The theory of business networks has attracted increasing attention in recent years. It assumes that the competitive advantage of a firm depends on its business relationships with various entities. The quality and number of business relationships a firm maintains shape its network position, which influences the firm’s performance. The aim of this paper is to propose a framework for analysing the development of the firm’s position in the business network in the context of the firm’s performance. A literature review method was used in the paper. Based on a literature analysis and the authors’ earlier research, the proposed framework suggests that a firm’s network position changes constantly due to continuous changes in the determinants of its network position and continuous changes in the firm’s behaviour as it develops its network position. In turn, changes in the network position impact the firm’s performance.

Keywords: business performance, network position

JEL classification codes: M10, M20
Introduction

The marketplace is becoming increasingly complex and difficult for firms irrespective of their size. In recent years, there has been a significant increase in competition in almost all industries. In this complex and often difficult environment, the problem is how to compete effectively and how to achieve better results and business performance than the closest competitors. Traditionally, competition between firms was based on the attractiveness of the products they offered, the way in which these were distributed, and the prices supported by appropriate promotion. However, in practice, often the closest competitors offer similar products sold at similar prices and using similar distribution channels. Hence the problem today is how to stand out from the competition and gain an advantage over rival businesses.

Increasingly, firms are basing their competitive advantage on business relationships with various entities: buyers, suppliers as well as competitors and other entities in the market environment. The networks that emerge in this way comprise the main business relationships of a firm with diverse entities, different resources and different (sometimes contradictory) interests. As part of such networks of relationships, there is a naturally born desire to achieve the best position, which, at least hypothetically, should lead to better business performance than that of the closest competitors. In the past, research focused much more on the firm’s market position than on its position within...
the business network [e.g. Hoque, James, 2000; Matear, Gray, Garrett, 2004]. In recent years, research has intensified into the firm’s network position, and in particular how to improve this position [e.g. Anderson et al., 1998; Anderson, Forsgren, Holm, 2015; and Siemieniako and Mitręga, 2018]. However, a comprehensive approach still needs to be developed to evaluate the process of building the firm’s position in the business network and to highlight its importance for a given firm’s business performance. Research on the influence of a firm’s network position on its business performance is important as “an advantageous network position can enhance the prominence of a firm,” according to Chen, Li and Meng [2019: 1169].

The aim of this paper is to propose a framework for analysing the development of the firm’s position in the business network in the context of the firm’s performance.

Because of the complexity of the process whereby a firm’s business network position is built, the proposed conceptual framework requires a comprehensive approach. This means including all the most important perspectives and elements to create a possible clear picture of this process. Specifically, we propose to consider two possible firm behaviours within a given network of business relationships: active and passive [see Leonidou, Katsikea, Hadjimarcou, 2002; Child, Mollering, 2003; Gadde, Hjelmgren, Skarp, 2012]. In the first case, a change in the firm’s network position is the result of its active behaviour. In the second one, the change is mostly influenced by the activities of other actors within the network and passive behaviour can be observed on the part of a given firm. So here a change in the firm’s network position is to a large extent outside the firm’s direct influence. Based on this dual perspective, assuming two possible firm behaviours, it is essential to discuss and investigate links between changes in a firm’s network position and business performance. It is still not clear if a change in the firm’s network position can impact its business performance and in what way. Additionally, the notion of comprehensiveness makes it necessary to identify a wide range of key determinants influencing the firm’s network position.

Our paper is a conceptual one. The aim of such papers is to “provide multi-level insights, and broaden the scope of our thinking” [Gilson, Goldberg, 2015: 128]. Instead of providing a detailed review of existing literature, such papers should “provide an integration of literatures, offer an integrated framework, provide value added, and highlight directions for future inquiry” [Gilson, Goldberg, 2015: 127]. Therefore our conceptual paper is based on an integrative literature review.

The starting point of the conceptualisation process is a preliminary general framework (see Figure 1), which is then developed into a final conceptual framework (see Figure 3), based on an integrative literature review [Rocco, Plakhotnik, 2009; Torraco, 2005]. The aim is to analyse the process whereby companies build their positions within business networks in the context of the firm’s performance as discussed in the last section of the paper.
An integrative literature review “reviews, critiques, and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated” [Torraco, 2005: 356]. It should lead to a new understanding and conceptualization of an existing phenomenon [Rocco, Plakhotnik, 2009]. This type of review is linked to a conceptual literature review, a type of review that is anchored in a specific research question and thus more selective than a systematic literature review [Kennedy, 2007]. To find the relevant literature, we focused on the Scopus and Google scholar database using the search keywords “network position” and “performance” in the management literature. Then, based on the knowledge of the authors and the most frequently cited literature addressing the topic of network position, the literature was supplemented with important and relevant entries exclusively dealing with the network position (with no reference to business performance). When conducting the analysis of the literature we first focused on identifying the two main streams of the literature on the network position and then on the possible determinants of the network position and their link to business performance.

The paper is structured as follows. After this introduction, the concept of the firm’s network position and its determinants is analysed. Then up-to-date research is presented on the links between network position and business performance. Finally, a framework is proposed for analysing the firm’s network position and its impact on business performance, and the directions of further research are indicated.

The concept and determinants of the firm’s network position

In the context of describing and measuring the network position, two approaches can be identified. The first focuses on researching the position in the network by analysing the quality (strength) of individual dyadic relationships of a firm and their embeddedness in a wider network of relationships [Håkansson, Snehota, 1995; Ford et al., 2011]. The second approach emphasises the centrality of a given firm in the network, in particular the number of the firm’s relationships, which constitutes part of the social network analysis [Björk, Magnusson, 2009].

The first of these approaches is typical for researchers gathered within the Industrial Marketing and Purchasing Group (IMP Group) [Håkansson et al., 2009]. The IMP approach highlights the multitude of relationships with
direct and indirect counterparts, such as customers, suppliers, competitors, influential bodies and other third parties with whom the focal firm is connected. It also stresses the importance of embeddedness of dyadic business relationships in a wider concept of direct and indirect relationships held by a firm [Ratajczak-Mrozek, 2017]. As such the network position is dependent not only on the quality of dyadic business relationships, but also on the links between these relationships. In addition, it should be emphasised that a significant part of research embedded in this approach does not relate directly to network position, but to the strengthening of dyadic relationships. In the IMP approach, dyadic business relationships are analysed using the so-called ARA (actors-resources-activities) model (see Figure 2) [Håkansson, Snehota, 1995]. The model assumes that in business networks, actors, resources and activities carried out are connected across each business relationship [Ford et al., 2011]. Therefore strengthening dyadic relationships and thus the firm’s network position can be based on each of these (e.g. by controlling resources that are significant for other network actors).

Figure 2. The scope of business network analysis

The quality of relationships that influence the firm’s network position is assessed by analysing specific relational determinants. Two relational determinants, trust and commitment, are most often used in research and seem
to be accepted as important determinants of the quality of business relationships by most researchers within this approach [Morgan, Hunt, 1994; Zabkar, Brencic, 2004; Ulaga, Eggert, 2006]. It has to be stressed, however, that there is no agreement on the complete set of all the relational determinants. Researchers tend to use, reveal and create new determinants of relationship quality. Except for trust and commitment, the most often applied are mutual adaptations and dependence, the firm’s competences, internal resources, exchange volumes, inter-organisational routines, identities, key resources, influence on decision making, and atmosphere [Håkansson, Ford, 2002; Baraldi et al., 2014; Baraldi, Ratajczak-Mrozek, 2019]. The measurement of the level of relational determinants is also subject to adjustments, for example in the industry-specific context. Researchers tend to use different questions and scales to evaluate the level of the determinants, even the most important ones – trust and commitment. The plurality of the relational determinants makes this approach less structured, but at the same time more open to adjustments and suited for both quantitative and qualitative research.

In the IMP approach, two levels of network position can be distinguished: micro and macro. The micro position refers to the quality of a firm’s dyadic relationship with another network actor [Johanson, Mattsson, 1987]. The macro position denotes a firm’s relations with the business network as a whole or its specific part. The macro position is not merely a sum of all the micro positions of a firm, as it takes into account the links between the focal firm’s micro positions and the micro positions of other actors [Ford et al., 2011].

Similar to the IMP approach, Johanson and Vahlne [2009] also emphasise the qualitative aspect of relationship assessment. As part of their studies on international business, they proposed a distinction into two network positions: insidership and outsidership. The two network positions, insidership and outsidership, are related to the location of a firm within the network. Such a position is an outcome of learning (knowledge), trust and commitment to the firm’s specific relationships [Johanson, Vahlne, 2009] and is somewhat close to the IMP approach in assessing the network position.

The second approach to defining and measuring network position is prevalent in social network analysis (SNA). The SNA approach is increasingly used in research on firms’ networks, including their network position [Borgatti, Brass, Halgin, 2014], despite the fact that this method was not originally designed to analyse business relationships. In the SNA approach, the firm’s network position is defined through the prism of measures used to analyse it in relation to other actors in the network. It is assumed that every actor in the pre-defined network has some position in it. Measures used in SNA allow the network position to be accurately described. Compared to the IMP approach, measures used in SNA are highly standardised [Carrington, Scott, Wasserman, 2005]. This applies to both types of determinants (measures) as well as the methods for calculating them with specific formulas.
The SNA method uses a set of specific measures and research techniques that are designed to support approaches developed in social sciences using formal mathematical, statistical and computational methodology. In SNA, the network position of a firm is typically measured by its centrality, which may be reflected by [Tichy, Tushman, Fombrun, 1979; Björk, Magnusson, 2009]:

- degree centrality – the number of relationships connecting the actor with other actors in the network,
- closeness centrality – average length of the shortest paths leading from the actor to other actors in the network,
- betweenness centrality – the frequency of the actor’s occurrence on the shortest paths of relationship between pairs of any other actors in the network,
- eigenvector centrality – measure of the number of an actor’s relationships with actors with a large number of connections with other actors in the network.

Other measures used in SNA include nods (actors) classified into specific groups. These groups may be treated as certain network positions [Wasserman, Faust, 1994; Jackson, 2008]:

- star – actor with the largest number of incoming relationships,
- bridge – an actor whose removal from the network causes it to break down into two or more unconnected smaller networks,
- structural equivalents – actors with identical connections to the same set of actors in the network,
- isolate – an actor not having a relationship with other actors in the network (similar to the “outsidership” position described above).

The two approaches described above may be applied when analysing a firm’s external and internal network positions. Most researchers studying the firm’s network position (with the use of either the IMP or SNA approaches) focus on external networks developed by the focal firm with its customers, suppliers, competitors, influential bodies and other entities. However, the issue of internal networks, developed between business units of firms within large organisational structures, is becoming increasingly important [Figueiredo, 2011; Ciabuschi, Holm, Martín Martín, 2014; Bresciani, Ferraris, 2016; Fonfara, Malys, Ratajczak-Mrozek, 2018]. Although internal networks only apply to larger companies with their own business units, this level of analysis is indispensable for a comprehensive framework to offer the most complete picture of how firms develop their position within the business network.

Based on the discussion above, it is possible to identify the main characteristics of a firm’s network position under the IMP and SNA approaches (see Table 1).

Based on the above analysis, network position may be defined as a multi-dimensional concept that indicates how an organisation is embedded in the external (and internal) network in terms of the number and quality of its business relationships as well as the connections between them [Baraldi et al., 2007; Baraldi, Ratajczak-Mrozek, 2019].
Table 1. Network position concepts under the IMP and SNA approaches – main characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>IMP approach</th>
<th>SNA approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main determinants of a firm’s network position</td>
<td>• trust, • commitment, • mutual adaptations, • dependence, • internal resources</td>
<td>• degree centrality, • closeness centrality, • betweenness centrality, • eigenvector centrality</td>
</tr>
<tr>
<td>Measurement of the influence of specific determinants on a firm’s network position</td>
<td>qualitative [unstandardised]</td>
<td>quantitative [standardised]</td>
</tr>
<tr>
<td>Specific firm’s network positions</td>
<td>• strong, • weak, • insidership, • outsidership</td>
<td>• star, • bridge, • structural equivalent, • isolate</td>
</tr>
<tr>
<td>Levels of network position analysis</td>
<td>• micro-position • macro-position • internal • external</td>
<td>• micro-position • macro-position • internal • external</td>
</tr>
<tr>
<td>Role of change in a firm’s network position (dynamism)</td>
<td>key (crucial)</td>
<td>visible</td>
</tr>
<tr>
<td>Firm’s behaviour in the process of network position change</td>
<td>active passive</td>
<td>not analysed</td>
</tr>
</tbody>
</table>

Source: own work.

Regardless of the adopted approach (IMP or SNA), one important aspect of network position analysis is its dynamism, including the process of change in the firm’s position in the network. As part of the IMP approach, it is assumed that the firm’s position in the network is constantly changing, reflecting one of the basic assumptions of this approach concerning simultaneous stability and variability of the network [Anderson et al., 1998]. The change of network position understood in this way results from the constant establishment of new relationships, breaking off old relationships and modification of existing relationships. Changes in the firm’s network position at the dyadic (micro) level are mainly perceived through the lens of (1) commitment to individual dyadic relationships (partners in relationships), which allows knowledge to be built; and (2) level of trust. A high level of commitment and trust increases the level of exchanged volumes and leads to closer inter-organisational routines [Baraldi, 2008], which, in turn, impact the degree of mutual dependence between the parties [Håkansson, Ford, 2002; Baraldi et al., 2014]. Thus, the process of changing the network position is perceived as strengthening key relationships based on increasing the level of trust and decisions about the growth of commitment to these relationships [Baraldi, Ratajczak-Mrozek, 2019]. At the network level, changes in the network position are assessed in terms of achieving a more central rather than peripheral position within different interconnected relationships [Håkansson, Snehota, 1995].
Research using the distinction into insidership and outsidership focuses mainly on the process of how the firm changes its international network position from that of an outsider to insider [e.g. Hilmersson, Jansson, 2012; Söderqvist, Chetty, 2013; Yamin, Kurt, 2018]. Thus the dynamic perspective appears relatively often. It is important to note that the results of some of these analyses are not restricted to internationalised firms and their foreign expansion. For example, Söderqvist and Chetty [2013: 548] indicate that stronger relationships “function as bridges to important new relationships both nationally and internationally” and thus enable firms to establish an insidership position within a network. Similarly Malys and Fonfara [2019] demonstrated that strengthening as well as diversifying ties may be seen as a way of building the firm’s insidership position.

The dynamism of business networks is less obvious in SNA, as it is focused on describing the existing network structure and the influence of the network structure on actors. However, in this approach, a dynamic perspective is also taken into consideration and includes especially the process and antecedents of creating relationships [Borgatt et al., 2009]. When new relationships are created, the structure of the entire network changes, which may lead to changes in the firm’s network position. The network position in SNA is dependent on the network structure and as such may change due to changes in the business relationships of the firm, but also because of changes in the business relationships of other actors in the network.

One issue that has not received sufficient attention in research so far is the firm’s behaviour in the dynamic process of changing its position within the network. This relates to the problem of a firm’s activity or passivity in strengthening its own position in the network. Some authors assume that the network position of a firm is subject to change regardless of the firm’s own initiatives [Håkansson, Snehota, 1995]. In fact, some research carried out suggests that most firms remain passive in managing business relationships and their position in the network [Czakon, Kawa, 2018]. Other studies, however, prove that some firms take deliberate action aimed at strengthening their network position, for instance, by replicating certain activities and resources in individual sections of the network [Mota, de Castro, Brito, 2016], and by seeking favourable positions, such as that of gatekeepers, which would allow them to exert power and exercise control over other actors in a network [Olsen et al., 2014]. Therefore, both active and passive behaviour by firms developing their network positions should be taken into account, along with its influence on business performance. Yet, the issue of passive vs. active behaviour in building one’s network position remains under-researched and lacks a comprehensive theory, especially in terms of specific action that may be taken by firms. As Hilmersson and Jansson [2012: 683] underline, “less, however, is known about the way the firm actively influences this position”. 

Krzysztof Fonfara, Łukasz Malys, Milena Ratajczak-Mrozek, Firm’s Network Position...
Network position and firm performance

One of the most important research problems in management sciences is discovering the determinants of differences in firms’ business performance. Traditionally, various researchers sought to identify those determinants by adopting the individual firm as the subject of analysis. It was assumed that firms operate independently, gaining access to factors of production and selling their products on an abstract market [see Borgatti, Foster, 2003]. Thus, factors determining the performance of a firm operating within a given sector were searched somewhat “inside” the firm. Nowadays, the huge impact of business networks on the performance of firms is increasingly highlighted [Ratajczak-Mrozek, 2017; Jiang et al., 2018; Fonfara, Malys, Ratajczak-Mrozek, 2018]. Some researchers even point to the possibility of the emergence of a network paradigm [Borgatti, Foster, 2003]. In their opinion, business networks can have a decisive impact on a firm’s access to information, resources, markets and technologies, and contribute significantly to the success or failure of individual firms.

At the same time, it has been pointed out that networks bring firms not only benefits, but also costs. These include the firm’s attachment to existing modes of operation. This is due to the fact that a firm operating in a business network, when making decisions, must consider the impact of planned activities on business partners. The firm is therefore limited to some extent by the existing network structure. Changes can only be made via the network and require the involvement of other actors [Håkansson, Ford, 2002]. Networks enable firms to influence other actors. However, through existing connections, firms are subject to the influence of other actors from the network. The relationships built by the firm are therefore the result of its strategy and decisions, as well as the strategies and decisions of business partners. At the same time, the strategy and the mode of operation of a firm in a business network, contrary to classic views, is not an individual decision. The strategy building process can be described as interactive, evolutionary and dependent on the partners’ activities [Håkansson, Ford, 2002]. Therefore, the question is what determines the possibility of achieving better results as part of a business network. It seems that the firm’s network position can play a decisive role.

In the past, a firm’s performance was more often associated with its market position than network position. It should be noted, however, that there is no full agreement on what market position is in fact and how it should be measured. Some authors [e.g. Hoque, James, 2000] propose measuring a firm’s market position by its financial performance to verify the impact of this position on organisational performance. Other researchers measure a firm’s market position with product quality and price level in relation to those of competitors. Still others consider factors such as brand image, brand recognition, customer service level, and innovation level [cf. Hooley et al., 1997; Fahy et al., 2000; Matear, Gray, Garrett, 2004], while referring these to firm performance (including financial performance). Most often market position
is analysed from the perspective of an isolated firm and compared to those of its closest competitors. It is considered by either adopting a different strategy (e.g. positional advantage in terms of either cost leadership or differentiation [Porter, 1985]) or using comparisons to competitors that result in classifying firms into “better” and “worse” (e.g. market position as revenue share in relation to competitors [Hoque, James, 2000]).

Network position is not analysed in comparison to competitors. Unlike market position, it highlights the embeddedness (and not isolation) of a firm in a business network. According to Cantner and Joel [2011: 60], the business performance of a firm operating in a network depends on the “external assets a firm is addressing,” which “can be represented by a firm’s network of relations to other actors”. Analysing the network position can help identify a unique aspect of the firm’s business performance within the context of its business relationships. This is so because the firm’s environment consists of a network of independent relationships developed through cooperation strategies aimed at achieving mutual benefits [Holm, Eriksson, Johanson, 1999]. Examining this specific aspect of business performance would be difficult from the exclusive perspective of market position.

So far not much research has been conducted into the impact of network position on business performance. In particular, there is a lack of studies investigating the direct influence of network position on business performance. Seiler, Papanagnou and Scarf [2020], using the social network analysis method, found that network connectedness may be linked to firm profitability. Some other rare research has focused on verifying the impact of network position on selected, pre-defined moderators (e.g. knowledge), which in turn can influence firm performance. The most often analysed moderators include access to resources (especially knowledge and information) [e.g. Zaheer, Bell, 2005; Eerme, Nummela, 2019; Cantner, Joel, 2011; Tsai, 2001] and increased innovativeness [Hakansson, Eriksson, 1993; Tsai, 2001; Kim, 2019]. It has been assumed (in a more or less direct way) that an increased importance of moderators can contribute to improving the firm’s business performance.

A major challenge is to adopt a dynamic perspective to firm performance measurement. As Håkansson and Snehota [2006: 273] report, “the effectiveness of a firm is not given by the possession of the ‘right’ set of resources accessed by a ‘right’ set of relationships at each moment in time but by the involvement in relevant change processes – the movement, in the context of the company”. A dynamic approach to changes in the firm’s network position demands methods similar to those used in business performance analysis. Specifically, identifying the process of network position development requires considering the time shift between the appearance of performance determinants and changes in business performance.
Discussion and conclusions

An attempt to describe the process of how firms build their positions within business networks implies the need to highlight the business relationships of a given firm with other entities. Therefore tracing this process requires identifying the key characteristics of the firm’s position in the business network, including its determinants in both the IMP approach (mainly trust, commitment, mutual adaptations, dependence and internal resources) and the SNA approach (mainly degree centrality, closeness centrality, betweenness centrality and eigenvector centrality) – see Table 1. Based on the above literature overview, a framework has been proposed for analysing the firm’s network position and business performance (see Figure 3).

Figure 3. Process of firm’s network position development and business performance – a final conceptual framework proposition

We base our proposal on the assumption proposed by Fonfara, Ratajczak-Mrozek and Leszczyński [2018] that the continuous process of change in business relationships starts with an initial state that, due to interaction, eventually evolves into a new state of business relationships (outcome of changes). We assume that a firm’s initial network position is the result of various qualitative and quantitative determinants (see Table 1) as well as the firm’s active or passive behaviour in creating and managing network relationships. The network position has an impact on the firm’s business performance. Over time the firm’s position in the business network can be subject to changes. These may be a result of changes in various determinants as well as a given firm’s actions (active behaviour) or activities undertaken by other actors in the business network (passive behaviour). Similarly, depending on the changing net-
work position, the firm’s business performance can change (improve or worsen) over time. The process of change is continuous, which means that a firm can always change its network position and always improve or worsen its business performance. This implies the need to include the dynamic perspective in the analysis, meaning a focus on detailed temporal patterns and drivers of change in the case of both network position and business performance.

Our analysis allows us to indicate directions of future research. First of all, the problem of a passive versus active approach to building a firm’s network position remains under-researched and lacks a comprehensive theory, especially in terms of specific action that may be taken by firms. Hence future research should focus on identifying and explaining possible active behaviour of firms aiming to change their position in the business network. It is important to analyse to what extent it is possible to influence a firm’s network position. Because business networks are created by interconnected relationships among business actors (other firms and institutions) it is necessary to remember that most of these interconnected actors will also try to positively influence their position within this network. Thus exerting an influence on one’s own network position and its changes is only possible to a limited extent. Future empirical studies should help answer the question of whether any specific action aimed at changing a firm’s network position is more successful than any other efforts and whether it can improve the firm’s performance, especially in the long term.

Second of all, our paper proposes a framework for analysing how firms develop their positions within business networks in the context of firm performance. However, it is important to check the validity of this framework empirically. Moreover, empirical studies on the impact of network position on business performance should be combined with the analysis of detailed firm characteristics as well as relationships and business networks. This should make it possible to identify additional factors influencing specific patterns and drivers of change for both network position and business performance.

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