FIBRES & TEXTILES
in Eastern Europe

September/October 2020

An international
journal devoted
to current problems
of fibre & textile science
and of the textile industry
worldwide
published by
ŁUKASIEWICZ Research Network
– Institute of Biopolymers
and Chemical Fibres
Łódź, Poland

Volume 28, No. 5 (143) 2020
ISSN 1230-3666

FIBRES & TEXTILES in Eastern Europe

September/October 2020
Volume 28, No. 5 (143)
ISSN 1230-3666
IF 0.775 (2019)
5 – Year Impact Factor 0.782
ICV 154.27 (2019)

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FIBRES & TEXTILES in Eastern Europe is decorated with the Golden Order of the Polish Textile Association

FIBRES & TEXTILES in Eastern Europe is inserted on the Master Journal List of Clarivate Analytics Philadelphia, USA and on Index Copernicus Journal Master List. The journal is indexed in Research Alert, SCI Expanded (SCI Search and Web of Science), the Materials Science Citation Index, Current Contents/Engineering, Computing & Technology; the Textile Institute, Manchester, in the Information Service; Rapra Technology Ltd.; Elsevier Geo Abstracts; Chemical Abstracts Service; and Referativny Zhurnal, i.a.

On the cover a fragment of Jolanta Owidzka's structural tapestry 'Prayer book'

published by:

Łukasiewicz
Institute of Biopolymers and Chemical Fibres

Contents

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Bridging the Effect of the Knowledge Spillover and Innovation Performance of Textile Companies: Evidence from Indonesia

DOI: 10.5604/01.3001.0014.2380

Abstract
Most studies on knowledge spillover hypothesis testing are limited to its occurrence and impact on improving the productivity or performance of the recipient companies. In this study a model is constructed of how to use knowledge spillovers from the provider to the beneficiary company, in the context of the textile industry in Indonesia. The model suggests that the knowledge obtained from the buyer may increase the innovation of domestic enterprise suppliers. The model also represents the possibility of knowledge spillover from labour turnover and the imitation process. A survey was carried out to measure the variables of the study conducted by distributing questionnaires to the marketing manager, human resource manager and operations manager of textile companies. The structural equation model was used to test the hypothesis. The results state that a company with better knowledge management can take advantage of knowledge spillover to produce innovative products that are more accepted by the market.

Key words: *knowledge spillover, innovation performance, knowledge management, textile industry.*

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Introduction

One of the benefits expected from an FDI recipient country is knowledge spillover, in addition to advantages in the form of technology and production [1]. At the company level, FDI can also be a channel of knowledge spillover for both companies in the country of origin as well as enterprises in the recipient countries [2].

There are at least two types of knowledge spillover relevant to this study, i.e. horizontal and vertical spillovers. Forms of the horizontal spillover effect are demonstrations, labour mobility, and competition dimensions, whereas vertical spillover can be in the form of a link to the supplier or links with downstream enterprises [3]. In previous study findings, vertical and horizontal knowledge spillovers were found in the existence of FDI in the textile industry in Indonesia. Vertical spillover were mainly triggered by textile company relations with domestic supplier companies. On the other hand, the horizontal spillover effect took place due to imitation and labour turnover factors in the same industry or location.

When domestic companies experience this knowledge spillover, the question arises as to what further benefits can be obtained. Wu and Muqiang state that these benefits can be innovations that can be generated by the company since innovation is an important parameter to beat the competition [3-5].

Knowledge acquired by its recipient would not automatically be used to generate innovation performance. Liao expressed the need for knowledge sharing and absorptive capacity in achieving innovation capability [4]. Chang states that the knowledge management process will improve efficiency, effectiveness, customer service and innovation [6]. Donate examined how the factors of cultural values, leadership, and human resources practices affect the exploration of knowledge and innovation [7].

Indonesia has long been recognised as one of the largest textile manufacturers in the world. Its population of over 250 million people and reputation among international textile and clothing manufacturers ensure steady domestic and export demand for textile and clothing products in the country. In the first and second quarters of 2017, Indonesia's textile industry managed to report positive growth again after a sharp deline in the previous few years. The country's textile industry expanded by 3.65 per cent in Q2 2017, according to data published by Statistics Indonesia. It exceeded the rise of 0.16 per cent in the previous quarter [8].

Knowledge spillover can also occur in the textile and clothing industry because of the importance of information technology in it [9]. In addition, not only are there domestic investors in this industry but also foreign ones. Thus, it is important for the recipient countries of foreign investment to take advantage of the managerial capabilities and technological mastery of the more advanced textile companies for the development of the textile industry in Indonesia.

The importance of the textile industry in the Indonesian economy is illustrated by the increase in the number of domestic direct investment projects and foreign direct investment in the last 4 years [10] (***Figure 1***).

The number of foreign investors in the textile industry is a signal of the high potential of the domestic market and exports of the Indonesian textile industry. Interaction between domestic direct investment and foreign direct investment not only occurs in the upstream-downstream relationship but also through labour interaction [11]. In addition to fulfilling the investment needs in the country, foreign investment in the manufacturing sector is also expected to provide benefits in the form of improving the managerial capabilities of domestic companies that are partners of other domestic companies through the effects of imitation and exhibition.

In general, many researchers have stated that there needs to be effort to utilise the knowledge obtained by a company to boost its innovation performance. Therefore, this study constructs a hypothetical model that bridges the knowledge spillover received and innovation performance of a textile company in Indonesia. A survey was conducted by distributing ques-

tionnaires to managers at the company to get tdata for testing the hypothesis.

Literature review

Knowledge spillover

The existence of FDI in developing countries could generate positive externalities. According to Newman these externalities may take the form of knowledge spillover, productivity spillover, or rent spillover [12].

Knowledge spillover can occur horizontally or vertically. Horizontal is knowledge that is spilled over in the same industry or location. For instance, domestic textile enterprises get the benefits of competition by imitating products manufactured by foreign textile companies. As another example, a textile company benefited through labour turnover in getting workers who previously worked in foreign companies that have higher productivity. In other words, horizontal FDI spillover can take the form of the demonstration effect, labour mobility, and competition dimensions [3, 12, 13].

Vertical is knowledge that is spilled over in the same industry (intra-industry). In this case, a domestic company which operates as a supplier to foreign companies, acquiring knowledge from them because the buyer will provide assistance regarding the specifications of the goods they need, or vice versa. Muqiang mentions this relation with suppliers, as well as that with foreign subsidiaries and local downstream enterprises [3].

Through questionnaires distributed, this study measured the horizontal spillover through the entry of foreign companies into the textile industry, the effects of product imitation, as well as labour and manager turnover of foreign firms to domestic companies.

Innovation performance

The definition of innovation performance is quite extensive as it includes some measures relating to products, finance and organisation. Some previous studies on this subject can be seen in the following table.

The first is the type of innovation that relies on the measurement of a product or technology, as reported by Elenkov [14]. The advantage of this kind is the presence of product implementation measures. This measurement is easier to conduct for the research context, specifically the textile industry. In business relationships with buyers, calculation of the quantity of goods purchased is easy to perform. However, this approach has shortcomings: not all products are accepted by the market. Although products result from a process of development,if they are not absorbed by the market, then this will not be significant as an innovation performance indicator.

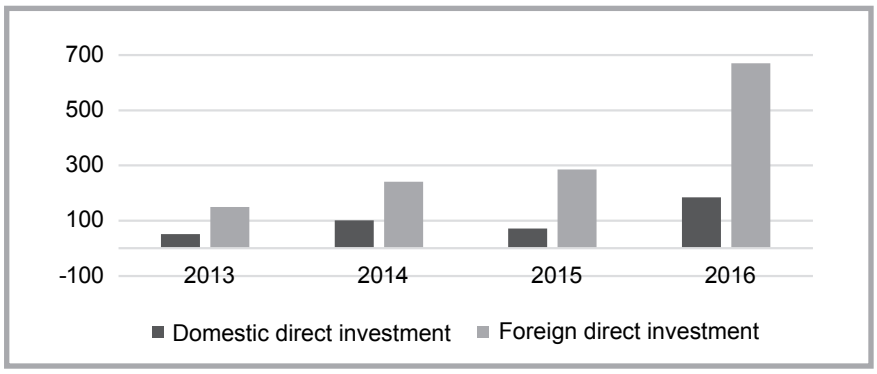

Figure 1. *Direct investment of textile industry in Indonesia.* ***Source:*** *Statistics Indonesia, 2017.*

Table 1. *Types of innovation measurement.* ***Source:*** *Author's literature review.*

Measurement type	Advantage	Disanvantage	Studied by
Product Improvements	Measuring the actual implementation	Not all products are accepted by the market	Elenkov & Manev [14]
R&D (Number of employees in R&D)	The measurement is easy and valid	Not describing efficiency	Olmos, et al. [15] Spanish National Research Council (CSIC)
Organisation (Innovative work behaviour)	Able to measure innovation activity	Not necessarily producing tangible outcomes	De Jong & Den Hartog [16]

The second type of measurement is of the existence of R & D institutions. As the name implies, R & D institutions are in charge of producing ways or methods of production or more innovative products. One measurement made by Garcia [15] was of the number of existing human resources in R & D institutions. As with the previous approach, this calculation method has advantages because its measurement is relatively straightforward and valid. On the other hand, there is also a shortage of this type of analysis, and it does not describe efficiency. The measurement of successfull treatment should illustrate the efficiency oriented expenses.

The third is the type of organisation that assumes measurement of innovation as a process. It is considered as a process of innovation measurement carried out by measuring the activity of innovative work behaviour, as reported by Jong [16]. This approach relies on analysis of the idea of exploration, generation, championing and implementation. The advantage of this method is that the activity of innovation can be seen through the processes that shape it. On the other hand, the lack of this perspective causes that the innovation activity does not necessarily describe the company's performance concerning both cost and production.

As regards knowledge received from business partners, then innovation means the process of transforming new ideas into tangible products. Based on the summary in ***Table 1***, the closest to the purpose of this research is the study conducted by Elenkov [14].

Concerning vertical knowledge spillover, it was stated by Elenkov that this is relevant to the textile industry in developing countries, such as Indonesia. An export-oriented business partner, which is located abroad or inside the country, is assumed as a party that knows the market demand better. This information is forwarded to suppliers, which could be used for improving on the product. High levels of competition in the textile market, both within the country and abroad, lead to the situation where only the businesses which can innovate beat the competition. In addition, some of the indicators of innovation through R & D activities [15] and organizational behaviour [16] were also adopted for the measurements made

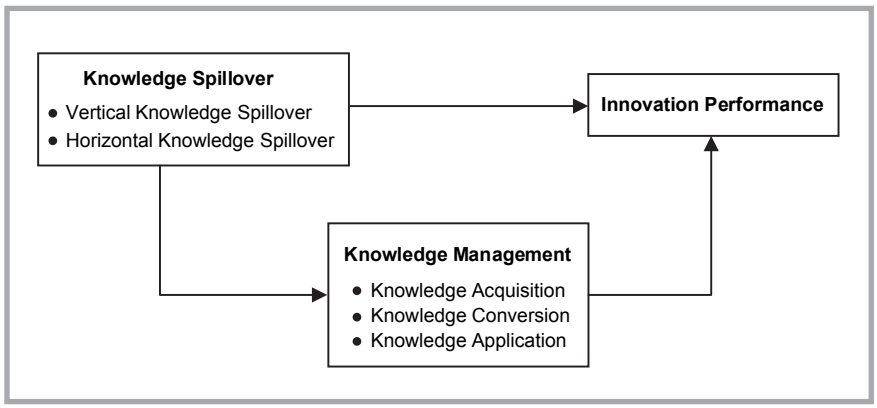

Figure 2. *Bridging knowledge spillover and innovation performance.* ***Source:*** *Authors' own.*

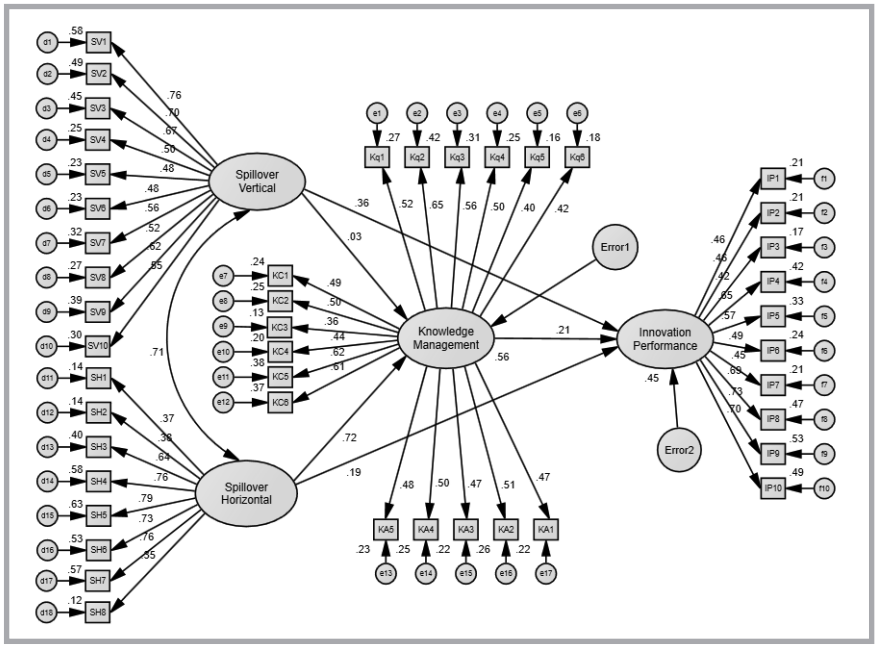

Figure 3. *Hypothetical model.*

in this study. Through the distribution of questionnaires, this study measured innovation performance through improved working methods, corporate administration and efficiency-oriented costs. Moreover, measurements were also based on increasing the quantity and quality of new products, process innovation and use of technology.

Knowledge management

Knowledge management can be seen as a science or practice of what is being implemented by policy makers in the industry. A model of knowledge management was discussed including simple models to complex ones. A lot of literature explores simple knowledge management, ranging from SECI, OK, intellectual capital, and ecology models, to the taxonomy model. Despres reviewed models and made a classification to describe and summarise knowledge management models of the originators [17].

The central object of knowledge management is knowledge which is divided into tacit and explicit. Both are intellectual assets and collaborate to become human capital for the company or organisation. KM can be carried out by individuals, groups, or even by the organisation itself. Implicitly, all models of knowledge management are to explain who the executor is. Explicitly, the player appears in KM-Nonaka SECI, Earl , and N-Form models. Knowledge management is implemented through a mechanism for obtaining or generating knowledge continually. In the Nonaka model, for example, the process of knowledge management consists of socialisation, externalisation, combination and internalisation.

In Snowden models, the knowledge management process is described as a mapping of knowledge, the creation of competencies, intellectual capital systems development, and the management of tacit knowledge. Almost all models explain the place where knowledge management occurs. For example, Nonaka explicitly describes Originating Ba, Ba Interacting, Cyber Ba, and Exercising Ba. Implicitly, all the models explain that the interaction of knowledge could occur face-to-face, in real time, and not in real time through the cyber world or any relevant medium.

The knowledge management process is the ability of the company and is believed to be a precondition of effective implementation of knowledge management [18]. Through the process of knowledge management, the company may acquire knowledge, convert it following the needs of the company, and apply it to goods or services produced. Furthermore, the employees are expected to work together to run knowledge management processes to improve company performance.

Daud and Wan divide the process of knowledge management into knowledge acquisition, conversion, application, and protection [19]. In the context of the textile industry, knowledge acquisition derived from a marketing manager who obtains information from the buyer is studied. The customer as a business partner is considered to have wider knowledge of market demand, both in the country and abroad. Moreover, according to the knowledge spillover that has occurred, the acquisition is also due to exchanging knowledge with business partners.

Once information is obtained from the knowledge spillover, then the next step is the conversion of knowledge into that which can be absorbed by the organisation, in particular by staff and employees. Included in this step is the adoption and adaptation of knowledge into textile production process. The player who has an important role at this stage is the HR manager, linking the marketing department to the production department. In the last step of knowledge management in the context of this study, it is assumed that textile companies apply knowledge to improve the work efficiency and quality of products targeted. In this study, we assume that no intentional or formal effort of the company to protect the knowledge has been applied. This is consistent with the nature of the textile industry,

which enables knowledge spillover again in the same sector.

Bridging knowledge spillover and innovation performance

To produce targeted innovation performance, the company must manage knowledge acquired properly. Enterprises that manage knowledge effectively can be more innovative [6, 20, 21] perform better [22]. It must be done because the company's competitive advantage is determined by its success in the practice of knowledge management and learning organisation [23].

In a broader perspective, knowledge management focuses on knowledge flow, while intellectual capital focuses on knowledge stock, which will affect organisational performance [24]. Particularly for the textile industry [25] states that improving the process of knowledge retention, maintenance, and retrieva inl knowledge management will enhance the competitive advantage. The implementation of knowledge management in customer relationship management will also assist the company to meet customer needs and subsequently improve corporate performance [26].

From the literature study conducted, there have been a lot of studies that tested the existence of knowledge spillover in the presence of foreign investment in the recipient country. Likewise, there have been many studies that recommend the importance of using knowledge in creating the innovation performance of companies. This study connects the knowledge bestowed by business partners of a foreign affiliated company and the innovation performance of domestic companies. From the literature studied, we can state that what bridges the two factors is knowledge management.

The hypothesis of this study is illustrated in ***Figure 2***, which states that knowledge management functions as an intervening variable between knowledge spillover and innovation performance.

Research method

Measurement of study variables was carried out through questionnaires distributed to managers in textile and garment companies in West Java and Jakarta. Both provinces are included in the largest textile industrial cluster in Indonesia. According to data from the Manufacture Company Directory, Ministry of Industry, there are 216 large and medium-sized textile and garment companies located in these two provinces. The data are used in this study as a basis for calculating the research sample. Questionnaires were distributed to managers, but only 102 completed answer questionnaires were used in this study. This sample size is 10 times larger than the largest number of formative indicators used to measure a single construct [27].

The questions prepared were based on theoretical studies and formed on an interval scale using the semantic differential. To test the hypothesis and explain the phenomenon that occurs, the data obtained were processed using the structural equation model to determine the direct and indirect effects.

The variables and sub-variables were constructed using the folling indicators (***Table 2***).

Table 2. *Variables and sub variables indicators.* ***Source:*** *Authors' own literature review and assumptions.*

Variables/Sub-variables	Indicators
Knowledge spillover	
Vertical knowledge spillover	supplier support improves performance supplier support improves competitiveness supplier support improves production efficiency customer support improves performance customer support to improves competitiveness customer support to improves production efficiency cooperation obtains raw materials cooperation gets equipment cooperation improves product quality upgrading product quality as required
Horizontal knowledge spillover	competitor improves performance competitor improves competitiveness competitor improves production efficiency employing skilled workers from foreign-owned enterprises increases efficiency employing a manager from foreign-owned enterprises increases efficiency imitating FDI production techniques improves performance imitating the FDI management style improves performance FDI competitors improve innovation
Knowledge management	
Knowledge acquisition	forum to exchange knowledge with business partners forum to gain knowledge of new products related to the industry procedure to acquire knowledge from competitors procedure to generate new knowledge from existing knowledge use feedback to improve the quality of the product team to identify and learn new knowledge
Knowledge conversion	procedure to transfer knowledge to staff and employees process of absorbing knowledge into the organisation procedure to absorb knowledge from business partners means to integrate types of knowledge related to the industry replace outdated knowledge with updated knowledge procedure to change competitive intelligence into action plans
Knowledge application	applying knowledge learned applying knowledge from challenges using knowledge to improve efficiency finding and applying the knowledge to improve competitive power associate the problem with sources of knowledge
Innovation performance	learning from foreign companies, competitors and customers; have improved methods and work processes renewing mindset by learning from foreign companies, competitors and customers improving product quality by learning from foreign companies, competitors and customers increasing the number of orders by learning from foreign companies, competitors and customers experiencing an increase in the number of new products by learning from foreign companies, competitors and customers experiencing a number of product innovations by learning from foreign companies, competitors and customers improving product cost efficiency by learning from foreign companies, competitors and customers number of new product developments exceeds expectations number of technology developments exceeds expectations number of important innovations exceeds expectations

Result and discussion

The hypothesis states that knowledge management is an intervening variable that connects knowledge spillover with innovation performance. Knowledge

Table 3. Confirmatory analysis for goodness of Fit Index. ***Source:*** *Authors' own literature review.*

Confirmatory model for exogenous variables		Confirmatory model for endogenous variables	
Chisquare	133.721 (Probability = 0.026)	Chisquare	321.768 (Probability = 0.05)
CMIN/DF	1.286	CMIN/DF	1.240
RMSEA	0.053	RMSEA	0.049
TLI	0.945	TLI	0.923
CFI	0.963	CFI	0.942

Table 4. Direct effects of variables. ***Note:*** *NS – Non significant; ** – significant at 95%; *** – significant at 99%.* ***Source:*** *Authors' own calculation.*

Direct effect	Path coefficient	Critical ratio	P. value	
Horizontal Spillover on Innovation Performance (HS ➔ IP)	0.192	0.903	0.366	NS
Vertical Spillover on Innovation Performance (VS ➔ IP)	0.359	2.120	0.034	**
Horizontal Spillover on Knowledge Management (HS ➔ KM)	0.723	2.918	0.004	***
Vertical Spillover on Knowledge Management (VS ➔ KM)	0.032	0.225	0.822	NS
Knowledge Management on Innovation Performance (KM ➔ IP)	0.21	1.240	0.215	NS

Table 5. Direct and indirect effects of variables. ***Source:*** *Author's own calculation.*

Exogenous variable	Endogenous variables	Direct effect	Indirect effect	Total effect
Horizontal spillover	Innovation performance	0.192	0.152	0.344
Vertical spillover	Innovation performance	0.359	0.007	0.366
Horizontal spillover	Knowledge management	0.723	–	0.723
Vertical spillover	Knowledge management	0.032	–	0.032
Knowledge management	Innovation performance	0.210	–	0.210

spillover is divided into two parts, namely vertical and horizontal spillover. A hypothetical model constructed based on data from the survey is shown as a chart obtained by software (***Figure 3***).

The results section consists of two statistical models that describe the goodness of the model. After that, there will be a discussion of the two findings, testing of hypotheses and analysis of the direct and indirect influence of variables.

The first statistic is confirmatory factor analysis used to generate the Goodness of Fit Index. Based on the test, it can be concluded that the compatibility test of the measurement model can be accepted. In other words, the overall parameters of the model indicate that the data support the model well (***Table 3***).

The second statistic is testing the validity and reliability of the concept of the variable by adopting a confirmatory factor analysis. Dimensions of the vertical spillover which are part of the knowledge spillover variable are formed by ten indicators (VS1-VS10). In ***Table 6***, it is seen that ten indicators form the vertical spillover. This is confirmed by the critical ratio (CR), which is significant. By the same principle, ***Table 6*** also describes the confirmatory test analysis for the horizontal dimension of spillover, which is also part of the knowledge spillover variable.

Furthermore, confirmatory testing of knowledge management analysis was undertaken for the variables shown in ***Table 7***. It is seen that there are sixteen indicators of knowledge management confirming the validity of the formation model.

The last model of the confirmatory analysis tests the indicators of innovation performance. It is shown in ***Table 8*** that the ten indicators are valid.

Through the statistics shown in ***Tables 6-8***, the test results show that all indicators of the dimensions that measure each variable are valid and reliable. This means that all the variables, i.e., knowledge kpillover, knowledge management, and innovation performance are valid and reliable.

Direct effects, indirect effects and total effect

In the model established there are two endogenous variables, namely knowledge management and innovation performance. To test whether knowledge management is a variable that bridges the knowledge spillover effect and innovation performance, this study examined the direct effects among these variables. ***Table 4*** shows a summary of the direct impact.

From the current statistics, it appears that there are only two direct effects of significant influence, i.e., horizontal spillover on knowledge management, and vertical spillover on innovation performance. These results do not clearly sum up the role of knowledge spillover in bridging the influence of knowledge spillover on innovation performance. Therefore, the impact of the direct, indirect and total effect of the variables was calculated. ***Table 5*** shows a summary of such influence.

If the statistics in ***Table 4*** and ***Table 5*** are interpreted simultaneously, we can see that the horizontal spillover effect on knowledge management is dominant. Likewise, the indirect influence of horizontal spillover on innovation performance is also more dominant. Therefore, in general, it can be stated that most of the research hypothesis is accepted. Knowledge management bridges horizontal spillover and innovation performance.

Horizontal spillover vs vertical spillover

In the textile industry, the existence of horizontal and vertical spillover may occur. As stated by Muqiang [3] the link bewteen suppliers, foreign subsidiaries and local downstream enterprises, are forms of vertical spillover. In the questionnaire distributed, measurement of this phenomenon was represented by several questions measuring the information provided by suppliers to the textile companies to improve performance through production efficiency and competitiveness. Also, the relationship between the company and customers, as a source of information that encourages companies to modify and improve the quality of products, is included within this kind of knowledge spillover. The most important of these measurements is cooperation with foreign investment enterprises to improve product quality.

The occurrence of horizontal spillover in this study was measured through the demonstration effect and labour mobility. On the other hand, labour mobility also has an impact on competition dimensions. The demonstration effect is measured through the imitation by domestic enterprises of new technology that is used by foreign companies. Labour mobility is measured by the reception manager of a domestic company who used to work in a foreign company. These measures are conducted according to Newman [12] and Li [28].

What's interesting about the estimation result is the finding that horizontal spillover is more dominant than vertical spillover in the context of the textile industry in Indonesia. This means a more informal relationship between domestic companies and foreign companies, which can cause the spillover of knowledge. In fact, the company observed is a corporation of a medium to large scale. This is certainly a finding that can be used by policymakers, both at the corporate (manager) and regional level (government).

Horizontal spillover to knowledge management

The second finding that should be discussed is the direct influence of horizontal spillover on knowledge management. From all the hypothesized direct effects, this relationship between two variables has the largest coefficient.

Measurement of knowledge management is based on the division of knowledge acquisition, knowledge conversion and knowledge application, as practised by Daud [19]. The consideration for this category is relatively straightforward and compatible with existing production stages in the textile industry. Knowledge is acquired through the exchange of information with business partners, through feedback from customers and the imitation effect with respect to products made by foreign companies. Knowledge acquired is then converted as per the needs of domestic companies. Knowledge conversion is supported by some elements that are possessed by domestic companies. The first is the existence of competitive intelligence possessed by the company. This element converts knowledge and applies it to the production process. Application of the knowledge that has been converted is undertaken to decrease production costs and encourage product innovation.

Table 6. *Confirmatory test for vertical and horizontal knowledge spillover.*

Concept	Indicator	Estimate	S.E.	C.R.	P
Vertical spillover	SV1	0.762			
	SV2	0.702	0.128	7.076	***
	SV3	0.673	0.141	6.712	***
	SV4	0.501	0.119	4.78	***
	SV5	0.48	0.116	4.571	***
	SV6	0.476	0.129	4.534	***
	SV7	0.564	0.231	4.794	***
	SV8	0.523	0.176	4.649	***
	SV9	0.622	0.198	5.43	***
	SV10	0.548	0.172	4.736	***
Horizontal spillover	SH1	0.371			
	SH2	0.38	0.38	2.807	0.005
	SH3	0.636	0.811	3.314	***
	SH4	0.763	1.049	3.495	***
	SH5	0.792	1.126	3.531	***
	SH6	0.731	0.84	3.469	***
	SH7	0.757	0.912	3.503	***
	SH8	0.347	0.317	2.598	0.009

Table 7. *Confirmatory test for knowledge management.*

Concept	Indicator	Estimate	S.E.	C.R.	P
Knowledge management	KC1	0.486			
	KC2	0.496	0.233	4.691	***
	KC3	0.361	0.175	3.392	***
	KC4	0.443	0.143	4.075	***
	KC5	0.62	0.237	5.476	***
	KC6	0.607	0.183	5.466	***
	KQ1	0.523			
	KQ2	0.646	0.181	5.733	***
	KQ3	0.561	0.226	5.103	***
	KQ4	0.498	0.17	4.571	***
	KQ5	0.402	0.199	3.583	***
	KQ6	0.424	0.261	3.781	***
	KA1	0.471			
	KA2	0.509	0.202	4.63	***
	KA3	0.469	0.198	4.253	***
	KA4	0.496	0.215	4.615	***

Table 8. *Confirmatory test for innovation performance.*

Concept	Indicator	Estimate	S.E.	C.R.	P
Innovation performance	IP1	0.461			
	IP2	0.462	0.34	3.452	***
	IP3	0.417	0.257	3.285	0.001
	IP4	0.651	0.384	3.976	***
	IP5	0.574	0.385	3.58	***
	IP6	0.491	0.225	3.506	***
	IP7	0.455	0.328	3.256	0.001
	IP8	0.688	0.51	3.295	***
	IP9	0.729	0.557	3.199	0.001
	IP10	0.699	0.541	3.118	0.002

By observing this knowledge management process, it can be identified that marketing managers have the primary responsibility in the stages of knowledge acquisition. In the next two steps, namely knowledge conversion and knowledge application, the managers responsible are the human resources manager and production manager. However, knowledge management activities could not be implemented partially and should remain integrated under the coordination of the HR department.

The important finding in this study is that a domestic company carried out man-

agement based on knowledge received through horizontal spillover.

Vertical spillover to innovation performance

Measurement of innovation performance in this study was made relatively simple by the characteristics of textile industry products. The size of these innovations includes the size of the process and methods of work processes, as well as administrative systems. There is also the size of the result of increased product quality, enhanced orders, as well as the technology used. Measures such as these were stated by Elenkov [14] and Jong [16].

Another finding in this study is the existence of the significant direct effect of vertical spillover on innovation performance. It was found that vertical spillover occurs more formally than horizontal spillover. This is probably caused by the fact that some of the innovation performance is in the form of a "process," which does require a more formal approach in its implementation.

Knowledge management to bridge horizontal spillover and innovation performace

The presence of foreign investment is expected to provide knowledge spillover to domestic companies. Wu [29] states that such knowledge can be directly utilised in enhancing the innovation performance of companies. Whereas Liao [4] reported the need for knowledge management activities to use knowledge for innovation capability.

Empirical studies conducted in the context of the textile industry stated that horizontal spillover should be bridged through proper knowledge management. This is also reinforced by the finding that horizontal spillover is more dominant than vertical spillover.

Conclusions and practical implications

There are several significant findings generated by this study. The first is the knowledge management carried out by domestic textile enterprises to bridge the utilisation of knowledge spillover and innovation achieved by the company. In this case, the more dominant knowledge spillover that occurs is horizontal spillover, which happens less formally between domestic companies and foreign companies. The second is, vertical spillover directly influencing the process of innovation undertaken by domestic companies without having to go through knowledge management.

The practical implication of this study is the importance of knowledge management being prepared by domestic companies. A task force implements knowledge management directed towards knowledge that has spilled over both formally and relatively formally from foreign companies. In addition, the principal task of the domestic company is to acquire, convert and apply knowledge to the firm.

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Received 14.02.2018 Reviewed 24.01.2020