



ALIGNMENT OF GLOBAL SUPPLY NETWORKS BASED ON STRATEGIC GROUPS OF SUPPLY CHAINS

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ABSTRACT. Background: From a supply chain perspective, often big differences exist between global raw material suppliers' approaches to supply their respective local markets. The progressing complexity of large centrally managed global supply networks and their often-unknown upstream ramifications increase the likelihood of undetected bottlenecks and inefficiencies. It is therefore necessary to develop an approach to strategically master the upstream complexity of such networks from a holistic supply chain perspective in order to align regional competitive priorities and supply chain structures. The objective of this research is hence to develop an approach for the supply-chain-based alignment of complex global supply networks.

Method: We review existing literature from the fields of supply chain and network management, strategic sourcing, and strategic management. Based on the literature review and theoretical and practical considerations we deduce a conceptual approach to consider upstream supply chain structures in supply network alignment initiatives.

Results: On the basis of these considerations and current empirical literature we transfer strategic group theory to the supply network management context. The proposed approach introduces strategic groups of supply chains as a segmentation criterion for complex global supply networks which enables the network-wide alignment of competitive priorities.

Conclusion: Supply-chain-based segmentation of global supply network structures can effectively reduce the complexity, firms face when aiming to strategically align their supply chains on a holistic level. The results of this research are applicable for certain types of global supply networks and can be used for network alignment and strategy development. The approach can furthermore generate insights useable for negotiation support with suppliers.

Key words: supply chain management, global supply networks, supply network segmentation, supply network alignment, strategic groups, strategic sourcing.

INTRODUCTION

Nowadays, competition happens between networks of interconnected firms, which need to be integrated and strategically aligned, in order to generate competitive advantage for the supply chain as a whole. Therefore, in order to build up and maintain competitive advantage, firms need to configure and manage their supply chains from a holistic perspective [Parker, Anderson 2002]. By taking a systemic perspective, supply chain management (SCM) seeks to align the goals of all involved parties within and outside a firm in order to maximize

the performance and efficiency of the supply chain as a whole [Christopher 2011].

The advantage achievable through optimally configuring the supply chain is particularly big on the upstream side of the firm, since nowadays raw material costs mostly make up the biggest share of firms' total costs [Monczka et al. 2011]. From a strategic perspective, the potentials for cost reductions in longer-term supply relationships can be accounted to the individual resources and capabilities of the respective suppliers [Monczka 2011]. Therefore, the resources and capabilities present in a firm's supply base

and the effective management of the included suppliers have become of paramount strategic importance to the firm [Monczka et al. 2011]. The key to unlock these strategic potentials in a firm's upstream supply chain is to align the competitive priorities throughout the supply base, in order to match suppliers' resources and capabilities to the firm's requirements depending on market conditions [Vereecke, Muylle 2006].

The complexity this implies in reality can be enormous though, since large multinational companies (MNCs) in the manufacturing industry often tend to manage networks of hundreds of sub-suppliers spread over dozens of countries and multiple continents. Leading MNCs often implement so-called network sourcing strategies, which means that they centrally purchase raw materials for their whole network of smaller sub-suppliers [Mohr, Eßig 2007]. The alignment of such complex global networks requires advanced strategies, that enable the firm to configure the individual supply chains in its network from a holistic perspective [Macchion et al. 2015]. For the development of such strategies for the alignment of complex global supply networks, it is crucial to segment the supply base in a way that allows the firm to effectively configure the structure of its supply network. In this context, the structures of individual raw material suppliers' supply chains, the competitive priorities they imply, regional market conditions, and the firm's requirements play central roles.

The main aim of this article is to develop an approach that can be used to strategically align complex global supply networks by prioritizing different types of supply chains for different sourcing situations and regional markets. By reviewing existing literature and evaluating existing theories in the fields of SCM and strategic management a conceptual approach to consider upstream supply chain structures in supply network alignment initiatives is deduced. There is currently no approach that explicitly and systematically considers the supply chain structures of suppliers for the development of sourcing strategies or for supply network alignment. Finally, the goal is to not only to provide practitioners with a useful tool to effectively

implement holistic SCM, but also to inspire new research regarding the alignment of complex global supply networks.

METHODS

This conceptual article primarily relies on the use of prior literature from the fields of supply chain and network management, strategic sourcing, and strategic management. It combines concepts from the sourcing strategy development context with the paradigms of SCM, and takes prevalent theories from the strategic management literature as a theoretical basis. Furthermore, empirical and conceptual literature from the field of supply network management is used to underpin the developed conceptual approach. The conceptual approach presented in this article is part of the results of a larger industry-specific research project conducted in the automotive industry. In the course of this project, the structures of the global supply networks of several leading plastics raw material producers and a leading global manufacturing company were analyzed. Company documents, presentations, and websites, as well as expert opinions were used as sources for information in this project. This article however mainly remains conceptual in nature, and relies on theoretical and practical considerations in the mentioned fields. One of its key aims is to pave the path for future qualitative and quantitative empirical research endeavors in the context of complex global supply networks and the influence of suppliers' supply chain structures on the long-term competitiveness of whole supply networks.

SUPPLY BASE SEGMENTATION

Since the value a firm can gain from its supply base rests on the principle of prioritizing the right suppliers, the firm must allocate its resources to those relationships from which the highest returns are expected [Choi, Krause 2006]. This can be realized through segmenting the supply base with the help of different purchasing portfolio approaches, whose segmentation criteria depend on the conditions in the respective sourcing situation [Wagner, Johnson 2004].

These purchasing portfolio approaches originated from the seminal approach of Kraljic [1983], which contrasts market complexity and strategic importance to the firm for individual supply markets [Kraljic 1983]. This approach has been modified and extended by several scholars to also consider factors like supplier relationships, specific investments, or product development, while the focus has mainly been shifting towards relationships and power distributions [Luzzini et al. 2012]. Furthermore, some approaches consider individual suppliers and their resources and capabilities regarding potentials for cost reduction and revenue creation [Large 2009]. In their taxonomy of supplier segmentation bases developed through a literature review, Day et al. [2010] differentiate between criteria relying on power and dependence between buyer and suppliers and criteria relying on relational factors [Day et al. 2010]. Relational segmentation criteria are related to history, behaviors, and specific investments, and criteria related to power and dependence refer to industry and supply market conditions, buyer and supplier characteristics, as well as product characteristics [Day et al. 2010]. These approaches however only consider the dyadic perspective between a firm and its direct suppliers, and neglect the potential upstream ramifications of their suppliers' own supply chains. From a supply chain perspective, these individual upstream supply chains of suppliers need to be considered as branches of the supply network of the firm, which need to be aligned with the rest of the network.

In the field of sourcing strategy development for individual material categories, the segmentation of suppliers regarding their resources and capabilities, i.e. specific strengths, and their relevance to the firm plays a central role [Monczka et al. 2011]. Supplier segments should ideally be created with the criteria that are most relevant regarding their influence on the value chain, strategic orientation, and core competences of suppliers [Heß 2008]. Relevant factors include suppliers' cost structures, financial status, customer satisfaction levels, support capabilities, relative strengths and weaknesses, core capabilities, and strategies [Monczka et al. 2011]. Besides the use of these general criteria, the main aim

of supplier segmentation in this context is to identify meaningful patterns along which suppliers differ among each other, so that differentiated strategies can be developed [Heß 2008]. The premise that within an industry patterns exist among which the firms in it differ and according to which these firms can be categorized, is also known as the concept of strategic groups [Porter 1980]. The assumption underlying this concept is that differences in profit rates between groups of firms result from these firms belonging to certain groups with a homogeneous strategic conduct [Porter 1980]. In the context of supply base segmentation, Heß [2008] suggests segmenting suppliers according to their strategies and the similarities between them regarding certain dimensions [Heß 2008]. Some of these strategic differences refer to the supply and value chain networks of suppliers, which are of particular relevance in complex global supply networks. After all, these structures and their fit to the supply chain strategy of the firm can bear potentials for cost and risk reductions for the firm and the supply chain as a whole [Pfohl 2016]. Essentially, the use of supply chain structures as a criterion to segment suppliers in the supply market (and base) is present in the strategic sourcing literature. Yet, the suggestions regarding the application of the concept remain rather generic, and potential differences regarding suppliers' individual regional supply chain structures are neglected. It is hence necessary to extend the concept of supply base segmentation according to strategic groups and supply chain structures to a wider perspective, in order to allow for the strategic alignment of complex global supply networks.

SUPPLY NETWORK MANAGEMENT

In the field of global manufacturing networks, various strategy frameworks have been developed and extended to the context of managing larger and more complex supply networks [Thomas 2013]. These frameworks represent the basis for the development of appropriate supply network strategies, to manage the involved complexity and relationships to gain competitive advantage [Macchion et al. 2015]. Designing and configuring such networks involves many

trade-offs, and is particularly challenging in complex global industries, where a multitude of situational and success factors have to be considered when developing the respective strategies [Pfohl 2016]. Empirical research has shown that supply network strategy configurations vary depending on the competitive priorities of firms, while mostly several strategic groups of firms exist that follow similar supply network strategies [Frohlich, Dixon 2001]. Most publications about supply network strategies emphasize competitive priorities related to cost and flexibility as the main dimensions besides quality and reliable delivery [Macchion et al. 2015]. In the context of strategic sourcing, the trade-off between cost, or leanness, and agility can be considered as essential, especially when taking a supply chain perspective [Christopher et al. 2006].

In complex global supply networks, market conditions and the distributions of manufacturing assets of individual firms vary among different regional markets. Global raw material suppliers for once, usually have different regional foci depending on where their home region and key markets are located. This results in different supply chain patterns throughout the individual regional markets. These regional supply chain structures can be linked to different competitive priorities of the supplying firms, and at the end reflect their respective strengths and weaknesses within the individual regions [Macchion et al. 2015]. In the plastics raw material industry, for example, large vertically integrated global suppliers usually manufacture some precursor products only in a few dedicated plants in their key regions [Kadipasaoglu et al. 2008]. Sometimes the production of these products is also only concentrated in their home region due to achievable economies of scale. These precursor products are then supplied to other plants in closer proximity to customers for additional production steps to refine or mix the materials according to customer requirements [Kadipasaoglu et al. 2008]. Other suppliers only focus on the refining of the raw materials, and purchase their feedstock on the market from local or global suppliers. This leads to single global suppliers serving their individual markets through different types of upstream supply chains, which imply different internal

lead times, supply and quality risks, as well as logistics and other costs. This aspect gets neglected, when segmenting the supply base only regarding different types of suppliers, and not based on the upstream supply chains sourcing decisions imply. In complex global supply networks, the consideration of these implied upstream supply chain structures can hence open up opportunities to strategically align the whole network in its individual regions. It is therefore necessary to develop an approach that can enable firms accomplish this in a systematic way.

STRATEGIC GROUPS OF SUPPLY CHAINS

On the one hand, the relevance of regional market conditions for the relative competitive advantages of different groups of suppliers in the supply base can be explained by the market-based view of the firm [Heß 2008, Porter 1980]. On the other hand, the resource-based view of the firm explains the relevance of the resources and capabilities of different groups of suppliers for the generation of competitive advantage through the supply base [Heß 2008, Pfohl 2016]. The relational view explains competitive advantage that is generated through the relationships of interconnected firms with complementary resources and capabilities [Dyer and Singh, 1998]. It can therefore be used to explain the relevance of different types of supply chains of firms' suppliers for the generation of competitive advantage through the supply base [Pfohl, Müller 2015]. Furthermore, according to contingency theory, the generation of a fit between the firm and its suppliers' resources and capabilities, as well as regional supply market conditions throughout the supply network is essential to achieve superior performance [Pfohl, Zöllner 1997, Thomas 2013].

As the resources and capabilities of different groups of suppliers also depend on their respective upstream supply chains, the latter also influence the competitive advantage the firm can generate through the supply relationship. Since they determine the upstream supply chain structures throughout the whole network, firms should

hence consider the sourcing and manufacturing strategies of their key suppliers when configuring the supply base. This is of particular relevance in complex global supply networks, where the determination of the respective raw material suppliers influences through what types of supply chains the regional component manufacturer networks of the firm are supplied.

The potential advantages of segmenting the supply base regarding suppliers' supply chain structures can be explained through extending strategic group theory to the supply chain context as suggested by Chang et al. [2012] [Chang et al. 2012, Porter 1980]. This can be accomplished by considering that different strategic groups within a market are separated through so-called mobility barriers, which cannot be crossed without substantial costs, elapsed time, or uncertainty [McGee, Thomas 1986]. Of the potential criteria to distinguish strategic groups mentioned by Porter [1980], level of vertical integration and geographical network structure are of particular relevance in the supply chain and strategic sourcing context [Chang et al. 2012, Heß 2008, Porter 1980]. For suppliers of plastic raw materials for example, operating a vertically integrated

supply chain bears significant advantages due to decreased supply risks and costs, as well as increased control over the supply chain and lower transaction costs [Jacobides, Billinger 2006, Kadipasaoglu 2008]. Setting up production capacities for precursor products requires substantial investments and technological know-how though, which can be considered as mobility barriers in this context. Regarding the geographical structure of the manufacturing and supply networks of global plastics raw material suppliers for example, the setting up of local production capacities for one or more stages of production is connected to substantial investments and risks. Especially setting up local capacities for the production of precursor products in additional regional markets, implies many trade-offs regarding achievable economies of scale and customer proximity, i.e. length of the supply chain [Frohlich, Dixon 2001, Macchion et al. 2015]. This establishment of local upstream production capacities determines the structure, and leanness as well as agility, of the supply chains serving the respective regional markets, and can thus be considered as further mobility barriers in the context of complex global supply networks [Christopher et al. 2006].

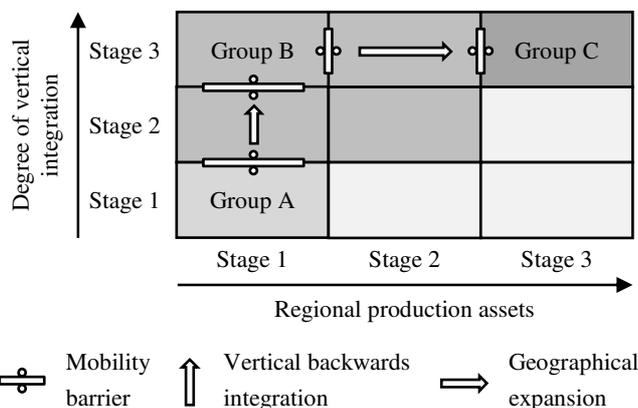


Fig. 1. Mobility barriers regarding vertical backwards integration and geographical expansion
 Rys. 1. Bariery mobilności w stosunku do pionowej integracji i ekspansji geograficznej

At the end, the different regional supply chain structures of global raw material suppliers are determined by their respective regional competitive priorities [Frohlich, Dixon 2001]. It hence makes sense to group supply chains based on the respective regional distributions of resources and capabilities, since they determine the suppliers' relative advantage in the respective regional markets

depending on local market conditions [McKone-Sweet, Lee 2009]. From the perspective of a buying firm aiming to configure and align its global supply network, it can thus be useful to group the different supply chains in its individual regional markets depending on the mobility barriers they imply. After all, the supply chain strategy a supplier employs to supply a regional market,

influences its respective cost structure, as well as other factors such as flexibility, as compared to its competitors' supply chains [Christopher et al. 2006, Macchion et al. 2015]. This differentiated approach enables firms to achieve superior performance, since excellent firms employ differentiated supply chain strategies, balance agility and leanness, and effectively integrate their channel partners [Pfohl 2016]. Figure 1 shows mobility barriers between exemplary strategic groups of supply chains in global manufacturing and supply networks regarding vertical integration and geographical expansion of different stages of production.

APPROACH FOR SUPPLY NETWORK ALIGNMENT

First step: Identification of strategic groups of supply chains

In order to align a complex global supply network based on strategic groups of supply chains, first, the supply base and network for key strategic raw materials need to be analyzed regarding the structures of suppliers' supply chains. Before the analysis can start however, the firm needs to be aware of the market conditions, its competitive priorities, and its internal requirements regarding the materials

in the respective regional supply markets. Leading firms who are operating such networks, should usually be aware of these factors, at least for their key strategic raw materials. The analysis of the upstream supply chain structures however, requires deeper knowledge of the respective production processes, and the distribution of the production assets of the major global suppliers present in the firm's supply base. The classification of different strategic groups of supply chains depends on the distinct structures of each supply market, and is only feasible if supply chains serving individual regional markets actually differ from each other. For many plastics raw materials for example, the previously elaborated mobility barriers regarding manufacturing and supply network structure can be used as a basis for categorizing strategic groups of supply chains. Furthermore, since they determine the structure of the respective supply chains, the upstream sourcing strategies employed by regional plants of global suppliers can be used for orientation. Feasible and commonly applicable dimensions of these sourcing strategies refer to local or global sourcing, single or multiple sourcing, own production or external procurement, as well as on-site or external production [Arnold, Eßig 2000]. Table 1 shows these common dimensions.

Table 1. Common dimensions for different sourcing strategies
Tabela 1. Wymiary różnych strategii zaopatrzenia

Procurement area	Number of suppliers	Procurement object	Place of value creation
Local	Single	Own production	On-site production
Global	Multiple	External procurement	External production

Source: Arnold, Eßig 2000

Based on the mobility barriers shown in Figure 1 and the dimensions of sourcing strategies shown in Table 1, an exemplary classification of groups (or types) of supply chains can be undertaken. Supply chains of Group A, where only the first stage of production is operated by the firm, would imply a local or global procurement area, multiple suppliers, external procurement, and external production. Supply chains of Group B, where all stages of production are operated by the firm, but are located in other regions,

would imply global and single sourcing, own production, and external production. Group C on the other hand, where all stages of production are owned and located within the region of interest, would imply local and single sourcing, own production, and potentially on-site production in an integrated plant. This exemplary classification is shown in Table 2.

Table 2. Exemplary classification of supply chain groups depending on employed sourcing strategies
Tabela 2. Przykładowa klasyfikacja grup łańcucha dostaw w zależności od zastosowanych strategii zaopatrzenia

	Procurement area	Number of suppliers	Procurement object	Place of value creation
Group A	Local/global	Multiple	External procurement	External production
Group B	Global	Single	Own production	External production
Group C	Local	Single	Own production	On-site production

Second step: Classification of supply chain groups according to competitive priorities and degree of flexibility

In the next step, the identified strategic groups of supply chains should be classified according to the competitive priorities and types of flexibility they are linked to [Macchion et al. 2015, Miller and Roth 1994]. The different employed sourcing strategies implemented in the respective regional supply chain structures lead to different degrees of flexibility regarding product mix and volumes, and can be linked to having a focus on either leanness, agility, “leagility” [Purvis et al. 2014]. The exact relationship between supply chain structure and competitive priorities and degree of flexibility highly depends on the respective industry and supply market of the raw materials in question though. Further, this type of classification has the highest validity, if the respective suppliers in the supply base are otherwise comparable, and conventional segmentation criteria reach their limits. To further illustrate the underlying principle and

the related process of the developed approach, the previously introduced example of leading global plastics raw material suppliers is elaborated further. Regarding the exemplary classification of supply chain groups, a higher number of (external) suppliers leads to increased flexibility regarding product mix and volumes, so that the exemplary Group A could be classified as having a focus on agility rather than leanness [Christopher et al. 2006, Purvis et al. 2014]. The use of an owned production plant as a single source reduces the complexity of the supply chain, and allows for its holistic alignment, but decreases flexibility regarding product mix, as well as product volumes, if the upstream plant is located outside of the region [Christopher et al. 2006, Purvis et al. 2014]. Supply chains of Group B could therefore be classified as having a focus on leanness rather than flexibility, whereas supply chains of Group C could be classified as “leagile”, since the owned upstream source is located in the same region or even the same plant [Christopher et al. 2006]. Table 3 shows this exemplary classification.

Table 3. Exemplary classification of supply chain groups according to competitive priorities
Tabela 3. Przykładowa klasyfikacja grup łańcucha dostaw w zależności od priorytetów konkurencyjności

	Competitive priority	Volume flexibility	Mix flexibility
Group A	Agility	High	High
Group B	Leanness	Low	Low
Group C	Leagility	High	Low

Third step: Prioritization of supply chain groups according to market conditions, competitive priorities, and flexibility requirements

In the final step, the identified and classified strategic groups of supply chains should be prioritized throughout the network, by shifting volumes between sources, or appointing specific sources for new

manufacturing projects. The feasibility of such a prioritization depends on whether the respective materials can actually be sourced to comparable conditions and prices through different suppliers in the supply base, and on whether they actually operate different types of supply chains. If this is the case, the market conditions regarding upstream and downstream uncertainty, the firm’s competitive priorities in the specific supply relationships, and the firm’s

requirements in volume flexibility and mix flexibility (in the sense of product variety) play central roles. Within large global supply networks, market conditions can vary between individual regions. Generally, different types of supply chains are more advantageous under certain market conditions than others. Depending on the raw material in question, upstream supply chains can be rather complex, local availability of certain products rather low, or the upstream market concentration rather high, with only few suppliers supplying certain precursor products to the market. In such cases, upstream supply uncertainty can be considered as rather high. Correspondingly, downstream demand of the firm, its sub-suppliers, and customers can either be rather stable, or rather volatile, which leads to different degrees of downstream demand uncertainty.

This can lead to either lean, agile, or leagile supply chains being more advantageous [Christopher et al. 2006, Lee 2002]. When upstream uncertainty is high, lean or leagile supply chains are more advantageous than agile ones, since they can secure supply at relatively low costs, especially when the firm operates its own precursor production [Chang et al. 2012, Christopher et al. 2006, Lee 2002]. This would correspond to a prioritization of supply chains of Group B or Group C in the mentioned example. In regional markets with high downstream uncertainty, agile or leagile supply chains are more advantageous as compared to lean ones, since they are better able to buffer peaks in demand [Chang et al.

2012, Christopher et al. 2006, Lee 2002]. This would correspond to a prioritization of supply chains of Group A or Group C in the mentioned example. Regarding the firm's competitive priorities for certain supply relationships, lean supply chains (Group B) should naturally be prioritized when the focus is on cost minimization, and agile supply chains (Group A) when the focus is on flexibility. While the firm's requirements in volume flexibility correspond to its general competitive priorities regarding flexibility, high mix flexibility requirements can best be fulfilled by agile supply chains involving multiple external sources like in the mentioned Group A. The reason for this is the ability to easier switch between different sources and materials, due to not being bound to certain materials due to large investments in upstream precursor production capacities. Also, regarding network-wide prioritization of supply chains, the regional market presence and network structure of key strategic partners has to be considered, in order to leverage potential bundling advantages of network sourcing strategies [Mohr, Eßig 2007]. The strategic alignment of supply networks hence implies many trade-offs, especially for firms who collaborate closely with a small number of key strategic suppliers. Table 4 summarizes a prioritization scheme for the different groups of supply chains in the mentioned example under the assumption that they are all equally present in the firms supply base and its individual regional supply markets. Figure 2 illustrates the described process.

Table 4. Exemplary prioritization of supply chain groups depending on market conditions, competitive priorities, and flexibility requirements

Tabela 4. Przykładowa klasyfikacja grup łańcucha dostaw w zależności od warunków rynkowych, priorytetów konkurencyjności i wymagań dotyczących elastyczności

	Upstream uncertainty	Downstream uncertainty	Competitive priority	Volume flexibility	Mix flexibility
Group A	Low	High	Flexibility	High	High
Group B	High	Low	Cost	Low	Low
Group C	High	High	Both	High	Low

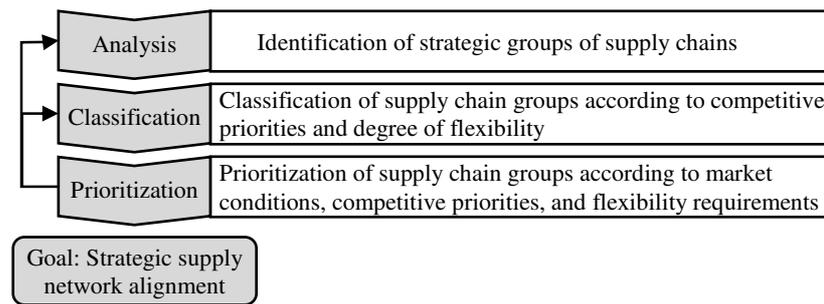


Fig. 2. Approach for supply network alignment
Rys. 2. Próba uszeregowania sieci zaopatrzenia

CONCLUSIONS

The strategic alignment of complex global supply networks can be achieved by segmenting individual regional supply networks based on strategic groups of supply chains. This segmentation base extends the existing dyadic approaches to a more holistic supply chain perspective. The developed approach aims at differentiating between global raw material suppliers approaches to supply regional networks of sub-suppliers such as component manufacturers. The approach relies on the identification of different groups of supply chains in regional markets and their classification regarding their implied sourcing strategies, competitive priorities, and degrees of flexibility. By prioritizing different groups of raw material supply chains for different regional markets and supply relationships, firms can unlock potentials for cost and risk reduction that lie further upstream in their supply networks. The key to maximize the performance of the supply network in a holistic and systemic way is the creation of a fit between these strategic groups of supply chains and the firm's own competitive priorities and flexibility requirements, as well as regional market conditions. By balancing these strategic recommendations with potential bundling effects achievable through network sourcing strategies, firms can effectively align their supply networks and achieve superior performance for the whole system.

The developed approach should be tested and potentially adjusted within the context of different industries and materials in order to empirically prove its validity. In this context, the effects on long-term network performance would be of particular interest of research and practice. This article further aims to inspire new qualitative and quantitative research in the field of strategic group theory and its application to the supply chain and network management context. In that regard, the development of a variety of industry-specific supply network strategy frameworks would be of high interest, not only for practitioners, but also for researchers, since it can uncover meaningful patterns [Macchion et al., 2015]. Finally, the results of this research are of high relevance for executives who centrally manage large complex global supply networks. The approach is not only directly applicable in practice for certain industries, but can also provide managers with additional strategic perspectives that can be highly advantageous in price and contract negotiations with existing and potential raw material suppliers.

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USZEREGOWANIE GLOBALNYCH SIECI ZAOPATRZENIA W OPARCIU O STRATEGICZNE GRUPY ŁAŃCUCHÓW DOSTAW

STRESZCZENIE. Wstęp: Z perspektywy łańcucha dostaw, często występują istotne różnice pomiędzy podejściem globalnych dostawców surowców w stosunku do ich rynków lokalnych. Wzrastająca kompleksowość globalnych łańcuchów dostaw zarządzanych centralnie, a następstwa takiego sposobu zarządzania, nie do końca poznane, zwiększają możliwość występowania niewykrytych wąskich gardeł i nieefektywności. W związku z tym jest koniecznym opracowanie podejścia strategicznego do kompleksowości takich sieci z holistycznej perspektywy łańcucha dostaw w celu uszeregowania regionalnych priorytetów konkurencyjności oraz struktur łańcucha dostaw. Celem tej pracy było opracowanie uszeregowania globalnych sieci zaopatrzeniowych w oparciu o łańcuch dostaw.

Metody: Dokonano przeglądu istniejącej literatury z obszaru zarządzania łańcuchem dostaw oraz siecią, zaopatrzenia strategicznego oraz zarządzania strategicznego. W oparciu o przegląd literatury oraz o teoretyczne i praktyczne rozważania stworzono koncepcję analizy struktur łańcucha dostaw ukierunkowanego w górę odnośnie inicjatyw ukształtowania sieci zaopatrzenia.

Wyniki: Na bazie tych rozważań oraz aktualnej literatury teoria grupy strategicznej została przetransferowana do kontekstu zarządzania siecią zaopatrzeniową. Proponowane rozwiązanie wprowadza grupy strategiczne łańcuchów dostaw, jako kryterium segmentacji globalnych sieci zaopatrzeniowych, co umożliwi uszeregowania priorytetów konkurencyjności w obrębie sieci.

Wnioski: Segmentacji w oparciu o łańcuch dostaw struktur globalnych sieci zaopatrzeniowych redukuje kompleksowość firm przy próbie strategicznego uszeregowania ich łańcuchów dostaw na poziomie holistycznym. Wyniki badań mogą być zastosowane w różnego rodzaju globalnych sieciach zaopatrzenia i użyte do szeregowania sieci oraz rozwoju strategii. Mogą być użyte też do przygotowania wniosków przygotowujących do negocjacji z dostawcami.

Słowa kluczowe: zarządzanie łańcuchem dostaw, globalne sieci zaopatrzeniowe, segmentacja sieci zaopatrzeniowej, uszeregowanie sieci zaopatrzeniowej, grupy strategiczne, zaopatrzenie strategiczne

DIE EINSTUFUNG VON GLOBALEN VERSORGUNGSNETZEN IN ANLEHNUNG AN STRATEGISCHE GRUPPEN VON LIEFERKETTEN

ZUSAMMENFASSUNG. Einleitung: Aus der Perspektive einer Lieferkette treten wesentliche Unterschiede bezüglich des Herangehens globaler Rohstoff-Lieferanten an ihre Lokalmärkte auf. Die steigende Komplexität globaler, zentral verwalteter Lieferketten bei den nicht ganz erkannten Folgen einer solchen Verwaltungsweise erhöhen die Gefahr des Auftretens von nicht entdeckten Engpässen und einer damit verbundenen Ineffektivität. Im Zusammenhang damit erscheint als nötig die Ausarbeitung eines strategischen Herangehens an die Komplexität solcher Netzwerke aus der holistischen Perspektive einer Lieferkette zwecks der Einstufung regionaler Wettbewerbsprioritäten und der Struktur der betreffenden Lieferkette. Das Ziel der Arbeit war es, die Einstufung von globalen Versorgungsnetzen in Anlehnung an die Lieferkette auszuarbeiten.

Methoden: Es wurde eine Übersicht innerhalb der bestehenden Fachliteratur aus dem Bereich Lieferketten- und Netzwerk-Management, strategische Versorgung und strategisches Management vorgenommen. Anhand der Literaturübersicht und theoretischer und praktischer Erwägungen wurde ein Konzept für die Analyse von Strukturen der Lieferkette, die bezüglich der bestehenden Initiativen zur Ausgestaltung von Versorgungsnetzen nach oben ausgerichtet ist, ausgearbeitet.

Ergebnisse: Aufgrund dieser Erwägungen und anhand der gegenwärtigen Fachliteratur wurde die Theorie der strategischen Gruppe zum Kontext der Verwaltung des Versorgungsnetzes transferiert. Die vorgeschlagene Lösung führt strategische Gruppen von Lieferketten als ein Kriterium für die Segmentierung von globalen Versorgungsnetzen ein, was die Einstufung von Wettbewerbsprioritäten innerhalb eines Netzwerkes ermöglicht.

Fazit: Die vorgenommene Segmentierung in Anlehnung an die Lieferkette innerhalb der Struktur der globalen Versorgungsnetze reduziert die Komplexität von Firmen beim Versuch einer strategischen Einstufung deren Lieferketten auf der holistischen Ebene. Die Forschungsergebnisse können in unterschiedlichen globalen Versorgungsnetzen angewendet und zur Einstufung der Netzwerke und zur Entwicklung der betreffenden Strategien in Anspruch genommen werden. Ferner können sie zur Vorbereitung von Schlussfolgerungen, die für die nachfolgenden Verhandlungen mit Lieferanten brauchbar sind, verwendet werden.

Codewörter: Lieferketten-Management, globale Versorgungsnetze, Segmentierung des Versorgungsnetzes, strategische Gruppen, strategische Versorgung.

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