

Interfunctional Coordination of Service Offering Provided by Manufacturers

Lucie Kanovska¹, Eva Tomaskova²

¹Brno University of Technology
Kolejni 2906/4, 612 00 Brno, Czech Republic
E-mail. kanovska@fbm.vutbr.cz

²Masaryk University
Veveří 70, Brno 611 80, Czech Republic
E-mail. eva.tomaskova@law.muni.cz

crossref <http://dx.doi.org/10.5755/j01.ee.27.5.14300>

Interfunctional coordination (IFC) aims to develop cooperation between the different departments within a company. Services offered by companies improve customer orientation of a company and increase customer satisfaction. IFC and customer orientation are the main parts of market orientation. Market orientation is one of many possible ways of improving companies' business performance and competitiveness. The aim of this paper is to describe the main findings of the research, which was focused on the relationship between IFC and the extension of services provided by manufacturers. Manufacturers of electronic components and electrical equipment based in the Czech Republic were among the participants of the research. These two industries are extremely important for today's Czech economy, especially as many companies become subcontractors for the automobile industry and the mechanical engineering industry. A Likert scale questionnaire was prepared to gather information about IFC and services. The respondents were mainly directors or managers, i.e. employees with high-level competence and knowledge of IFC and services in this particular market. A total of 60 SMEs were included in the survey. The data was collected between February and November 2014. The Spearman's rank correlation test was performed to verify the relationship between IFC and services. The main findings show the following: (1) There is a significant relationship between IFC and the development of new products and services aligned to customer needs; (2) There is a somewhat significant relationship between IFC and the quality of products and services provided in manufacturing; (3) No significant relationship exists between IFC and special services offered to VIP customers.

Keywords: *Interfunctional Coordination (IFC), Market Orientation, Services Provided by Manufacturers, Service Offering, Servitization, Manufacturers of Electrical Equipment and Electronic Components, Czech Republic.*

Introduction

Today there are many different ways of managing a company at our disposal. Generally, the objective of all of these methods is to increase profit whilst satisfying customers. Many of these ways are mutually complimentary, e.g. services and interfunctional coordination (IFC). The main aspects of market orientation are customer orientation (including customer services), and IFC. Many authors are concerned with the implementation of market orientation because it has a positive impact on business performance.

IFC helps company managers develop cooperation between different departments (activities) in a company. It can be described as a harmonization of all internal functions and processes in a company (Tay & Tay, 2007). Recently several main research questions concerning IFC have been discussed: (1) what is IFC or how we can define IFC? (2) how to categorize IFC? (3) is there any connection between marketing, logistics and managerial conception of IFC? and (4) what kind of barriers are associated with the implementation of IFC?

Today services provided by manufacturers help companies to become more competitive through a portfolio of integrated products and services. This strategy is called a service-led competitive strategy. The realization of this

strategy is called servitization. However, the concept of servitization is not limited to the addition of services to products offered on the market. The key notion of servitization is with regard to the manufacturer as not only a producer, but also a service-provider. This provider chooses to improve its company's processes with carefully chosen business models rather than merely focusing on developing its products.

Only then does the manufacturer focus on the product design and production-based competencies to provide the customer with overall improvement in efficiency and effectiveness. It may be concluded that servitization is the process of transforming manufacturers into full service-providers, able to compete through services integrated with products, i.e. a transition from a production-centric to a service-centric manufacturer. The addition of services to products in order to expand the total portfolio is one way of reacting to eroding product margins and the loss of strategic differentiation through product innovation and technological superiority (Fischer *et al.*, 2012).

The aim of this paper is to describe the main findings of the research, which focused on the relationship between IFC and the extension of service offering provided by manufacturers. The participants of the research were electronic component manufacturers and electrical equipment manufacturers based in the Czech Republic. These two sectors are very

important for industry today, especially as many companies are becoming subcontractors for the automobile industry and the mechanical engineering industry. We focused on the following industries: CZ-NACE 26 (Manufacturing of computer, electronic and optical products): CZ-NACE 26.1, CZ-NACE 26.3, CZ-NACE 2651, CZ-NACE 266 and CZ-NACE 27 (The production of Electric Equipment): CZ-NACE 27, CZ-NACE 271, CZ-NACE 273.

The electronic component manufacturers and electrical equipment manufacturers in the Czech Republic show the following characteristics regarding the field of services and IFC: (1) companies recognise the strategic importance of services, especially the offering of products and services designed according to customer needs, including product delivery; (2) implementation of IFC is based on management, information coordination, organizational structure and corporate culture, (3) companies stress teamwork, cooperation, flexibility and positive attitude to innovations similar to the approach of the hi-tech companies (Kanovska & Tomaskova, 2015).

The methods used in this research include the systemic analysis of scientific literature, secondary data analysis and empirical analysis. In addition, to identify the relationship between IFC and the service offering, the Spearman rank correlation test was applied. The survey questionnaires were distributed and collected between February and November 2014. The acquired data was then processed and analysed.

Literature Review

Interfunctional Coordination

The first mention of the term “IFC” can be found at the beginning of 1970. Lawrence & Lorch (1967) defined IFC as an integration of the quality of sale and collaboration among departments with the goal to achieving unity of effort in accordance with the demands of the environment. The perception of IFC has broadened over time. Bartosek & Tomaskova (2013) divided definitions of IFC into four groups: (1) Quantitative view – IFC is presented as a category, which a department has to implement, e.g. Lawrence & Lorsch (1967); Jaworski & Kohli (1993); Mentzer (2004); Zahra & George (2002); Tay & Tay (2007); Ramanathan, Gunasekaran & Subramanian (2011). (2) Qualitative view – IFC is presented with its own characteristics, e.g. Day & Klein (1987), Chopra & Meindl (2009). (3) View of goals – IFC is accented as a positive factor influencing business performance, e.g. Cheng *et al.* (2010), Hingley *et al.* (2011). (4) Marketing view – IFC is connected with benefits for customers or customer satisfaction, e.g. Narver & Slater (1990), Zao & Cavusgil (2006).

Many authors prefer the quantitative view. However, Farzard *et al.* (2008) offer an interesting definition. According to Farzard *et al.* (2008), the implementation of IFC is an important prerequisite for the integration of all departments and all activities, as well as for the improvement of the structure and strategy of a company. The implementation of IFC includes an analysis focused on all internal processes and the relationship with the external environment. Therefore, the implementation of IFC is an important and integral part of a company's structure and strategy.

The implementation of IFC is not easy. Current research shows that some companies have gaps in the (1) collaboration of departments; (2) gathering and analyzing the information regarding the external environment; (3) and the attitude of their workers towards a company (Kanovska & Tomaskova, 2012). According to Milichovsky & Simberova (2015), information is fundamental for the achievement of the required performance and effectiveness of the whole company. It is necessary to manage information gathered from the external environment and send out information to the external environment. Companies face the need to discover the means to control communication to the external environment mainly within the following areas: (1) the choice of information for publication; (2) the liability for collecting information; (3) the publication measurement - method and time frame; (4) the way of publishing the information; (5) to whom the measurement is dedicated.

The perception of the importance of IFC is a key prerequisite to future development and prosperity. The companies with a high level of market orientation and IFC show a positive attitude to innovation, prefer teamwork and mutual cooperation and strive for flexibility (Kanovska & Tomaskova, 2012). Innovation creates the value added to a company in the market. The performance of a company depends on its input into innovation, technology and new ideas that gives it an advantage over competitors, financial and managerial investments into knowledge of processes and knowledge of employees (Sedziuviene & Vveinhardt, 2010).

IFC is one important factor in market orientation; it enables the implementation of market orientation. Market orientation focuses on external and internal elements and activities leading to improved performance. (Tomaskova, 2005). A similar stance as Tomaskova is adopted by Kurtinaitiene & Gaizutis (2008). The authors stress that market orientation is a company-wide process of the customer and competitor-intelligent generation, dissemination and coordinated response of all units towards information obtained. Market-orientated and consumer-focused companies have superior business performance because they keep track of changes in customers' needs and wishes and they respond to these changes accordingly (Lo *et al.*, 2015). Customer-focused companies have to measure customer performance. Customer performance is significant to the total level of business performance. Both Milichovsky & Simberova (2015) assert that the measurement of customer performance usually depends on corporate activities, e.g. whether a company offers products on the industrial market or on the service market. Market orientation helps to provide a better capacity for obtaining production resources, increases sales markets and establishes the company's position in the market. All of the above are the characteristics of competitive advantages (Zostautiene & Daraskeviciute, 2009).

Today's business environment requires full external and internal collaboration of a company, which must be supported by its relationships with customers and suppliers. This approach leads to the creation of a common approach for different industries (i.e. electronic components, automotive and other manufacturing industries). IFC or interdepartmental coordination solves the problem of connecting this complex business network. For this reason, IFC is focused on: (1) all processes that focus on the company and its whole

environment; (2) coordination between the company and its environment; (3) all processes that focus on the internal environment of the company (Bartosek & Tomaskova, 2013).

To summarise, IFC involves gathering information and resources, sharing this information and coordinating responses to competitors' actions. Companies have to manage these activities promptly within all departments, in an efficient way, with a low level of resources. The fulfilment of these principles leads to an increased market orientation and consequently to improved business performance.

Services Provided by Manufacturers

Manufacturers competing on the basis of service provision are not a new phenomenon. In the 1800s, International Harvester used services to help start their new reaping equipment among farmers in the American Midwest (Baines & Lightfoot, 2013). The services offered by a manufacturer are the activities which complement the products they manufacture. Many current manufacturers provide services of some range, depth and quality, but only some of them establish market differentiation. Service strategies are based on the extension of services within the total offering (e.g. Vandermerwe & Rada, 1988; Mathieu, 2001; Oliva & Kallenberg, 2003; Gebauer, 2008).

The first important step to becoming an efficient service provider is to bundle together products and services which were previously sold separately. A typical example of this is the growing number of more extensive service level agreements, which consist of various product-oriented service elements, such as maintenance, repair and overhaul services (Kowalkowski *et al.*, 2015). However, sometimes service level agreements are not very profitable for manufacturers. Either customers fail to understand the added value for services included in their agreements or they are not able or do not want to use all services offered. Therefore, it is vital to consider the service level agreements very carefully. Manufacturers need to decide which services can be provided with no charge and which require a payment from a customer. One possible solution may be the differentiation between market segments. While some customers will need to pay for services, there will be no payment required from another group of customers.

According to Fischer *et al.* (2012), the extension of services offered is made up of the following three service categories: (1) *customer services* with the aim of improving the quality of the customer relationship, (2) *product-related services* which ensure the functionality of the product and (3) *services supporting business needs* which reach beyond the operational needs of the customer.

The service category *customer services* includes services related to information, delivery, billing, and documentation. The second category *product-related services* differentiates between two types of services. The first one is *basic services*, which enable companies to react as soon as possible to product malfunctions or breakdowns (e.g. spare parts, repair, inspections and basic training). The second one, *advanced services*, aims to prevent product breakdowns (e.g. the preventive maintenance service, process optimisation, training and maintenance contracts). The last category, *service supporting business needs*, involves outsourcing ser-

VICES, business consulting, and technical consulting services, e.g. R&D, design and construction, feasibility studies (Fischer *et al.*, 2012).

Nowadays, manufacturers provide a wide range of services, from basics such as warranties, repair and maintenance to sophisticated services, including consulting-based services or tailored product solutions. Producers are continuously trying to expand their service offering. Many manufacturers plan to offer more advanced services and solutions to their customers, as they encounter new significant challenges and feel an increasing need to customize their offers and communicate more directly with their customers. According to the findings of the research by 22 electrical equipment manufacturers belonging to CZ-NACE 27, namely CZ-NACE 27, CZ-NACE 271 and CZ-NACE 273, it is clear that the most common services are: 1) consultancy services (e.g. technical discussion, product design proposal), 2) warranty repairs and post warranty repairs, 3) spare parts, 4) extended warranty and 5) technical helpdesk. Naturally, precise technical documentation is a necessity today. The above-mentioned services are widely offered to customers and may be perceived as the main service types in electrical equipment manufacturing in the Czech Republic. The findings show a high importance of the technical background of products. The technical consultancies, documentation, technical helpdesk, repairs and spare parts play a key role for customers in this market.

Many of today's companies provide special services for their VIP customers, mostly focused on a prompt response to their needs. VIP customers are a group of customers who can be defined as the highest spending customers. These customers are usually long-standing, loyal clients. VIP customers are very important and desirable for businesses, most likely because of their potential to increase a company's profits (Mann, 1993). VIP offerings not only offer consumers access to new experiences, but also provide a sizeable profit for firms (Fombelle *et al.*, 2015).

Many customers seek VIP offerings to attain a self-perception of prosperity or status (Gimbel, 2006). As VIPs become more experienced, they demonstrate a preference for more exclusive, less outwardly visible VIP offerings. Managers should seek to create tiered offerings that are tailored to the experience level of the individual. Fostering growth up the various tiered offerings would allow the individual the specific type of social comparison deemed important and create lasting relationships (Fombelle *et al.*, 2015).

To be able to react promptly to customers, not only to the needs of the VIP customers, the company management needs to be well organised in order to gather, analyse and coordinate all the important information. Moreover, nowadays, customers have to be ensured that a product is suitable for their unique requirements and that there is also assistance available in the case of a product failure. Another interesting aspect arising from this research shows that almost one third of the respondents provide their customers with integrated solutions. The importance of integrated solutions is constantly increasing and helps manufacturers maintain long-lasting relationships with their customers.

To sum up, the service transition concept as established in Oliva and Kallenberg's (2003) study assumes that firms undertake a unidirectional repositioning along a prod-

uct-service continuum: from basic, product-oriented services towards more customized, process-oriented ones, ultimately leading to the provision of a solution. As a result of this assumption, the further firms move along the transition continuum, a) the greater relative importance of services increase and the less the relative importance of tangible products, and b) the customer relationships become long-term and more intimate (Kowalkowski *et al.*, 2015).

Research Questions

According to Min (2015), IFC is particularly important for logistics activity. A change in logistics activity has an influence on the effectiveness and efficiency of production and marketing. In particular, logistics is closely related to marketing through its role in services. The services offered by a manufacturer are activities complementing its products. Nowadays, higher market complexity and increasing competition are forcing traditional manufacturers to rethink their outdated business strategies (Ebeling *et al.*, 2014). IFC helps company managers to develop cooperation between different departments (functions). To increase the value of the service as perceived by customers, high-quality services accompanying the products have to be provided based on customer needs. In order to verify the relationship between IFC and service, the following research questions RQ1-RQ3 were designed:

RQ1: Is there any correlation between IFC and the development of new products and services according to the customer needs in manufacturing?

RQ2: Is there any correlation between IFC and the special service offerings in manufacturing for VIP customers?

RQ3: Is there any correlation between IFC and the quality of products and services provided in manufacturing?

Research Methodology

The aim of this research is to ascertain the relationship between IFC and extension of services. The connections between IFC and customers were confirmed by, among others, Narver & Slater (1990), and Zao & Cavusgil (2006). For this reason, it is supposed that IFC has a positive influence on services.

A Likert scale questionnaire focusing on IFC and services provided by the manufacturers was prepared. The Likert scale ranged from 1 (No, I don't agree) to 5 (Yes, I agree).

The part about IFC contains 22 items and is divided into the following parts: The Cooperative Arrangements, Company Culture, Functional and Expertise, Communications, Leadership Style, Ethic and Goodwill, Organizational Structure, Coordination and Control. Each part involves two sections; the Coordination section is divided into Coordination Activities, Fundamental Information Acquisition and Information Coordination and includes six items. The IFC part of the questionnaire was partly created from the results of previous research, 15 items were chosen from the "New Method" of measuring market orientation by Tomaskova (2005). These items were divided into the above mentioned parts and the questionnaire was extended with some new items: a) two items related to Cooperative Arrangements were inspired by Mentzer (2004), b) one item related to Company Culture was inspired by Homburg & Pflesser (2000), and c)

four entirely new items related to Functional and Expertise, Ethics, Fundamental Information Acquisition and Information Coordination. Only the part about Coordination of IFC was chosen to answer the three research questions, RQ1, RQ2 and RQ3.

The part related to services provided by the manufacturers involves 27 items and is divided into three parts as follows: Service Offering with 12 items, Importance of Services with 6 items and Service Delivery with 9 items. A total of 5 items (3 from Service Offering and 2 from Importance of Services) were based on previous research which was conducted in 2005 in the sector of SMEs producers of saws and saw bands in the Czech Republic (Kanovska, 2005) and another 4 items (2 from Importance of Services and 2 from Service Delivery) were inspired by the above mentioned research. The items in Service Delivery (four items) were mostly inspired by Gebauer *et al.* (2011) and Turunen & Toivonen (2011). The rest of the items in the questionnaire (14 items) are new and are based on a) the study of literature, mainly Gebauer *et al.* (2012), Kindstrom & Kowalkowski (2014) and Baines & Lightfoot (2013), b) interviews with the manufacturers, c) current information about sale and service support in manufacturing companies and d) information gathered from scientific journals. The part, *Service Offering*, was chosen to discern the relationship to the previously mentioned research questions RQ1, RQ2 and RQ3.

The questionnaire focused on IFC and services in manufacturing also involves two sections related to Company Performance and General Questions about the respondents. These parts are important for the total overview of a company's situation.

The respondents participating in the research were the directors or managers of companies producing electrical equipment and electronic components in the Czech Republic. The number of the respondents participating in this research is based on Sekaran (2000) who accept the formula of Roscoe (1975) that the sufficient sample size is between 30 and 500 respondents for most studies.

A total of 60 SMEs were included in the survey. The data was collected between February and November 2014. The research was focused on the following industry classifications belonging to CZ-NACE 26 (Manufacturer of computer, electronic and optical products): CZ-NACE 26.1, CZ-NACE 26.3, CZ-NACE 2651, CZ-NACE 266 and CZ-NACE 27 (The production of Electrical Equipment): CZ-NACE 27, CZ-NACE 271, CZ-NACE 273. The companies were selected from the Kompas database and restricted to the Czech Republic. Next, the firms were contacted by phone or email and asked to fill in a web-based questionnaire. The complete database was analysed using standard and sophisticated statistical methods. Incomplete questionnaires were discarded. Table 1 represents all industries that participated in the research (CZ-NACE 26 and CZ-NACE 27). The total number of companies participating in the research is 60, i.e. 38 manufacturers of computer, electronic and optical products (electronic components) and 22 manufacturers of electrical equipment.

Table 1

Classification of Research Industries (Source: Authors)

Classification of Industries	Absolute Number	Relative Number
CZ-NACE 26	38	
CZ-NACE 26.1	21	35.00 %
CZ-NACE 26.3	5	8.33 %
CZ-NACE 2651	7	11.67 %
CZ-NACE 266	5	8.33 %
CZ-NACE 27	22	
CZ-NACE 27	4	6.67 %
CZ-NACE 271	7	11.67 %
CZ-NACE 273	11	18.33 %
Total	60	100.00 %

The questionnaire was tested for internal consistency and reliability. The level of reliability of the questionnaire measured by the Cronbach's alpha is 0.863.

Data was analysed using the statistical software package Minitab, version 17. Descriptive statistics (minimum, maximum, mean and standard deviation) were applied to describe the characteristics of organizational performance of the sample. Spearman's rank correlation was applied to the statistical data analysis to ascertain the influence of IFC and service offering. The Spearman's rank-order correlation is the non-parametric version of the Pearson product-moment correlation. Spearman's correlation coefficient, (ρ also signified by r_s) measures the strength of association between two ranked variables. It is possible to use two methods to calculate Spearman's rank-order correlation depending on whether: (1) the data does not have tied ranks or (2) the data has tied ranks. When there are no tied ranks, the formula is:

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

where d_i = difference in paired ranks and n = number of cases. When there are tied ranks, the formula is the following:

$$\rho = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i (x_i - \bar{x})^2 \sum_i (y_i - \bar{y})^2}}$$

where i = paired score. (AERD Statistics, 2016)

Three items describing the evaluation of services in manufacturing, particularly service offering were chosen. These

Table 2

Correlation analysis using the Spearman's rank correlation (Source: Authors)

IFC	Service Offering		
	(1) New products including services are developed, tested and improved according to customer needs.	(2) We provide special service offers in manufacturing for VIP customers.	(3) Provided products and services in manufacturing are of a good quality.
(1) We gather and analyse all-important information regularly.	0,271 0,041	0,234 0,083	0,378 0,004
(2) We implement the information gained into our decisions.	0,264 0,043	0,290 0,027	0,378 0,004
(3) We have positive attitude toward all information advised by our stakeholders.	0,323 0,025	0,012 0,934	0,102 0,491
(4) We check information about potential resources.	0,323 0,016	0,192 0,165	0,354 0,009
(5) We focus on information coordination between all company departments.	0,237 0,076	0,124 0,362	0,204 0,139
(6) We focus on information coordination from the company to its environment.	0,282 0,031	0,047 0,728	0,137 0,316

The first value is Spearman's rank correlation: Spearman's rho, the second value is p-value. If $p < 0,05$ then we reject the null hypothesis (H_0 : items are independent), i.e. accept that the sample gives reasonable evidence to support the alternative hypothesis (H_A : items are dependent).

As shown in Table 2, there is a positive correlation between IFC and the development of new products including services and between IFC and the providing of special services for VIP customers. Both parts show five positive relations out of six. The last part dealing with providing products and services in a good quality shows positive correlation with only half of the IFC items.

The results show a positive correlation between the item concerning the implementation of information gathered into managerial decisions and the items related to service offerings. On the contrary, information coordination between all departments of companies is independent on all items of service offerings.

To sum up, the results show a positive relationship between IFC and service offering, therefore. IFC influences the quality and offers of services provided by manufacturers. However, IFC does not have any relationship with the offer of services to VIP customers.

Discussions

Firstly, the main results show a positive relationship between IFC and the development of new products and services according to customer needs. It is obvious that the success of the development of new products and services depends on the gathering of information, its analysis and effective coordination between the company and its environment. It is interesting that information coordination between departments within the company does not influence the development of new products and services in manufacturing. To sum up, the first research question, RQ1, can be concluded as follows, "IFC and development of new products and services according to customer needs are dependent on each other", which means that there is a positive correlation between them. Present day companies must be able to adjust easily to the rapid changes in customers' needs and wishes. The success of new services depends on flexible, quick and accurate offers. According to Ebeling et al. (2014), a customer support provider strategy profits from a service-oriented culture that is characterized by values that highlight customization and flexibility. Moreover, it points out that employees who deliver these values to support customers with tailored services optimize the effectiveness and efficiency of the product use.

Secondly, the data show that there is no relationship between IFC and the special service offers in manufacturing for VIP customers except in the case of the implementation of information gathered into managerial decisions. It can be assumed that every company only has several VIP customers and the offer of services is very specialized; the service offers targeting VIP customers is usually out of the scope of the common offer and IFC has no influence on it. Therefore, it may be concluded that the special service offers to VIP customers and IFC are independent of each other as no significant correlation between them was found (RQ2).

Thirdly, the results show that the relationship between IFC and the quality of service offering, namely the item "provided products and services in manufacturing are of good quality", is not explicit. There is a positive relationship between services and IFC, namely the item "the gathering,

analysis and the implementation of information". No correspondence was detected between service and information coordination in a company, between services and a company's environment, or between the services and the attitude towards the advice of stakeholders. To conclude, RQ3, IFC and provided products and services are of good quality and are partly dependent on each other.

The following conclusions were reached: (1) A significant relationship exists between IFC and the development of new products and services according to customer needs. This result corresponds to the outcomes of Narver & Slater (1990) and Zao & Cavusgil (2006). (2) A partly significant relationship exists between IFC and the quality of products and services provided in manufacturing. Ideas that value is co-created with customers rather than embedded in products are gaining traction (Baines, 2013). (3) The findings revealed that no significant relationship exists between IFC and the special service offerings to VIP customers.

This paper briefly presents the main results that have arisen from the research describing possible relationships between IFC and service offerings provided by manufacturers. The next step is to provide further insights into these results through more detailed evaluations and comparisons. Future work can be aimed at expanding the research beyond a local level, at least, to regional leaders in the field of the manufacture of electrical equipment and electronic components.

Conclusion

The scientific literature analysis states that IFC includes gaining information and resources, sharing the information and coordinating responses to market changes. Implementation of IFC leads to an improvement in market orientation and leads to better business performance. According to Schlegel (1999), the synergy of IFC, inter-organisational integration and coordination created by supply chain management can improve customer services through increased inventory availability, better on-time delivery performances, increased order-fill rates, and lower post-sales costs.

The aim of services delivered by industrial companies is to expand the product portfolio. General strategic options include the improvement of logistical precision of product delivery, customer integration in customising the product offered, customer adaptation of product features and standardised customer service (Wouters, 2004).

The opportunities for the improvement of service offerings and IFC are the main focus of this research. The results of the research unveil the relationship patterns between IFC and all three items related to the service offerings provided by the manufacturers. It can be concluded that it is vital for the management to take into consideration the information gathered when making decisions.

References

- AERD Statistics. Spearman's Rank-Order Correlation. (2016) Available from internet: <https://statistics.laerd.com/statistical-guides/spearman's-rank-order-correlation-statistical-guide.php>.
- Baines, T., & Lightfoot, H. (2013). *Made to serve: how manufacturers can compete through servitization and product service systems*. John Wiley & Sons.
- Bartosek, V., & Tomaskova, E. (2013). Interfunctional Coordination from Company Functions Point of View. *Acta academica karviniensis*, 13(3), 5–18.
- Chen, D. et al. (2010). Information Systems Strategy: Reconceptualization, Measurement, and Implications. *MIS Quarterly*, 34(2), 233–259.
- Chopra, S., & Meindl, P. (2009). *Supply Chain Management*. Prentice Hall.
- Day, P. & Klein, R. (1987). *Accountabilities - five public services*. London: Tavistock Publications.
- Ebeling, J., Friedli, T., Fleisch, E., & Gebauer, H. (2014). Strategies for Developing the Service Business in Manufacturing Companies. In *Servitization in Industry* (pp. 229–245). Springer International Publishing.
- Farzad, A., Nahavandi, N., & Caruana, A. (2008). The effect of internal marketing on organizational commitment in Iranian banks. *American Journal of Applied Sciences*, 5 (11), 1480–1486. <https://doi.org/10.3844/ajassp.2008.1480.1486>
- Fischer, T., Gebauer, H., & Fleisch, E. (2012). *Service business development: strategies for value creation in manufacturing firms*. Cambridge University Press. <https://doi.org/10.1017/cbo9781139136730>
- Fombelle, P. W., Sirianni, N. J., Goldstein, N. J., & Cialdini, R. B. (2015). Let them all eat cake: Providing VIP services without the cost of exclusion for non-VIP customers. *Journal of Business Research*, 68(9), 1987–1996. <https://doi.org/10.1016/j.jbusres.2015.01.018>
- Gimbel, B. & Bonamici, K. (2006). Buying by the Bottle. *Fortune*, 153(2), 115–116.
- Gebauer, H. (2008). Identifying service strategies in product manufacturing companies by exploring environment–strategy configurations. *Industrial Marketing Management*, 37(3), 278–291. <https://doi.org/10.1016/j.indmarman.2007.05.018>
- Gebauer, H., Gustafsson, A., & Witell, L. (2011). Competitive advantage through service differentiation by manufacturing companies. *Journal of Business Research*, 64(12), 1270–1280. <https://doi.org/10.1016/j.jbusres.2011.01.015>
- Gebauer, H., Ren, G. J., Valtakoski, A., & Reynoso, J. (2012). Service-driven manufacturing: provision, evolution and financial impact of services in industrial firms. *Journal of Service Management*, 23(1), 120–136. <https://doi.org/10.1108/09564231211209005>
- Hingley, M., et al. (2011). Using fourth-party logistics management to improve horizontal collaboration among grocery retailers. *Supply Chain Management*, 21(1), 104–126. <https://doi.org/10.1108/13598541111155839>
- Jaworski, B. J., & Kohli, A. K. (1993). Market-orientation: Antecedents and Consequences. *Journal of Marketing*, 57(3), 53–70. <https://doi.org/10.2307/1251854>
- Homburg, CH. & Pflesser, CH. (2000). A multiple-layer model of market-oriented organizational culture: Measurement issues and performance outcomes. *Journal of Marketing Research*, 37, 449–462. <https://doi.org/10.1509/jmkr.37.4.449.18786>
- Kanovska, L. (2005). *Customer services and their importance for company prosperity*. Brno: Vutium.
- Kanovska, L., & Tomaskova, E. (2012). Interfunctional coordination at hi-tech firms. *Inzinerine Ekonomika-Engineering Economics*, 23(1), 70-76. <https://doi.org/10.5755/j01.ee.23.1.1224>
- Kanovska, L., & Tomaskova, E. (2015). Trends in Customer Services and Interfunctional Coordination by Manufacturers. *Procedia-Social and Behavioral Sciences*, 213, 677–682. <https://doi.org/10.1016/j.sbspro.2015.11.479>
- Kindstrom, D., & Kowalkowski, C. (2014). Service innovation in product-centric firms: A multidimensional business model perspective. *Journal of Business & Industrial Marketing*, 29(2), 96–111. <https://doi.org/10.1108/JBIM-08-2013-0165>
- Kowalkowski, C., Windahl, C., Kindstrom, D., & Gebauer, H. (2015). What service transition? Rethinking established assumptions about manufacturers' service-led growth strategies. *Industrial Marketing Management*, 45, 59–69. <https://doi.org/10.1016/j.indmarman.2015.02.016>
- Kurtinaitiene, J., & Gaizutis, A. (2008). Market Orientation and Development of Innovative Solutions in the Mobile Telecommunications Third Generation Networks. *Inzinerine Ekonomika-Engineering Economics*, 56(1), 84–90.
- Lawrence, P., & Lorsch, J. (1967). Differentiation and Integration in Complex Organizations. *Administrative Science Quarterly*, 12, 1–30. <https://doi.org/10.2307/2391211>

- Lo, May Chiun, et al. (2015). Examining the Effects of Leadership, Market Orientation and Leader Member Exchange (LMX) on Organisational Performance. *Inzinerine Ekonomika-Engineering Economics* 26(4), 409–421. <https://doi.org/10.5755/j01.ee.26.4.7656>
- Mann, I. S. (1993). Marketing to the affluent: A look at their expectations and. *Cornell Hospitality Quarterly*, 34(5), 54. <https://doi.org/10.1177/001088049303400511>
- Mathieu, V. A. (2001). Product services: from a service supporting the product to a service supporting. *The Journal of Business & Industrial Marketing*, 16(1), 39–58. <https://doi.org/10.1108/08858620110364873>
- Mentzer, J.T. (2004). *Fundamental of Supply Chain Management*. Thousand Oaks, California: SAGE Publications.
- Milichovsky, F., & Simberova, I. (2015). Marketing effectiveness: Metrics for effective strategic marketing. *Engineering Economics*, 26(2), 211–219. <https://doi.org/10.5755/j01.ee.26.2.3826>
- Min, H. (2015). *The Essentials of Supply chain management – New Business Concepts and Applications*. Paul Boger.
- Narver, J. C. & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20–34. <https://doi.org/10.2307/1251757>
- Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management*, 14(2), 160–172. <https://doi.org/10.1108/09564230310474138>
- Ramanathan, U., Gunasekaran, A., & Subramanian, N. (2011). Supply chain collaboration performance metrics: A conceptual framework. *Benchmarking: An International Journal*, 18(6), 856–872. <https://doi.org/10.1108/14635771111180734>
- Roscoe, J. T. (1975). *Fundamental Research Statistics for the Behavioural Sciences*. (2nd ed.) New York: Holt Rinehart & Winston.
- Schlegel, G. L. (1999). Supply chain optimization: a practitioner's perspective. *Supply Chain Management Review* 35(1), 50–57.
- Sedziuviene, N., & Vveinhardt, J. (2010). Competitiveness and Innovations: Role of Knowledge Management at a Knowledge Organization. *Inzinerine Ekonomika-Engineering Economics*, 21(5), 525–536.
- Sekaran, U. (2000). *Research Methods for Business: A Skill-building Approach*. (3rd ed.). New York: John Wiley & Sons, Inc.
- Tay, J. Y. W. & Tay, L. (2007). Market orientation and the property development business in Singapore. *International Journal of Strategic Property Management*, 11(1), pp. 1–16.
- Tomaskova, E. (2005). *Measuring of Market orientation and its Influence on Business Performance*. Brno: Vutium.
- Turunen, T. T., & Toivonen, M. (2011). Organizing customer-oriented service business in manufacturing. *Operations Management Research*, 4(1/2), 74–84. <https://doi.org/10.1007/s12063-011-0047-5>
- Vandermerwe, S., & Rada, J. (1989). Servitization of business: adding value by adding services. *European Management Journal*, 6(4), 314–324. [https://doi.org/10.1016/0263-2373\(88\)90033-3](https://doi.org/10.1016/0263-2373(88)90033-3)
- Wise, R., & Baumgartner, P. (1999). Go downstream: the new profit imperative in manufacturing. *Harvard business re-view*, 77(5), 133–141.
- Wouters, J. P. (2004). Customer service strategy options: A multiple case study in a B2B setting. *Industrial Marketing Management*, 33(7), 583–592. <https://doi.org/10.1016/j.indmarman.2003.12.003>
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185–203.
- Zhao, Y., & Cavusgil, T. (2006). The effect of supplier's market orientation on manufacturer's trust. *Industrial Marketing Management*, 35(4) 405–414. <https://doi.org/10.1016/j.indmarman.2005.04.001>
- Zostautiene, D., & Daraskeviciute, B. (2009). Peculiarities of Competitive Advantage Development of Panevezys City Companies through the Elements of Marketing Culture. *Inzinerine Ekonomika-Engineering Economics*, 65(5), 102–112.

The article has been reviewed.

Received in March, 2016; accepted in December, 2016