

THE EFFECT OF VALUE-ADDED ACTIVITIES OF KEY SUPPLIERS ON THE PERFORMANCE OF MANUFACTURING FIRMS

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Abstract: The impact of value-added activities provided by key suppliers on the performance of manufacturing firms was measured in this study. Based on a literature review, four added-value activities: supplier customized services, logistics collaboration, information sharing, and innovation and development were focused on. Data collected from various levels of managers in manufacturing firms in Amman, Jordan was used to test the proposed research model. A quantitative approach was employed, and a survey (structured questionnaire) conducted to collect primary data. The final sample included 126 respondents, representing a 63% response rate. The proposed research model was analyzed and tested using SPSS version 22. All value-added activities were found to have a statistically significant effect on the manufacturing firms in Jordan and the dimension of logistics collaboration had the greatest effect on performance. This research model can be applied to future studies of multiple sectors in Jordan or the same sector in multiple countries to examine the effect of value-added activities on different firm's performance levels.

Key words: key suppliers, value-added activities, manufacturing firms, supplier collaboration, supplier relationship management.

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Introduction

In recent decades, business performance has become increasingly linked to many supply chain management business practices. These business practices are not only an internal issue for firms but also an issue of collaboration with external parties who can assist them in creating more value for their businesses (Dyer and Singh, 1998). The establishment of good relationships with suppliers—especially collaboration with key suppliers—is important in managing and improving business performance (Cousins et al., 2008). Collaboration has become more important because suppliers' knowledge and capabilities can provide businesses with a competitive advantage in a volatile and competitive business environment (Nix and Zacharia, 2014). It was suggested by Sheth and Sharma (2007) that effective relationship management with strategic suppliers is becoming a strategic function and source of competitive advantage. Many opportunities emerge from the

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collaboration between firms and their suppliers, especially with a redefined marketplace that stresses the importance of key suppliers who provide not only availability of items to firms but also value-added activities that can enhance their business performance (O'Brian, 2014). More value-added activities are now demanded from suppliers and this has become a trend for most organizations (Soinio et al., 2012). Factors affecting the success of collaborative relationships between suppliers and manufacturers, in terms of satisfaction and trust, have been explored (Makkonen et al., 2016; Tanskanen and Aminoff, 2015), but few have focused on the direct effect of value-added activities on the business performance of manufacturing firms (Riley and Klein, 2019; Yang et al., 2013). Therefore, the identification and measuring of the most important value-added activities of key suppliers that have a positive effect on the performance of manufacturing firms in Jordan have been undertaken by this study.

Literature review

Understanding the importance of value-added activities requires an understanding of the needs of firms. Significant opportunities to manufacturing firms are offered by these activities, especially if their effects on business performance have been understood (Yang et al., 2013). Therefore, added-value activities provided by suppliers can be considered as any action taken by suppliers to add benefit to the delivered product or services and, usually, these actions come from key suppliers (O'Brian, 2014). Four value-added activities affecting the performance of manufacturing firms form the focus of this study: supplier customized services, logistics collaboration, information sharing, and innovation and development.

Supplier customized services

In securing customized services from key suppliers, the establishment of good relationships to achieve maximum benefits is essential for firms (Jajja et al., 2016). These customizations are the basis for delivering excellent products and services to satisfy customers' needs, and are considered crucial in enabling the provision of enhanced offerings to more diverse customer segments of manufacturing firms (Amedofu et al., 2019). Moreover, relationships with suppliers vary in strength—from basic to advanced price-based transactional relationships—resulting in more customized services as relationships with suppliers advance. For example, basic services and items, including computer supplies, as well as highly specific and customized development missions are offered by the IT industry (Tseng, 2014). Therefore, the challenge facing manufacturing firms is to identify the right suppliers who can provide them with a series of customized activities and services that can enhance their business performance (Ho et al., 2010).

Customized services usually commence with extensive meetings with suppliers to determine the nature of these services and might require the participation of cross-functional teams from both organizations (O'Brian, 2014). Therefore, the types of customized services that are required and achievable are determined by the fit

between buyer and supplier. These customized services can stem from suppliers' technical capabilities, market research capabilities, warranties, and customized after-sales services, among others (de Araújo et al., 2015). Thus, those suppliers who are able to effectively provide customized products and services should be chosen (Tseng, 2014).

Logistics collaboration

The importance of effective policies and procedures to foster cooperation with key suppliers in the field of logistics was emphasized by Tseng (2014) and it was recommended that purchasing employees should have specialized training to be able to collaborate with suppliers to improve shipping, production, inventory control, and operations processes. In addition, a positive effect on the quality of products produced by manufacturing companies will be achieved (Tseng, 2014). The collaboration in logistics activities between buyer and supplier also improves the relationship performance, which enhances the competitive advantage of manufacturing firms (Kähkönen et al., 2017). This is due to the benefits of collaboration, including reduced purchase order times and order management activities, less administrative time for shipping processes, and greater flexibility in dealing with any logistical problems (Knoppen et al., 2015; Shashi and Singh, 2015). Supplier collaboration in logistics can include all activities related to the flow of incoming materials to the company, including information and finance flows (Chopra et al., 2013). This can incorporate many aspects of logistics management, including warehousing, distribution, transportation, and processing of orders. To plan and coordinate all logistical activities to achieve the desired level of customer services with the highest possible level of efficiency is the mission of the supplier (Chopra et al., 2013).

Moreover, there should be coordination of logistics between the buyer and supplier in the form of a logistics strategy. Decisions affecting the logistics strategy involve identifying the appropriate number of warehouses and choosing their locations, investing in technology, and choosing the right transportation mode. The logistics strategy is influenced by other strategic decisions involving the finance, production, and procurement functions. Therefore, it should be implemented with the guidance of higher managerial strategic levels (Murphy and Knemeyer, 2015). For example, the marketing goal of product availability in multiple locations will have an influence on the logistics transportation decisions that are affected by other activities. Logistics collaboration can also include forecasting demand more precisely to determine the items required by manufacturing firms and assistance in planning logistical activities between key suppliers and manufacturing firms, which will positively influence the efficiency of both parties (Kisperska-Moron and De Haan, 2011; Shashi and Singh, 2015). Thus, logistics collaboration can influence the decisions related to logistics functions and can direct them towards the financial success of firms through the alignment of the logistics and corporate strategies of the organization (Murphy and Knemeyer, 2015).

Information sharing

Managing information and communication between manufacturing firms and suppliers is becoming crucial to businesses. Therefore, employing shared information systems can assist firms in reducing costs, especially if this information is exchanged on a real-time basis (So and Sun, 2010). Effective information sharing mechanisms require the integration of buyers and suppliers that will facilitate the execution of complex purchasing strategies, such as just-in-time concepts (Zhou and Benton, 2007). This integration can be conducted using IT applications that enable both parties to synchronize their data by connecting with their business systems and establishing a more collaborative decision-making process (Matopoulos et al., 2009). Accordingly, the performance of manufacturing firms can be enhanced by key suppliers with more accurate demand forecasting, improved coordination in production planning decisions, and effective management of inventory levels within the organization (So and Sun, 2010). The relationship with the key supplier should ensure an accurate and timely flow of information (Liu et al., 2013) related to the planning, coordinating, and controlling of all data that can help manufacturing firms in establishing efficient processes. This information sharing mechanism and supplier information alignment will enable the firms to make more successful decisions and achieve a competitive advantage over their rivals (Soosay and Hyland, 2015).

The objective of information sharing is to enable manufacturers to provide the best value to their customers at a low cost by having effective and efficient information flows between the two parties (Marodin et al., 2017). Moreover, all redundant activities and waste will be eliminated by the frequent and timely exchange of information with suppliers. This alignment between manufacturing firms and their suppliers leads to more efficient, faster, and accurate processes that enhance the performance of both suppliers and their customers (Goldsby et al., 2006; Marodin et al., 2017). Consequently, information sharing and integration among key suppliers and manufacturers will lead to improvements in logistics decisions, improvements in development activities, enhanced production efficiencies, and ultimately establish competitive advantage in the whole manufacturing supply chain (Flynn et al., 2010).

Innovation and development activities

Innovation in the field of supply chain management is a performance indicator of any supply chain, and, according to researchers, it is one of the major antecedents of business performance and a key source of competitive advantage (Kähkönen et al., 2017). Moreover, key suppliers are considered a valuable source of innovative ideas. Therefore, collaborative relationships with key suppliers can play an important role in fostering engagement between manufacturing firms and their suppliers in the early stages of product development (Hallstedt et al., 2013). These practices can take many forms, such as early supplier involvement, bundling

services, and product development (Hallikas et al., 2014). Moreover, supplier innovation can facilitate manufacturing firms achieving greater sustainability in their businesses through intensive collaboration with key strategic suppliers (Sofka and Grimpe, 2010). The design and technical expertise of suppliers enables manufacturing firms to deal with volatile market needs and to continuously upgrade and develop their products (Chopra et al., 2013; So and Sun, 2010). This emphasizes the importance of supplier-buyer collaboration in positively affecting sales growth, new product development, and production process improvement (Bhasin and Burcher, 2006). Innovation and development activities depend on how close the relationship between the manufacturer and their key suppliers is. Sensitive information and design data can be shared by both parties, which is hugely beneficial during product development and operations improvement (So and Sun, 2010). Activities of supplier innovation and development can be conducted through strategic alignment with manufacturers as common goals and strategies—including many activities, such as process and product development, the ability to provide co-design capabilities, and sharing of sensitive information—can be established (Vickery et al., 2010; So and Sun, 2010). There is concrete evidence that the innovation and development activities provided by suppliers—through integration in some cases—can improve business performance (Colicev et al., 2016; Duhaylongsod and De Giovanni, 2019). Although this association between innovation and performance encourages manufacturing firms to adopt innovative strategies, to develop and adopt an innovation strategy, both parties should choose the right strategy that fits their needs and capabilities to realize the benefits of the positive association between innovation and performance. Therefore, the most suitable innovation strategy that a firm can implement should be identified based on high levels of coordination and integration with key suppliers who can provide them with the required capabilities to make this strategy successful (Duhaylongsod and De Giovanni, 2019). For example, lowering the costs of production processes through innovation and development activities can lead to better margins on the products of manufacturing firms and, consequently, can be translated into lower market prices or higher profit margins for the firm (Devaraj et al., 2007). Another example is that end consumers' willingness to purchase their products through product customization can be increased; although, additional costs may be added to the firm through these innovations. (Duhaylongsod and De Giovanni, 2019).

Business performance

Firm performance is a measure reflecting the effectiveness and efficiency of many value adding factors to the business (Shashi and Singh, 2015). As shown in the literature, value-added activities have a positive impact (directly or indirectly) on firm performance. Therefore, the focus should be on major firm performance indicators that create value and enhance the competitiveness of the firm's position in the market. In addition, firm performance can be measured through multiple

factors. There are many measures of a firm's positive levels of performance. These metrics include improvement in market position, increased sales volume and profitability, return on investment, and enhanced reputation. These factors are among the most important to measure the performance of manufacturing firms (Yuan et al., 2010; Lin et al., 2013), and thus are used in this study.

Research model and hypotheses

The proposed research model presented in Figure 1 was adapted from prior research discussed in the literature review section. The value-added supplier activities consisted of four dimensions adopted from prior research: supplier customized services (de Araújo et al., 2015; Tseng, 2014); supplier logistics collaboration (Kähkönen et al., 2017; Kisperska-Moron and De Haan, 2011; Tseng, 2014); supplier information sharing (Marodin et al., 2017; So and Sun, 2010); and supplier innovation and development activities (Duhaylongsod and De Giovanni, 2019; Kähkönen et al., 2017; So and Sun, 2010). Additionally, five items measuring business performance were adopted from Yuan et al. (2010) and Lin et al. (2013).

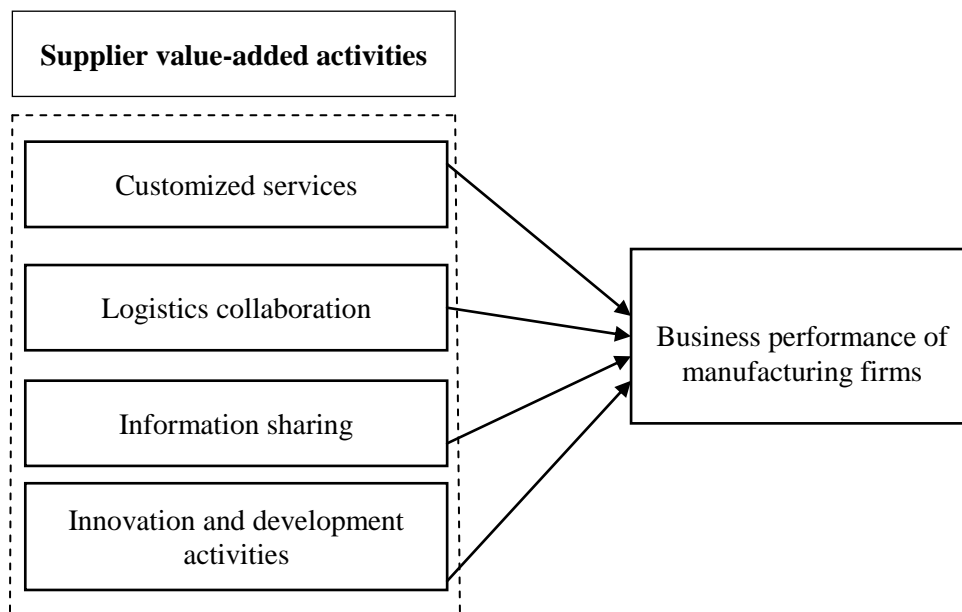


Figure 1: The research model

The research model was based on the literature review of value-added supplier activities, and consequently, the following hypotheses was formulated:

- H1: Supplier value-added activities significantly influence the business performance of manufacturing firms in Jordan
Based on the supplier value-added activities, the following sub-hypotheses are formulated as follow:
H1.1: Supplier customized services significantly influence business performance.
H1.2: Supplier logistics collaboration significantly influences business performance.
H1.3: Supplier information sharing significantly influences business performance.
H1.4: Supplier innovation and development activities significantly influence business performance.

Research methodology

The data were collected from manufacturing companies located in Amman, Jordan. The survey questionnaire was developed in English based on the literature review, and sent for feedback to an academic lecturer in supply chain management and a purchasing manager from one of the manufacturing companies in Amman. The questionnaire was well understood, and minor changes were made accordingly. The questionnaire consisted of two sections: first, demographic data about the manufacturing firms, and second, all variables measuring value-added supplier activities and the business performance of the firms. A five-point Likert scale was used for all items from 1 = "Strongly disagree" to 5 = "Strongly agree." Of the 200 questionnaires distributed, 126 were usable, representing a 63% response rate. The proposed research model was analyzed and tested using SPSS version 22.

Results and discussion

The sample has been classified into ten manufacturing sectors in Jordan. The sample details regarding the number of respondents in each sector, along with their respective percentages, are explained in Table 1.

Table 1. Sample characteristics of the study

Demographics	Description	Number	Percentage
Firm Size	Small (< 20 employees)	44	35%
	Medium (20–99 employees)	71	56%
	Large (100 employees and more)	11	9%
Type of Firm	Chemicals	12	10%
	Construction	3	2%
	Engineering and electrical industries	2	1%

	Food and supply	41	33%
	Furniture	4	3%
	Garments	10	8%
	Mining and Minerals	8	6%
	Plastic products	22	18%
	Printing and paper	13	10%
	Therapeutics	11	9%

The food and supply sector, accounting for 33% of the sample, emerges as clearly dominant. Plastic products account for 18%, and the remaining 49% are respondents from other different manufacturing sectors in Jordan (e.g., chemicals, printing and paper, mining, and minerals). The sample has been classified into small, medium, and large organizations, according to the number of employees in each—medium (57%), small (35%), and large (9%) organizations.

A statistical correlation test was conducted to explore the strength and direction of the relationship between the constructs of the study. The bivariate correlation coefficients between each supplier's value-added activities and the performance of the manufacturing firms are presented in Table 2.

Table 2. Correlation matrix of the study constructs

	CS	LC	IS	ID	BP
Customized Services (CS)	1				
Logistics Collaboration (LC)	.752**	1			
Information Sharing (IS)	.654**	.785**	1		
Innovation & Development (ID)	.658**	.757**	.791**	1	
Business Performance (BP)	.728**	.836**	.806**	.795**	1

** . Correlation is significant at the 0.01 level (2-tailed).

From Table 2, all independent suppliers' value-added activities are shown as having significant associations with the performance of manufacturing firms (at a significance level of 0.01). Moreover, the relationships are all positive; greater performance is achieved with more value-added activities, thus an increase in any value-added activity, such as *logistics collaboration*, will result in an increase in overall business performance. As the most important factor affecting firms' performance, *logistics collaboration* has the highest Pearson correlation coefficient, ($r=0.836$), followed by *information sharing* ($r=0.806$), *innovation and development* ($r=0.795$), and *customized services* ($r=0.728$). A linear regression analysis is used to explore the predictive influence of value-added activities on the performance of manufacturing firms. As there are many types of regression analysis, each of which can be used for a specific situation (Pallant, 2013), this test has been conducted using the enter method, where all independent variables of value-added activities are entered in the equation simultaneously; notably, this is the most commonly used regression analysis (Hair et al., 2014). The model summary, presenting the scores of the correlation coefficient, R, R-squared, adjusted R-squared, and the standard error of the estimate, which are then used to determine the overall fit of the regression model with the data, is presented in Table 3.

Table 3. Regression model summary for value-added activities on predicting business performance

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error
1	.888 ^a	.788	.781	.38514
a. Predictors: (Constant), ID, CS, IS, LC				

The multiple correlation coefficient R-value was 0.888. An excellent level of prediction is indicated for the value-added activities on the performance of manufacturing firms. The coefficient of determination contains the R-squared score, which represents the proportion of variance in the performance of manufacturing firms that can be explained by value-added activities. For this study, the R-squared score was 0.788, whereby the value-added activities explain 78.8% of the variability of the performance of manufacturing firms. The adjusted R-squared value as a better estimate of the true population of manufacturing firms where R-squared is affected by the sample size, is established in Table 3. Here, the value of the adjusted R-squared was 78.1%, supporting the R-squared result. To show whether the overall regression model is a good fit for the data, an ANOVA test was conducted. Table 4 represents the ANOVA statistical significance, and the F ratio in the ANOVA test. The table shows that value-added activities predict the performance of manufacturing firms; the F value (regression value) is 112.724, and

the significance value is < 0.05 . The first main hypothesis (H1: Supplier value-added activities significantly influence the business performance of manufacturing firms in Jordan) is supported by this result.

Table 4. ANOVA significance test for value-added activities

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66.884	4	16.721	112.724	.000 ^b
	Residual	17.948	121	.148		
	Total	84.832	125			
a. Dependent Variable: Business performance						
b. Predictors: (Constant), ID, CS, IS, LC						

The coefficients, indicating how well each of the value-added activities is related to the performance of the firms, are presented in table 5. The significance values (column *Sig.*) indicate whether the value-added activity is making a statistically significant unique contribution; values < 0.05 are considered statistically significant. All tested value-added activities have a significance value of less than 0.05.

Table 5. Regression coefficients of value-added activities on business performance

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.*
	B	Std. Error	Beta		
(Constant)	.126	.186		.675	.501
Customized Services (CS)	.127	.057	.144	2.215	.029*
Logistics Collaboration (LC)	.349	.079	.358	4.419	.000*
Information Sharing (IS)	.245	.077	.244	3.158	.002*
Innovation & Development (ID)	.237	.074	.236	3.182	.002*

The added-value activity *logistics collaboration* has the biggest impact on the performance of manufacturing firms ($B = .349$, $t\text{-value} = 4.419$). This result supports the sub-hypothesis H1.2 (Supplier logistics collaboration significantly influences business performance). Added-value activity *Information sharing* ($B = .245$, $t\text{-value}$

= 3.158) supported the sub-hypothesis H1.3 (Supplier information sharing significantly influences business performance); *innovation & development activities* ($B = 0.237$, $t\text{-value} = 3.182$), supported the sub-hypothesis H1.4 (Supplier innovation and development activities significantly influence business performance), and *customized services* ($B = .127$, $t\text{-value} = 2.215$), supported the sub-hypothesis H1.1 (Supplier customized services significantly influences business performance). Thus, the general form of the equation to predict the performance of manufacturing firms through value-added activities is $= .126 + (.127 \times CS) + (.349 \times LC) + (.245 \times IS) + (.237 \times ID)$. As can be seen from the equation, the logistics collaboration dimension has the biggest effect on the firm's performance in enabling manufacturers in Jordan to achieve efficiency in their operations. The importance of cooperation with key suppliers in several logistical activities such as improving the shipping, production, and inventory control processes was the focus of the study which supports Tseng (2014). Moreover, the logistics collaboration with key suppliers is shown to enhance the delivery of required materials in the right manner, at the right time, and within as short a lead time as possible. These logistics collaboration issues are supported by several prior studies (Kisperska-Moron and De Haan, 2011; Kähkönen et al., 2017; Dave and Sohani, 2019). The second value-added activity is the information-sharing dimension, which has been ranked second in its effect on the firm's performance. This dimension can assist manufacturers in aligning their software programs and achieve greater coordination. Information on key suppliers should be shared to enhance demand forecasting, production planning, and inventory management. In addition, key suppliers should have information systems that are compatible with the company to facilitate effective information sharing as supported by several prior studies (Marodin et al., 2017; So and Sun, 2010). The third value-added area is innovation and development activities, ranked third in its effect on firms' performance and can primarily be used to engage suppliers in the development process to enhance the versions of products and services of the manufacturer. Innovation, co-design services, and participation in product design can be provided by key suppliers. Furthermore, training programs should be offered for key suppliers to participate in firms' continuous improvement. These innovation and development activities support the results of several prior studies (So and Sun, 2010; Duhaylongsod and De Giovanni, 2019). Finally, customized services ranked fourth in the prediction model. This dimension provides the manufacturer with more additional customized services that are usually not provided by suppliers, such as special specifications for the requested items in manufacturing or a special type of packaging. Moreover, the provision of products and services, as per firms' required specifications, should be offered by key suppliers. The findings of the customized services dimension are similar to those of several prior studies (Tseng, 2014; de Araújo et al., 2015).

Managerial implications

Competitive advantages that can be offered to customers to meet their needs more efficiently are sought by manufacturing firms. The variety of value-added activities offered by key suppliers enables manufacturing firms in Jordan and other countries to maintain their competitiveness in the market. The results of this study could help practitioners, especially in purchasing departments, in three important ways. First, if managers invest in the selection and development of key suppliers who can provide value-added activities, they will be able to effectively form the appropriate sourcing strategy that matches with supply chain strategies—either lean or agile. The results showed that value-added activities could contribute to the success of logistics and product development activities. Therefore, the positive contributions of value-added activities should be recognized by managers as a significant part of their firm's operations. Second, this study may help manufacturing firms in defining the main capabilities required for gaining competitive advantage in the market. The coordination and integration among different supply chain members help firms implement complicated practices related to product innovation and logistics collaboration. Third, this study can guide purchasing managers on how to prioritize investment in the value-added activities of key suppliers. For example, logistics collaboration was shown to have the biggest impact on firms' performance; therefore, this dimension should be a priority for implementation. In conclusion, this study could help purchasing managers in the implementation of strategic and operational decisions related to value-added activities as well as the appropriate allocation of resources needed for investment in these activities.

Conclusion

The impact of value-added activities provided by key suppliers on the performance of manufacturing firms in Jordan was measured. Manufacturing firms expect suppliers to provide the required items on time, at sufficient quantity, and without defects. However, manufacturing firms should focus on value-added activities provided by key suppliers who provide them with critical items. Therefore, the study focused on value-added activities that can bring more value to the products and services of manufacturing firms in Jordan. Four added-value activities, namely: customized services, logistics collaboration, information sharing, and innovation and development, were the focus of the proposed research model. It is evident that value-added activities significantly predict the performance of manufacturing firms. These results will empower managers to improve key performance indicators for manufacturing firms in Jordan. These four dimensions can be used by purchasing department practitioners to prioritize their investments and make continuous improvements to several activities in each dimension. As the study suggested, logistical activities such as shipping, production, and inventory control processes can be improved by key suppliers who deliver the needed materials on

time within short lead time constraints. In addition, information to help manufacturing firms with demand forecasting, production planning, and inventory management can be shared by key suppliers. Compatible information systems should exist between key suppliers and manufacturing firms to ensure an effective information sharing process. Moreover, the ability of suppliers to participate effectively in the design and innovation of products is important. Finally, it is recommended that products and services as per manufacturing firms' required specifications—including specialized packaging or any other customized requirements—should be provided. The areas defined by each dimension can be used as guidelines for managers to suggest activities that can improve firms' performance levels. However, some limitations exist; a probability sampling technique is suggested instead of convenience sampling to make the results generalizable in the context of the study and a larger sample size could be selected. Additionally, the application of the research model in different industries will enhance the reliability of the model. This research model can be applied to future studies in other sectors in Jordan to measure the effect of value-added activities on different levels of firms' performance.

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WPLYW DZIAŁALNOŚCI WARTOŚCIOWEJ KLUCZOWYCH DOSTAWCÓW NA SKUTECZNOŚĆ FIRM PRODUKCYJNYCH

Streszczenie: W niniejszym badaniu mierzono wpływ działań o wartości dodanej świadczonych przez kluczowych dostawców na wyniki firm produkcyjnych. Na podstawie przeglądu literatury skoncentrowano się na czterech działaniach o wartości dodanej: usługach dostosowanych do potrzeb dostawców, współpracy logistycznej, wymianie informacji oraz innowacjach i rozwoju. Do przetestowania proponowanego modelu badawczego wykorzystano dane zebrane od różnych szczebli menedżerów w firmach produkcyjnych w Ammanie w Jordanii. Zastosowano podejście ilościowe i przeprowadzono ankietę (ustrukturyzowany kwestionariusz) w celu zebrania danych pierwotnych. Ostateczna próba obejmowała 126 respondentów, co odpowiadało 63% wskaźnikowi odpowiedzi. Zaproponowany model badawczy został przeanalizowany i przetestowany przy użyciu SPSS w wersji 22. Stwierdzono, że wszystkie działania o wartości dodanej miały statystycznie istotny wpływ na firmy produkcyjne w Jordanii, a wymiar współpracy logistycznej miał największy wpływ na wyniki. Ten model badawczy można zastosować w przyszłych badaniach wielu sektorów w Jordanii lub tego samego sektora w wielu krajach w celu zbadania wpływu działań o wartości dodanej na poziomy wydajności różnych firm.

Słowa kluczowe: kluczowi dostawcy, działalność dodana, firmy produkcyjne, współpraca z dostawcami, dostawca, zarządzanie relacjami z dostawcami.

关键供应商的增值活动对制造企业绩效的影响

摘要: 本研究测量了主要供应商提供的增值活动对制造企业绩效的影响。根据文献回顾, 重点关注四项增值活动: 供应商定制服务, 物流协作, 信息共享以及创新与发展。从约旦安曼制造公司各级管理人员收集的数据用于检验所提出的研究模型。采用定量方法, 并进行了一项调查(结构化问卷)以收集主要数据。最终样本包括126名受访者, 代表63%的答复率。使用SPSS 22版对建议的研究模型进行了分析和测试。发现所有增值活动均对约旦的制造企业具有统计学上的显著影响, 而物流合作的规模对绩效的影响最大。该研究模型可以应用于约旦多个部门或多个国家中同一部门的未来研究, 以研究增值活动对不同公司绩效水平的影响。

关键词: 主要供应商, 增值活动, 制造公司, 供应商协作, 供应商关系管理。