The Relevance of Relationships in the Value Creation Process: Analysis of SCM in the Chemical-Pharmaceutical Sector

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This work, through an empirical research (Jayaram, Kannan and Tan model), aims at analysing, at the same time, the effect of "structural mechanisms" and "relationships building" factors on the value creation process in the Supply Chain. The two factors have been chosen among others, as they have been considered able to improve the internal and external processes of the firm and the Supply Chain, and in consequence, able to influence the value creation process of the Supply Chain Management. The research has been directed to the chemical and pharmaceutical sector of the Southern Lazio (Italy) and a factorial analysis, using the software SPSS (16.0) which has been performed in order to verify the influence of these factors in value creation process of the Supply Chain. The outcomes confirm the positive contribute in the value creation process for companies that take care of the relationships among the stakeholders in the management process of the supply chain (the "relationships building" factor) and, in parallel with the analysis of the same process, the secondary role of the "structural mechanisms" factor has been highlighted.

Keywords: supply chain management, value creation, relationships building, structural mechanisms

Introduction and Methodology

Among the several successful factors identified by the referred literature related to the supply chain, the authors consider essential for this work "…the *structural elements* as for example an integrated informative system, and the *building of relationships* as confidence and diligence…" (Jayaram, Kannan, & Tan, 2004).

Notwithstanding the advantages of the supply chain management (SCM), few companies have stood out in terms of Supply Chain integration; just some of them have been able to cut their providers on their own strategic decisions (Turnbull, Oliver, & Wilkinson, 1992; Lamming, 1993; Dyer, Cho, & Chu, 1998; Handfield, Krause, Scannell, & Monczka, 2000) and, several times, it has been found a lack, for instance, of instruments dedicated to the communication of the product planning features within the whole organization, obstructing all the integration efforts done by the customer during the decision-making process (Govers, 2001; Martins & Aspinwall, 2001).

Another reason that blocks companies in the effective management of the Supply Chain is the little attention

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paid to structural issues as, for instance, the planning of a Supply Chain which can involve both the border connections and the transversal ones, the necessity to select the right members of the Supply Chain and to make sure that there is a connection between the company capabilities and that ones of the partners related to the Supply Chain (Cheng, 1983; Prescott, 1999).

The remark brought out from this research entails the recognition, by companies, of the necessity to build and manage the inter-functional relationships beyond the boundaries and to be careful of the structural elements in order to excel and to create value in the SCM.

The realization of the paper starts from the *desk* analysis and, through the online database of the relevant reviews in the management science, some articles, which embrace the last decade from 2002 to 2011, have been selected. Because more than 500 articles and books on the theme of the Supply Chain have appeared in this period, they have been submitted to a selection of about 90 references concerning the Supply Chain and the value creation and 25 of them based on some models, have been selected and studied. Among the several interpretative models, it has been decided to deepen the study of a model realized by three American authors (Jayaram, Kannan, & Tan) in 2004.

This work has followed a deductive approach on the basis of a well consolidated theory and verifying its application to specific cases (Hyde, 2000).

A *field* analysis on a sample of some companies belonging to the chemical and pharmaceutical sector of Southern Lazio has been performed with a specific reference to Frosinone and Latina province.

This work is based on the *quantitative* method which is structured in four steps:
- Hypotheses formulation;
- Variables construction;
- Analysis of the relationships between the different variables;
- Synthesis of the outcomes.

Jayaram et al. (2004) model verifies the relevant elements that interest the creation of value for the Supply Chain and its relevance in the performances of the company. The model is made of three hypotheses carried out by 33 variables: Four in the hypothesis 1, five in the hypothesis 2, 20 for the value creation processes and four in the hypothesis 3.

The relationships between the different elements have been identified through the analysis of a semi-structured questionnaire made of 30 questions and distributed to 4,500 American companies. The elaborations of the questionnaires, realized through the structural equation model approach, show that all the hypotheses have been verified.

This model (Goldsby & Autry, 2011) has been repeated in this article, through an empirical analysis referred to two specific productive sectors (chemical and pharmaceutical) and within a different geographical context (Italy, and in particular, Southern Lazio). The verification has been realized with the same semi-structured questionnaire proposed by the American authors mentioned above. The referred model analyses two important concepts:

(1) The effective inter-functional and boundaries relationships which multiply the opportunities of a value creation;

(2) The opportunities depending on structural and behavioural mechanism.

In order to support the fundamental concepts of the model, the authors have referred to the following theories: Contingency theory (Guide, Jayaram, & Linton, 2003; Johnson, Klassen, Leenders, & Fearon, 2002); resource-based view (RBV) of the firm (Wernerfelt, 1984; Dierickx & Cool, 1989; Barney, 1991); transaction cost economics (Coase, 1937; Williamson, 1975; Wernerfelt, 1984); social network theory (Cyert & March, 1963; Granovetter, 1985; Jones, Hesterly, & Borgatti, 1997); organizational theory (Chandler, 1962); Organizational behavior (Alderson, 1965); lean systems/reengineering (Schonberger, 1982; Womack, Jones, & Roos, 1990; Hammer & Champy, 1993); boundary spanning view of attachment (D'Aveni, 1978; Granovetter, 1985).

From a scientific point of view, the goal is to add one step to the theories of the value creation within the group of theories related to the SCM. Moreover, the research provides a survey on the application of the SCM methodologies within few explored sectors, like the chemical and the pharmaceutical ones in the Southern Lazio, which could give the input for further analysis in the area of the researches concerning the SCM.

From a managerial point of view, the research provides an operative tool and, in consequence, a practical support to the decisions taken by the company management, and a lot of empirical analysis, as a matter of fact, suggest a positive connection between the efforts done to create value in the Supply Chain and the increase of performances, while few studies have identified the drivers which allow these companies to enjoy these benefits. The companies which enjoy the advantages related to the value creation, have been able to recognize the structural and behavioural key elements.

In the light of these preliminary remarks and in order to achieve the goals above mentioned, it is necessary to define the *Research Questions* on which the hypotheses have been built.

RQ1: Which elements influence the value creation of a Supply Chain?

RQ2: Which is the impact that these elements have on the company performances?

The next step is the definition, based on the referred model, of the research hypotheses on which the empirical analysis will be set. Moreover, the model is based on the following postulate:

The value creation of the Supply Chain is a many-sided construct which can be broken down into three sub-dimensions: supplier value, customer value and internal processes value.

There are three hypotheses which support the research request:

HP1: Structural mechanisms have a positive influence on the value creation.

HP2: The building of relationships has a positive impact on the value creation.

HP3: The value creation of the Supply Chain has a positive impact on company performances.

The Jayaram, Kannan and Tan Model

In order to help the decision makers in the configuration of an effective Supply Chain, some models have been used, Schmidt and Whilhelm (2000) have realized a review of the models and of the algorithms used to plan the Supply Chains systems.

The Jayaram, Kannan and Tan model (see Figure 1) is made of three research hypotheses. Structural mechanisms and the building of relationships constitute the independent variables of the model and the value creation for the Supply Chain depends on them. This last variable declines into three specific modalities: the suppliers value (SV), the customer value (CV), and the internal process value (IPV) and it changes into an independent variable for the verification of the third hypothesis.
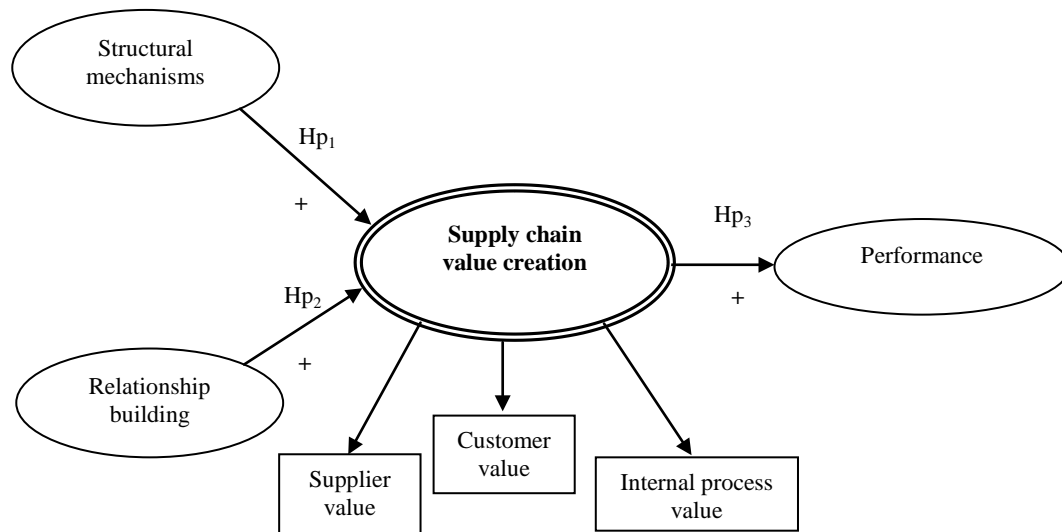
Figure 1. The Jayaram, Kannan and Tan model. Source: Author's elaboration based on Jayaram and Alii pictures, 2004.

These hypotheses are widely supported by literatures. Frohlich Markham and Westbrook (2002) have observed that companies which have a high integration level of both suppliers and customers would have a higher level of performance than that ones which have a low level of both parameters. Facwett and Magnan (2001) have studied the integration models pointing out that the integration established with suppliers or customers belonging to a lower level was the less common one.

In literature, there is not have an agreement on the hypothesis that companies should pursue, internally or externally, the efforts to create value in the Supply Chain.

With regard to the first hypothesis, the authors identify the structural mechanism with four elements: the geographical proximity of suppliers; the ability to manage the stocks within the whole Supply Chain; the interest of suppliers and customers in participating to the Supply Chain, and the use of sophisticated information systems (see Figure 2).

Bartholomew (1999) cited some examples of companies that have implemented common informative systems in order to ease the integration among the members of the Supply Chain, the capability to instantly identify the lack of components or the exceeding stocks and the use of this information to answer in a rapid way, requires, as a matter of fact, a sort of coordination among the Supply Chain partners. Some studies have pointed out that the diligence coming from the suppliers can improve the Supply Chain coordination and reduce the inefficiencies in the whole system (Gilbert & Ballou, 1999; Zhao, Xie, & Zhang, 2002). The availability of the suppliers and customers to take part in the efforts of the Supply Chain is, as a matter of fact, critical, because the participation and the cooperation between the partners of the Supply Chain involve a mutual commitment. In short, this work suggests that the structural features, as the proximity of the Supply Chain partners, a common system of shared information, the commitment of both suppliers and customers, are very important starting points for the value creation of the Supply Chain.

With regard to the relationships building (REL), five constitutive elements can be identified: the improvement of the integration among the Supply Chain activities; the research of new methods to integrate the activities; more frequent connection with the Supply Chain members; the involvement of all members within the

decision-making process referred to the products; marketing services or plans and the extension of the Supply Chain beyond the closest members (see Figure 3). Some authors like Cyert and March (1963), Granovetter (1985), and Heide (1994) have evaluated the importance of the binding relationships within a certain social network as connections which have a revealing influence on the strategic decision-making process. A logical consequence of this is that the efforts made by companies to maintain the confidence and the commitment among the partners of the Supply Chain could reduce the effectiveness of the efforts made for the value creation process. Johnson's research (1999) has pointed out that the length of the relationship with the suppliers has a positive influence on the strategic integration within the distribution companies. Brown, Cobb, and Lusch (1999) found out that all the companies which focused their attention on behavioural aspects, such as the perception of equity among the members and the use of informal arrangements, have built strong relationships and a high level of flexibility within the Supply Chain. The results deriving from the researches of these authors suggest that the quality of the relationship between buyer and seller, measured in terms of trust and satisfaction, is significantly related to the perception that the purchaser has of the possibility he/she has to reach his/her own distribution channels and the market share increases. In addition to the tangible benefits, the relationship quality also improves the buyer's approval and the status within the sector.
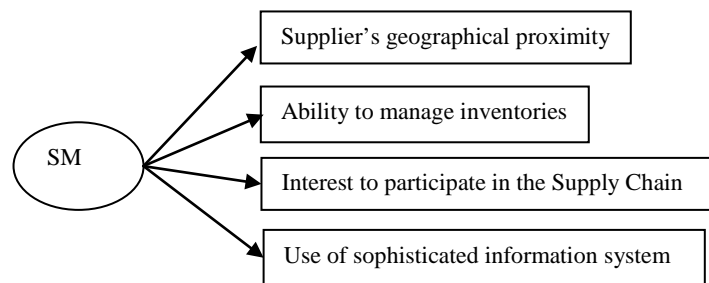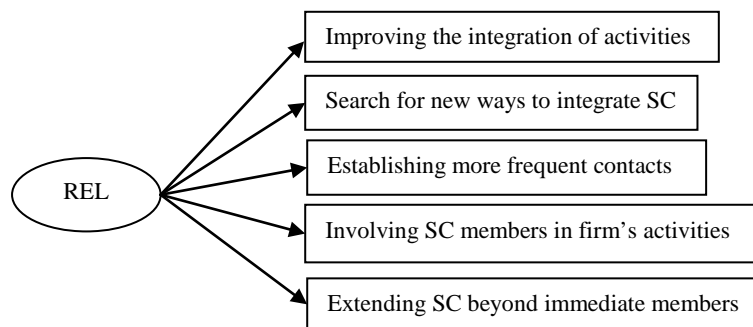

Figure 2. Structural mechanism.

Figure 3. Relationships building.

In the Figure 4 (supplier value), Figure 5 (customer value), and Figure 6 (internal process value), there are all the elements, as mentioned above, that constitute the creation of value for the Supply Chain.

The third and last hypothesis relates the value creation of the Supply Chain with the company performances. According to the authors the performances can be measured through four elements: the market share; the ROA (Return on Assets); the competitive position; and the level of service and assistance to the customer (see Figure 7).
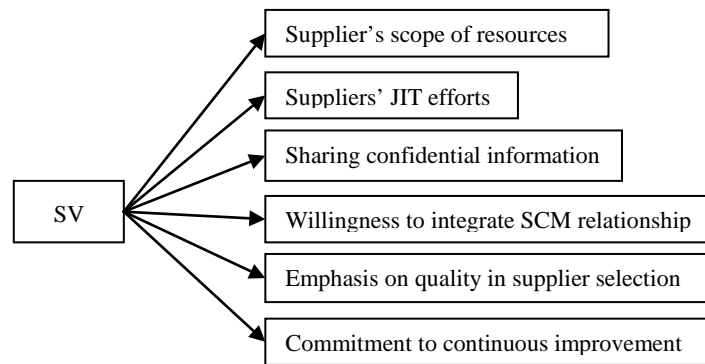
SV
- Supplier's scope of resources
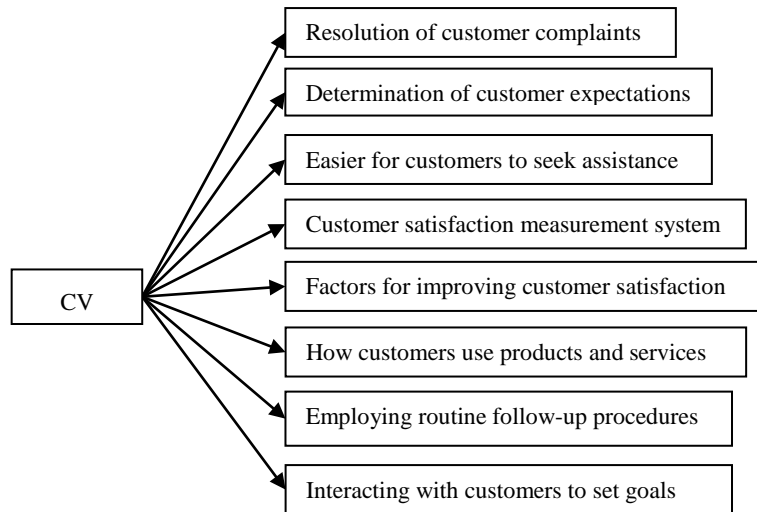- Suppliers' JIT efforts
- Sharing confidential information
- Willingness to integrate SCM relationship
- Emphasis on quality in supplier selection
- Commitment to continuous improvement

Figure 4. Supplier value.

CV
- Resolution of customer complaints
- Determination of customer expectations
- Easier for customers to seek assistance
- Customer satisfaction measurement system
- Factors for improving customer satisfaction
- How customers use products and services
- Employing routine follow-up procedures
- Interacting with customers to set goals

Figure 5. Customer value.

IPV
- Reducing lot size
- Reducing setup time
- Reducing supplier base
- Buying from JIT suppliers
- Increasing delivery frequencies
- Reducing inventory to free up investment

Figure 6. Internal process value.

PERF
- Market share
- ROA (Return on Assets)
- Overall competitive position
- Overall customer service levels
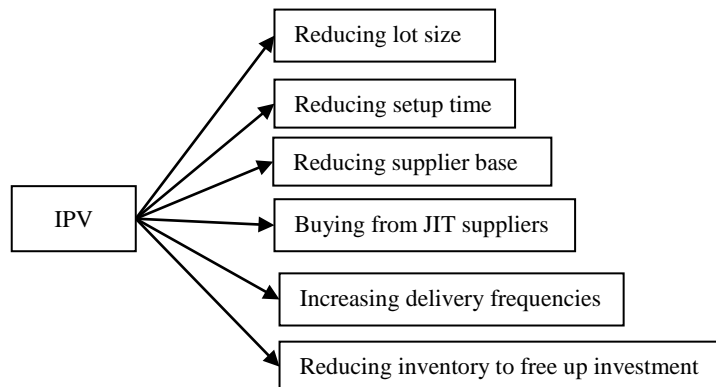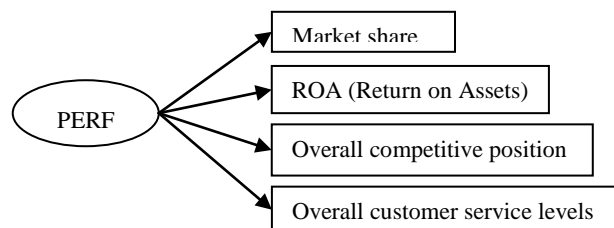
Figure 7. Company performance.

Several studies have pointed out a positive relationship between the coordinated efforts made in order to generate value within the Supply Chain and the company performances (Frohlich & Westbrook, 2001; Morash & Clinton, 1998; Teresko, 1992). On the contrary, there are few researches which have studied the customers, suppliers and internal process impact on the value creation and on the performances, like El Sawy (2001), Fawcett and Magnan (2001), Frohlich and Westbrook (2001) have proposed a general construct named value creation of the Supply Chain, even if they have not considered toward which members of the Supply Chain the value creation is addressed.

The American authors, on the basis of the pertinent literature review, have identified nine elements (four structural and five relational) related to the hypotheses 1 and 2, 20 elements (eight for the customers, six for the suppliers, and six for the internal processes) related to the value creation process and four measures to evaluate the financial and market performances of the company (Tan, Handfield, & Krause, 1998; Tan, Kannan, Handfield, & Ghosh, 1999). Different kind of questions have been realized for each element, close question have been developed with a five-point Likert Scale and semi-closed and open questions have been created through the realization of a 30 questions questionnaire.

The questionnaire has been previously tested by 30 purchase and supply mangers and their answers have been used in the following analysis. A reviewed version of the questionnaire has been e-mailed to 4,500 companies, but among that ones which have been returned, just 527 can be used for the purposes of the research. The hypotheses have been tested through structural equation models and the answers have been processed using the LISREL-SIMPLIS software, version 8.30 (Joreskog & Sorbom, 1993; Byrne, 1998).

As shown in Figure 8, the model has produced the following results:

• The hypothesis 1 shows a positive connection between the structural mechanisms and the value creation of the Supply Chain. The coefficient 0.19 ($t = 3.47$, $p < 0.01$) indicates that the hypothesis is verified.

• The hypothesis 2 presents a positive connection between the building of relationships and the value creation of the Supply Chain. The coefficient 0.57 ($t = 7.09$, $p < 0.01$) indicates that the hypothesis is verified.

• The hypothesis 3 indicates that the value creation of the Supply Chain has a positive connection with the company performances. The coefficient 0.41 ($t = 5.94$, $p < 0.01$) indicates that the hypothesis is verified.

The outcomes support the hypotheses on which the model is based, that is that both the structural mechanisms and the building of relationships have a revealing and positive impact for the creation of value that, in turn, has a positive impact on the performances. This is an important result because it provides the proof of the necessity to study the model and to reiterate it through other empirical analysis.

While in literature, the development of actions based on a fundamental strategy represents a common theme, in practice it is frequent prove that companies are led by short-term goals without considering wider strategic tasks. So the outcomes suggest this lack of connection between theory and practice and indicate the reason and the way through which the creation of value can help to explain the weak success of the efforts made by the SCM.

Although the 20 elements do not represent an exhaustive list of the three factors—customer value, supplier value, and internal process value, this model shows that, in turn, these last factors reflect the general construct of the value creation of the Supply Chain.
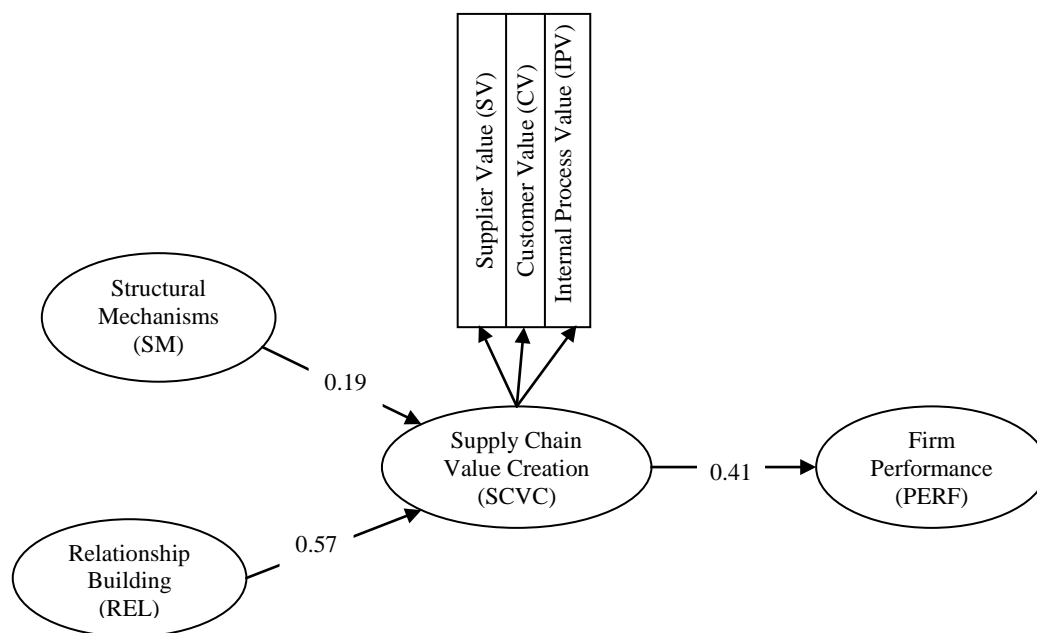
Figure 8. Structural equation model. Source: Jayaram et al., 2004.

Not always a shared and a generally accepted definition of value and value creation comes out from literature; on the contrary it can be deduced that the value creation concept for a specific actor is definitely surpassed by the perception of a process where multiple actors, such as suppliers, customers and other stakeholders (media, employees, the state, etc.) interact by following a reticular approach (Gummesson, 2008).

Therefore, the concept that will be analysed in this work is the value creation both for the internal processes and for customers and suppliers, two of the most relevant stakeholder which are connected with the firm, by showing several kind of interest (Freeman, 1984; Clarkson, 1988; Hinna, 2005).

The Chemical and Pharmaceutical Sectors[1]

Among the several productive sectors of Lazio, the Pharmaceutical one of the Southern Lazio (geographical area of the central Italy delimited by the provinces of Rome, Frosinone, and Latina) deserves a particular attention, considering that big firms, among which also find big multinational companies, play an important role in this field.

The productive local system, with more than 14,500 operators, has a turnover of about 3,000 million euros and involves about 25 big factories (almost all main world groups) and about 250 middle-little companies[2]. The chemical-pharmaceutical sector rely on some university bases (the three universities of Rome and the off-centre base of Latina) on public and private formation centres and on scientific and technological parks situated in Rome and in the Southern Lazio.

The Southern Lazio social-economic system, based on Frosinone and Latina provinces, presents an excellent railway and traffic accessibility, further strengthen with advanced logistic centres which allows to ease

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[1] Part of the paragraph is extrapolated from Unioncamere Lazio, Impresa, territorio e direttrici di sviluppo nel sistema Lazio—Una mappa ragionata del capitale produttivo regionale, 2010.
[2] Cfr. Regione Lazio, Guida agli investimenti nel Lazio, Roma, 2008.

the relationship with the functional capital city (Rome) and to be connected with an original and pertinent way to the globalization trends.

The Chemical Sector

The chemical sector completes the offer of products and scientific research giving an overall identification of the chemical-pharmaceutical sector. The manufacturing plant of the chemical field in Lazio is made of 885 companies, distributed in this way:

• 365 committed to the production of chemical products (basic products such as oil, solvents, lubricants, industrial cleansers, and detergents);

• 520 committed to the manufacturing of rubber and plastic products.

As for the pharmaceutical field, also this sector is particularly directed toward an international dimension, with an export data which surpasses three billion euros and that is characterized by a wide plurality of product genres:

• 1.3 billion euros is the value of refined oil products export;

• 1.1 billion euros is the value of basic chemical products export;

• 515 million euros come from the abroad selling of soaps, detergents and products for cleaning and polishing;

• The export of other chemical products adds up to 282 million euros;

• 248 million euros derive from the export of rubber products;

• 114 million euros from the export of plastic material articles.

A smaller component is represented by pesticides, chemical products for agriculture, paints and enamels.

From a geographical point of view, the chemical sector is mostly concentrated on three productive centres:

• A 12.1% of the companies are situated in cities belonging to the province of Frosinone, where the productive centre achieves in this field as the highest level in terms of managerial density;

• A 9.9% in the productive centre of Latina;

• A 9.8% in the area delimited by the cities of Pomezia and Aprilia.

Besides, several firms are present in the area of Castelli and Cassino, while just one third of the companies have their centre in Rome, the capital city.

In the chemical industry, the final products of a producer represent the input material for the manufacturing process of the following producer. Usually the first customer of a producer could also be another chemical firm which will refine and work again the input products, or else, the person who will use the input chemical product as raw material for its final production, could be the producer of other kind of products such as textile fibres, food, medicine etc.. Since in the chemical sector, the production stage lasts more than the order execution phase, chemical products are, in most cases, make-to-stock articles and, after the productive cycle, the final products are "pushed" into the distribution network and stored within the distribution centres.

Companies which are part of this sector belong to the code ISTAT C.20 and they are the leader in the production of basic chemical products, they appear skilled in six business units, all of which is focused on a specific product portfolio (for instance, oil-chemical products, chemical products for treatments, nutrition health etc.). The main customers reside in the sectors of cleanser, detergent, health and nutrition, cosmetic industry, and a series of other industrial market like paint, ink, textile, plastic, synthetic lubricants, agriculture, mines, and oil extraction.

The Pharmaceutical Sector

Although it numbers only 124 active companies, the pharmaceutical production chain represents undoubtedly the finest section in the manufacturing sector of Lazio.

The attention of this work is focused only on the pharmaceutical industry and the companies that operate in this field are mainly concentrated, in addition to Rome, around three axes: Pomezia, within the territorial area delimited by the cities of Aprilia, Latina, and Sermoneta; in the area delimited by Anagni, Frosinone, and Ferentino.

It has been estimated that, in these companies, about 15,000 people have found an occupation. The sector is basically made of three levels: chemical plants, pharmaceutical plants, and marketing companies. Chemical plants deliver the active principle to the pharmaceutical company, which in turn, produces a wide range of products: solid products (capsules, pills, covered and not), liquid and cream, medical and sterile equipment, over-the-counter and custom drugs. All the productive processes are made of two main steps: the formulation and the confection. The output of the formulation phase is made of unpacked materials (pills, liquids, etc.), which are packaged, during the confection phase, in different containers (for example, blister packs, a kind of packaging specific for each country). Marketing companies represent, in terms of volume, the biggest group of customers. Other typologies of customers, such as wholesalers, governmental and non-governmental agencies, complete the demand factor. Depending on the customer typology, the estimated data are converted into purchase orders which have a certain horizon (more or less within nine and 12 weeks).

Distribution centres and warehouses are almost always placed in the proximity of the factories. In most cases, considering that the distribution process is believed as a fundamental aspect because the value of the final products is rather high than the physical volume and the transportation costs, products are directly sent to the customers' warehouses and distribution centres.

Empirical Analysis

In 2012, an amount of 169 companies have been identified by the Companies Registration Office database which is the office archive of the Italian Chambers of Commerce, the questionnaire has been e-mailed to 155 of these firms which had been successfully contacted by phone. Finally, with a 43.79% rate of answers (with respect to the 12% of the referred model), 74 companies have accepted to participate in sending the fulfilled questionnaire by e-mail (see Table 1 and Table 2).

In order to identify all the companies belonging to the chemical and pharmaceutical sector of Frosinone and Latina, the service *ri.map* of the Companies Registration Office has been used. The selection of the companies has been realized following two parameters: *the territorial parameter*, inserting Frosinone and Latina provinces; and the economic activities ISTAT C 20 and C 21 connected to the *economic activities*.

Table 1

Population of Companies Classified by Provinces and According to the ISTAT Code.

	Frosinone	Latina	Total per ISTAT code
C 20	66	80	146
C 21	7	16	23
Total amount per province	73	96	169

Note. Source: Author's elaboration based on Companies Registration Office data.

Due to the restrained numerousness of companies, it has been decided to propose the questionnaire to the whole population.

Table 2

Analysis of Interviewed People

Total population	169
Total non-traceable or not collaborative companies	14
Total contacted companies	155
Total fulfilled received questionnaires, of which:	74
• From companies belonging to the chemical sector	34
• From companies belonging to the pharmaceutical sector	40

Note. Source: Author's elaboration.

The data obtained from with the questionnaire have been processed with the *item* indicated by the authors, using the statistic inference models, that is a *t*-test to compare the tested variable with the expected ones, the variance analysis, the regression and the factor analysis.

As a matter of fact, the "subjective" nature of the thematic in question have suggested, *in primis* to authors of the model and after to the writer, the study of the eventual *latent dimensions* (not observable) able to synthetize the single dimensions that, in turn, can to create value (structural mechanisms and building of relationships), in substance, the issue is to understand how the above mentioned elements affect the value creation level in the Supply Chain. In order to verify the supposed relationships, this research uses the analysis of the main components (PCA) and the linear regression to test and measure the hypotheses set by using the investigation data (Rust, Lakadamyali, Zhang, & Zhuang, 2004). All the analysis have been realized by using the software SPSS (version 16.0).

This work aims at verifying if the hypotheses of Jayaram et al. (2004)'s model, applied in a different contest, can bring the same outcome: structural mechanisms and the building of relationships have a positive effect on the value creation of the Supply Chain which also in the chemical and pharmaceutical sectors.

Afterwards, the hypothesis 1 and 2 have been tested with the multiple linear regression. The creation of value in the Supply Chain has represented the dependent variable; structural mechanisms and the building of relationship constitute the independent ones.

For first, the outcomes show that the regression model is significant. Although the low level of the component R^2, ANOVA results indicate a significance of a 0.057 as shown in the summarizing scheme (see Table 3):

Table 3

HP1 e 2

R^2 adj	*F*-value	Sig.
0.051	2.974	0.057

After, also the hypothesis 3 has been tested. Here the dependent variable is represented by the performance while the independent one is the value creation of the Supply Chain. Also this one, is a revealing model (see Table 4).

Table 4

HP3

R^2 adj	F-value	Sig.
0.064	6.014	0.017

On the contrary, despite the revealing nature of the model, the outcomes of the hypothesis show the absence of support for the hypothesis 1 because the relationship is not significant, on the other hand, there is a strong connection between the relationship building process with the value creation one, so that the hypothesis 2 is verified. An additional confirmation of the model is represented by the hypothesis 3 that is verified as the "value creation of the Supply Chain" variable appears connected with the "company performance" dependent variable (see Table 5).

Table 5

Hypothesis Outcome

Hypothesis		Test	Is the hypotesis supported?
HP 1:	Structural mechanisms have a positive influence on the creation of value.	Positive relationship (0.149[*]) but not significant (0.897)	No
SM → SCVC			
HP 2:	The building of relationship has a positive influence on the creation of value.	Positive relationship (2.964[*]) and very significant (0.017)	Yes
REL → SCVC			
HP 3:	The value creation of the Supply Chain has a positive influence on firms' performances.	Positive relationship (2.955[*]) and very significant (0.017)	Yes
SCVC → PERF			

Note. [*] The level of significance is $p < 0.05$.

Conclusions

This study has had the purpose of analysing, at the same time, the effect of two factors: the structural mechanisms and the building of relationships on the creation of value within the Supply Chain, factors which operate for the improvement of the internal and external processes. In particular, this work, following the model of Jayaram et al. (2004) has investigated the relationship between different factors that can influence the value creation for suppliers, customers and internal processes, considering if they can also have an impact on the performances.

The research questions—Which elements affect the creation of value in the Supply Chain?—Which is the impact that these elements have on company performance?—and three hypothesis—HP1: Structural mechanisms have a positive influence on the value creation process. HP2: the building of relationships has a positive influence on the value creation process. HP3: the creation of value in the Supply Chain has a positive influence on the value creation process.

Afterwards, the effects that the model has on the Supply Chain within the chemical and pharmaceutical sectors of the Southern Lazio have been analysed with the aim of verifying if the hypothesis, applied to a different contest, could bring the same outcomes of the above mentioned model.

Despite the significant nature of the model, the outcomes show the absence of support for the first hypothesis as the coefficient 0.149 ($t = 0.897$, $p < 0.05$) indicates that the hypothesis 1 is not verified; on the contrary, there is a strong connection between the relationships building process and the value creation in the Supply Chain as the coefficient 2.964 ($t = 0.017$, $p < 0.05$) shows that the hypothesis 2 is verified; the same positive relationship between the value creation of the Supply Chain and the company performances, with a coefficient equal to 2.955 ($t = 0.017$, $p < 0.05$) testifies that also the hypothesis 3 is verified.

Therefore, the factor analysis have confirmed that all the companies that pay attention to relationships can gain a greater benefit from the efforts made for the creation of value, while the same cannot be said for the structural mechanisms because the analysis has not shown a revealing connection with the value creation process.

Definitively, the research have confirmed just in part the model of Jayaram et al. (2004) by demonstrating that relationships, collaboration and confidence within the Supply Chain can give an important contribution to the creation of value for the customers (Dyer, 1996; Hendricks & Singhal, 2003; Hult, Ketchen, & Slater, 2004; Lee, 2004; Rinehart, Novack, & Langley, 2008), for the suppliers and for the internal processes and that, at the same time, these efforts have a positive implication on company performances.

Moreover, the literature that supports the hypotheses, shows that the success of a Supply Chain only can be achieved through an efficient coordination of the participant companies (Van Hoek, Harrison, & Christopher, 2001) by reducing the product life cycle and its costs (Levary, 2000). The research of a new method to integrate the partners within the Supply Chain only can be realized through the improvement of the relationships with them. Similarly, the following step to cut the Supply Chain members in the activities of the company, entails the surpass of all the suppliers and customers belonging to the first level. The creation of value through customers and supplier implies not only the comprehension of their necessities, but also the effort to meet their needs.

Limits of the Research and Future Hypothesis of Development

The research process has been developed with some limits that will be underlined in this occasion in order to sharpen further researches. However, we can put a great confidence in the outcomes because the study is supported by previous researches and the hypotheses are based on the specific literature.

The investigation has been realized exclusively within two sectors and in a specific place, so, the research could be expanded in order to understand its validity also within a different territory. The contest sensitivity, in fact, is a further restriction that could interest also our study. According to Johnson et al. (2002), it would be necessary to study at least another case which has the expected outcomes based on different theories or to verify the opposite hypotheses.

The same model can present some limits, the stream of information could be considered as a different source which should be separated from the other variables. Moreover, the ambient factors, such as the complexity, the ambient dynamism, the industrial concentration, could be studied within another research hypothesis because they can affect the value creation mechanisms.

Another direction for a future research could be the examination of the variable effects such as the firm size, the kind of product, and the company position within the Supply Chain (including the suppliers of the suppliers and the customers of the customers) extended to the creation of value.

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