

BUSINESS MODELS OF FLAG ENTERPRISES IN DISTRIBUTION NETWORKS

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Abstract

The aim of the paper is to indicate those elements of business model, which differentiate flag enterprises in the distribution networks of steel mill products. Literature research aimed at distinguishing elements defining business model was conducted to obtain the objective. Additionally, three standard business models of enterprises cooperating in the supply networks were described. Then, the cooperation models in a network were referred to flagship companies in the distribution networks highlighting both the attributes, allowing to distinguish a flag distributor among the organizations cooperating within a network and those attributes, which differentiate flagship companies. The research was conducted between 2011-2016 in the sector of steel products distribution. 20 flagship companies were distinguished, in 18 organizations a thorough research was performed.

Keywords: Business model, flag enterprise, distribution network, postponed production

1. INTRODUCTION

Distribution network is particularly important part of the supply chain, where material decoupling point is the production for stock or assembly on order. In two remaining types of supply chain about the decoupling point: production according to the order and designing a product according to an order, the distribution part of the supply chain is considerable smaller and fulfills mainly an informative function. In the network structure of the distribution it is possible to indicate a central link, which is a dominating hub (dominated network, for example administrated or corporative) or fulfills a coordinating function due to collecting and sharing the knowledge with the actors in the network.

Such an organisation is described as flag enterprise of distribution network. The role of such organisations is particularly important for the supply chains of standard products as well as products differentiated according to the order of a customer, where the order is realised pursuant to the strategy of postponed production. Business models of flag enterprises of distribution networks are a multidimensional and heterogeneous construct. The business model is defined from different perspectives. They are described in the first part of the paper, which also includes the elements comprising the business model, with reference to the business models of enterprises in distribution networks. In the following part of the article the elements of business model of flag enterprise within a distribution network of steel mill products. The aim of the paper is to emphasise those elements of business model, which differentiate the flag enterprises of distribution network of steel products.

2. THE BUSINESS MODEL ELEMENTS DISTINUISHIG THE CENTRAL ORGANIZATION IN A DISTRIBUTION NETWORK

The discussion about the business models of flag enterprises should commerce with the indication of the interpretation of a business model. There are numerous concept defining a business model in a literature. They depend on the adopted perspective and differ with the set of elements distinguished in a model. The selected definitions of a business model are listed in **Table 1**.

Table 1 Business model - selected interpretations

Name and surname of the author	Definition of the business model	Elements defining the business model
Venkatraman, Henderson (1998, p.33-38)	The business model is a coordinated plan of action, the aim of which is developing strategy which satisfies customer expectations.	
Tapscott(2001, s.5)	The business model refers to the enterprise's architecture and in particular to the manner in which the enterprise uses resources in order to create a distinguishable value for the customer	enterprise's architecture, resources, value for the customer
Linder, Cantrell(2001, p.13)	The business model is the idea of carrying out a profitable activity in changing environment	the proposal of the value for purchasers developed with key stakeholders and comprising operations which create and offer this value
Petrovic et al. (2001, pp.1-2)	The business model describes logics of the business system aiming at creating the value resulting from processes taking place in the enterprise. Hence, the business model constitutes the implementation of business strategy at conceptual and structural level as well as the basis to implement business processes	
Morriss(2003, pp.17)	The business model describes manners of creating and delivering values and it may evolve along with changes of needs and preferences of purchasers	The set of products and services delivered on the market in a particular manner by a given organisation, appropriately placed on the market, which provides strong relations with current and future customers
Afuah(2004, pp.2-17)	The business model is a set of actions taken in a particular manner and in appropriate time in given conditions of market environment to create and deliver the highest value to purchasers and provide the enterprise position enabling to capture such a value	
Osterwalder et al. (2005, p.30)	The business model is a conceptual tool containing a set of elements and relations between them, which enables to express business logics of a given enterprise	The description of value offered by the enterprise to a group or groups of purchasers, the description of the enterprise's architecture and the network of partners who co-create, offer and deliver the value and relational capital providing profitable and stable revenue streams
Keena, Quresh(2006, p.2)	The core of the business model is the value for the customer and logics of the enterprise's operation which is connected with its creation	the value understood as overall advantages expected by purchasers logics of the enterprise's operation, i.e. various forms of the enterprise's activity aiming at creation of this value and its delivery to customers
Rasmussen(2007, pp.1-2)	The business model should consist of two parts - narrative and calculative ones which should form an answer to questions: "Who is a customer? What is a value for him? In what way such a value may be delivered rationalising costs and in what way does the action engage resources of the enterprise?"	The business model should not be only descriptive (product, customer, manners of delivering value, resources of the organisation), but also it should take into consideration a kind of financial model. With such an assumption the business model presents not only the idea and elements of a given undertaking but also detailed financial justification of the activity
Mahadevan (2009, p.9)	The business model is a configuration of three streams of flows which are key to business: the stream of value, the stream of revenue, a logistic stream.	
Brzóska (2009, p.7)	The business model is characterised through spheres distinguishing its essence: actions and resources connected with them, created and captured values. Spheres of actions and resources play here the role subordinated to the creation of the value for the customer as well as the ability of its capturing and maintaining. The primacy of creating the value results from perceiving it as the most important goal of the enterprise, the achievement of which gives it competitive advantage. Profitability is the most important financial dimension, the level of which is influenced by actions carried out by the company and resources which it owns.	
Smith i inni(2010, p.450)	The business model is a scheme of a manner in which the enterprise configures the set of strategic products concerning: markets, customers, proposal of value, organisational structure, competence, processes, culture, measures in order to create the value and next its capture.	

Source: Own elaboration

A lot of presented approaches define the business model through its attributes. Summing up the above interpretations of the business model, one may assume that it includes the description of the value offered by the enterprise to a group or groups of customers, along with determining basic resources, processes (actions) as well as external relations of this enterprise which create value and providing the enterprise with competitiveness in a given field as well as enabling to increase its value. The most quoted elements of the business model include: the position of the enterprise in the chain of value, the value for the customer, the sources of income, resources / competencies, relations with partners, offered products[13,14].

The shape of the business model is mainly dependent on the sector, because it is a manner in which the organisation - in the conditions of environment identified and diagnosed by it - runs its activity. Taking into account the presented theoretical background of the organisation and the research problem indicated in the introduction, the analysis was narrowed to the distribution of steel products. In this sector business models of organisations cooperating in supply chain which adopt the role of designing and coordination of the network as well as the organisation of material flows were considered. Such organisations are described as flag enterprises of distribution network or flag suppliers [15]. Adopting the perspective of the business model analysis at the level of flag enterprises of the distribution network points out on a particular level of detail in conducted research.

The theoretical construct of the flag enterprise of the distribution network of steel products consists of elements considered as the constant value:

- place in the value stream: distribution - the sale of products with a various processing level and customising to the consumer's needs,
- products: steel products,
- relations with partners (number and structure): numerous and complex - it is a network organisation.

Elements diversifying the business model of flag enterprises of the distribution network of steel products allowing to build competitive advantage between flag suppliers of steel products, which are considered in research presented in the article, are the following: value for the customer (types of carried out processes), key competences and key resources, the types of formed relations. The article does not take into consideration all elements of the business model. A hypothesis was formulated that the elements diversifying business models of flag enterprises of the distribution network of steel products include as well: the sources of income, costs, the segments of recipients. The hypothesis will be verified in the future research.

Figure 1 summarises the concept of the analysis concerning the model of the flag enterprise of the distribution network of steel products presented in the article

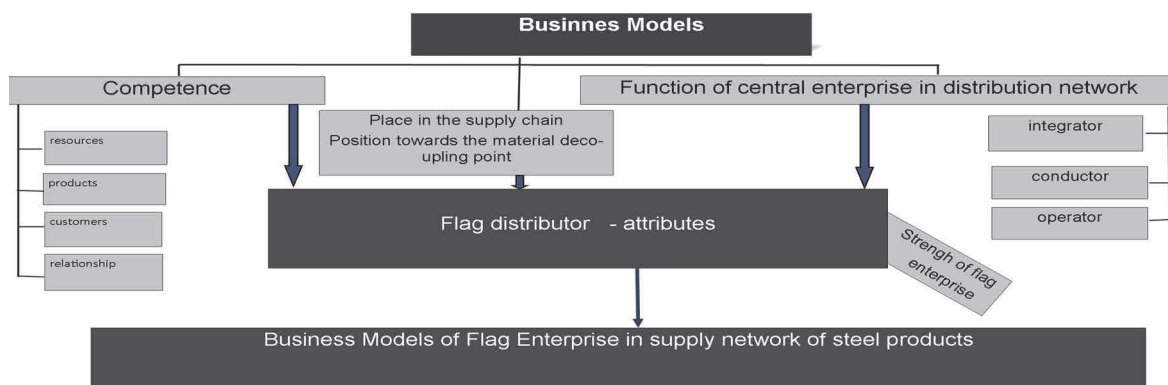


Figure 1 The concept of the analysis concerning the model of the flag enterprise of the distribution network of steel products

Source: Own elaboration

3. THE CONSTRUCT OF THE FLAG ENTERPRISE OF THE DISTRIBUTION NETWORK OF STEEL PRODUCTS

Flag enterprises of the distribution network of steel products are characterised by attributes of both the integrator of the network and the conductor [15]. Managerial roles of enterprises distinguishing by models of the conductor, operator and integrator described in the literature are depicted in **Table 2**.

Table 2 Characteristics of roles of the operator, integrator and conductor in the network

	Operator	Integrator	Conductor
Coordination			
Integration			
Creation of network			
Selection of partners			
Monitoring			
Ensuring cohesion of the network structure			
Delegation of tasks to partners of the network in accordance with competencies			
Creation of identity and organisational culture			
Settling transactions with customers and partners of the network			

Source: [15]

Regardless of stronger roles of the central enterprise (in the direction of the integrator or conductor), owning such features is necessary to qualify an organisation as flag enterprise, due to the fact that identified roles decide about the position of an organisation in the network, the possibility of creation of the network and its management.

Flag distributors differ in the scope of processes carried out in the value stream. Classical tasks resulting from the role of the commercial enterprise include stock management, the choice of purchase sources, the management of relations between recipients and suppliers, market research, purchase and sale of products [13,14]. These are key competences of organisations specialising in the supply so they compose the business model of the supplier. Frequently, these tasks are extended with transportation processes and, what is significant for the sector of the distribution of steel products, with carrying out tasks concerning postponed production. The strategy of postponed production may be implemented on different stages of the product manufacturing. Yang et al. (2004) presenting the role of deferral strategy in reducing negative effects of fluctuations in demand takes into consideration the following variants: the deferral of the product development, the deferral of the purchase of materials, parts, components, the deferral of production, a logistic deferral.

AlGeddawy and Elmaraghy (2010) distinguished three levels of postponed diversification of the product: the strategic level in which the positioning of the product diversification point is optimised, tactical (physical) level which includes sequencing of the process and designing of assembly line system and the operational level.

Carrying out tasks of postponed production is the attribute distinguishing flag enterprises in the supply chain of steel products. The range of carried out services rendered within the framework of deferral is the feature of the business model of the flag enterprise which significantly diversifies these entities in the sector of the distribution of steel products.

4. THE ANALYSIS OF SELECTED ATTRIBUTES DIVERSIFYING BUSINESS MODELS OF FLAG ENTERPRISES OF THE DISTRIBUTION NETWORK OF STEEL PRODUCTS

The research depicted in the article focuses on two elements of the business model which diversify flag enterprises of the distribution network of steel products: key resources and formed relations (reasons and types). **Table 3** presents three aspects taken into consideration in the research: the strength of the flag enterprise of the distribution network of steel products, elements involved in relation competencies and elements considered in the resource policy of the flag enterprise.

Table 3 Element of the business models

Strength of flag enterprise	Relational competence	Resource of flag enterprise
Value and the quantity of sold products	Number of different types of co-operators included into the cooperation	Rarity
Width of the assortment	Motives for establishing the cooperation	Flexibility
Number of supported segments	Types of the relation	Substitutability / complementarity
	Substitutability / complementarity of resource of the co-operator	

Source: own elaboration

The research was conducted on the sample of 60 distribution enterprises associated in the Polish Union of Steel Distributors. In this group 20 organisations fulfilled the assumptions of flag enterprises of the distribution network. Firstly, the correlations of each of the attributes and the network built by the flag enterprise with the indicator of its strength were examined. Resources were described by such attributes as rarity, flexibility, substitutability / complementarity of resources in which the enterprise invests, while relations were determined by: the number of various co-operators, the reasons of establishing collaboration, the types of formed relations and substitutability / complementarity of the co-operator's resources. The attribute describing resources of the flag enterprise such as the rarity indicator achieved a high correlation. Flag enterprises have rare resources allowing them to be distinguishable in the environment and capture values unavailable for other organisations. However, all enterprises indicated a significant share in the base of resources which are also owned by other suppliers of steel products. The rarity indicator was estimated in the range of $\langle 0 - 1 \rangle$, where 0 meant lack of rare resources and 1 - exclusively rare resources. The obtained results of flag enterprises of the distribution network of steel products were very similar and fell within the range of $\langle 0.4-0.6 \rangle$. Another correlation at the significance level $p = 0.11$ with the Spearman's rank of 0.48 was revealed by the variable describing relations formed by flag enterprises: the number of various types of co-operators. The number of various types of organisations included by flag enterprises of the distribution network of steel products was between $\langle 0.8-1 \rangle$, where 1 meant relations with all types of organisations. The types of organisations were determined as: a supplier, a classical wholesaler, the subcontractor carrying out tasks of postponed production, a retailer, a final customer, a transport undertaking, a supply centre, a logistics centre. The results concerning both factors indicate a large compliance of such an strategic approach among flag enterprises of the distribution network, which allow to include these attributes into elements characterising the business model of the flag enterprise and not into the features differentiating these organisations (they are differentiated by types of rare resources and the fact of having a rare resource). Other variables which did not achieved an adequate level of significance have the following impact on the strength of the flag enterprise: the flexibility of machines owned by the flag enterprise increases its strength, the increase in informal relations slightly reduces the strength of the flag enterprise, the average substitutability of machines obtained as a result of cooperation (both under the cooperation agreement and informal relations) increases the strength of the flag enterprise. The flexibility indicator of machines is connected with the economies of scale and the character of the flag enterprise. The flag enterprise chooses resources in accordance with the possibility of achieving high economies of scale. This

results in the exclusion of highly specialised (dedicated) resources beyond the flag enterprise's own resources and, in accordance of outsourcing, obtaining them from other organisations. The detailed correlation analysis shows that the more complementary resources are obtained by means of cooperation, the more frequently the flag distributor decides to cooperate formally (cooperative agreements replace informal cooperation). Thus, the research presented both attributes distinguishing the business model of the flag enterprise of the distribution network of steel products and attributes differentiating particular flag distributors (**Figure 2**).

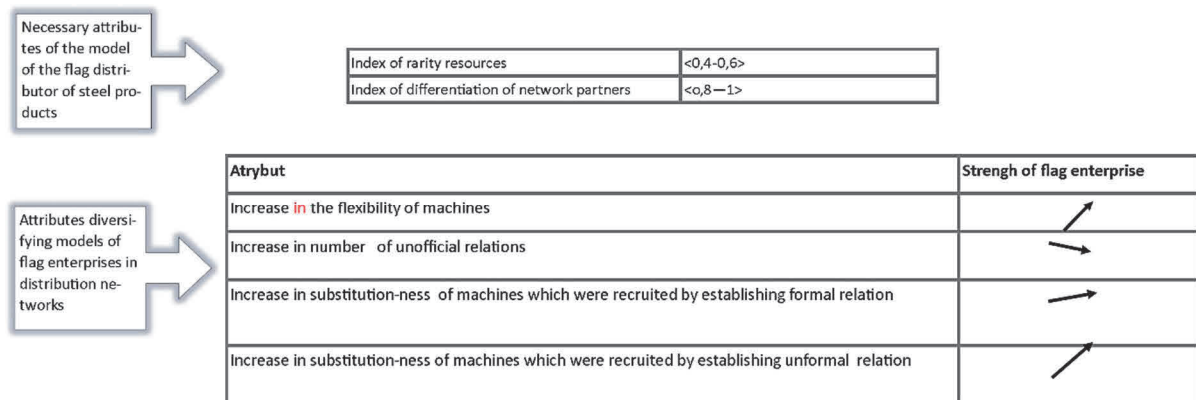


Figure 2 Attributes of flag enterprises of distribution network of steel products

Source: Own elaboration

The listed attributes indicate the ways of competing between flag enterprises in the supply chain of steel products. At the same time the obtained research results are the voice in the discussion between theoreticians and practitioners of management specialising in business models. This is due to the fact that one can distinguish those elements which characterise actors cooperating in networks of given industries and create theoretical construct of the business model of such organisations. On the other hand, it is possible to identify such elements which diversify organisations with a particular business model and allow to build the competitive position and implement different strategies.

5. CONCLUSIONS

The conducted research allowed to distinguish both elements defining the business model of the flag enterprise and elements differentiating particular flag distributors of steel products.

In the research the index of the strength of the flag enterprise was used. The developed index allowed to analyse business models of flag enterprises, including in particular the scope of resource and relation elements. The shift of the product diversifying point from the level of production enterprises on the level of distribution enterprises called service centres and steelyards becomes particularly important. The supply chain designed in such a way requires from flag enterprises of the distribution network to coordinate both logistical, commercial and marketing tasks as well as those connected with postponed production (postponed differentiation). The implementation of tasks of postponed production extends the resource base with rare resources and those with various levels of flexibility and complementary. However, analysing the distribution of steel products in Poland in the course of 20 years, one may put a hypothesis that relation competences have been of key importance in building positions of particular organisations in the network. The topic of business models is still inexhaustible and the research presented in the article showed further areas which should be taken into account in the next research stages.

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