane u Hrvatskoj*, Etnografski muzej, Zagreb.
- Sarkis, J. (2012), "A Boundaries and flows perspective of green supply chain management", *Supply chain management: an international journal*, Vol. 17, No. 2, pp. 202-216.
- Segetlija, Z. (2005), "Značaj logističkih troškova u trgovini", *Suvremena trgovina*, Vol. 30, No. 2, pp. 69-71.
- Sterman, J.D. (2001), "System Dynamics Modeling: Tools for Learning in a Complex World", *California Management Review*, Vol. 43, No. 4., <http://www.systemdynamics.org/conferences/2002/proceed/papers/CAREVIEW/C2STERMA.PDF>, accessed 16.9.2014.
- Stipanović, C. (2006), *Koncepcija i strategija razvoja u turizmu – sustav i poslovna politika*, Fakultet za menadžment u turizmu i ugostiteljstvu, Opatija.

- Teare, R. (1996), "Hospitality operations: patterns in management, service improvement and business performance", *International journal of contemporary hospitality management*, Vol. 8, No. 7, pp. 63-74.
- Terry, L. (2007), *Hospitality logistics: supply chain made to order*, <http://www.inboundlogistics.com/cms/article/hospitality-logistics-supply-chains-made-to-order/>, accessed 24.04.2014.
- Tigu, G. and Calaretu, B. (2013), "Supply chain management performance in tourism continental hotels chain case", *Supply Chain Management: an international journal*, Vol. 15, No. 33, pp. 103-115.
- UN Global Compact Office and Business for Social Responsibility (2010), *Supply chain sustainability: a practical guide for continuous improvement*, http://www.bsr.org/reports/BSR_UNGC_SupplyChainReport.pdf, p. 26, accessed 24.4.2014.
- Vouk, R. (2005), "Uloga menadžmenta opskrbnog lanca u povećanju konkurentnosti poduzeća", *Ekonomski pregled*, Vol. 56, No. 11, pp. 1013-1030.
- Zelenika, R., Pupovac, D. and Pavlič, H. (2001), "Gospodarski učinci ekologizacije globalnoga logističkoga sustava", *Pomorski zbornik*, Vol. 39, No. 1, pp. 267-287.
- Zelenika, R., Grčić, M. and Pavlič Skender, H. (2008), "Tercijarna logistika u fokusu svih logistika", in Segetlija, Ž. and Karić, M. (Red.) *Zbornik radova Poslovna logistika u suvremenom menadžmentu*, 8. međunarodni znanstveni skup, Ekonomski fakultet Osijek, pp. 111-138, <http://www.efos.unios.hr/repec/osi/bulimm/PDF/BusinessLogisticsinModernManagement08/bulimm0807.pdf>, accessed 3.6.2014.
- Zhou, Y. (2012), *Learn to Read Causal Loop Diagrams, Systems & us*, August, <http://systemsandus.com/2012/08/15/learn-to-read-clds/m>, accessed 16.9.2014.
- Waters, J. ed. (2010), *Global logistic: new directions in supply chain management*, Kogan Page Limited, London.
- Wolstenholme, E.F. (1999), "Qualitative vs Quantitative Modelling: the Evolving Balance", *Journal of the Operational Research Society*, Vol. 50, No. 4, pp. 422-428.

Christian Stipanović, PhD, Full Professor

University of Rijeka

Faculty of Tourism and Hospitality Management Opatija

Primorska 42, p.p. 97, HR-51410 Opatija, Croatia

Tel. 00385/51/294-184, fax. 00385/51/292-945.

E-mail: christis@fthm.hr

Elena Rudan, PhD, Assistant Professor

University of Rijeka

Faculty of Tourism and Hospitality Management Opatija

Primorska 42, p.p. 97, HR-51410 Opatija, Croatia

Tel. 00385/51/294-759, fax. 00385/51/292-945.

E-mail: elenar@fthm.hr