

## NEGOTIATIONS IN THE CLOSED-LOOP ALUMINIUM SUPPLY CHAIN

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**Abstract:** In this study, an attempt has been made to characterize the conditions and the way of conducting negotiations in the closed loop of aluminium waste supply chain. This study focuses on the negotiations on this type of waste between the waste producer (aluminium producer) and the buyer (recycler) and it differs from the negotiations conducted in traditional logistic channels. The motive for the research was to establish that this type of negotiation had not yet been described in the literature on the subject. The research consisted in the analysis of documentation from 69 negotiated deliveries of aluminium dross from various EU countries to a Polish company dealing in its processing and the analysis of conducted structured interviews with representatives of 14 companies selling or buying aluminium dross from various EU countries. The investigation confirmed the research hypothesis that negotiators in a closed-loop supply chain apply intensified strategies to build the trust of the other party in the conducted negotiations and that closed loops are mainly price-based negotiations based on classical purchasing behaviour.

**Keywords:** negotiations, reverse logistics, negotiations in logistics, closed-loop negotiations

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### Introduction

Negotiations are an integral part of the functioning of any company, and the seller-buyer relationship depends on whether negotiations are successful or not. The ability to create highly cooperative relationships along this particular line is believed to be a key competence leading to a competitive advantage based on knowledge (Johnston and Kristal, 2008). The supplier-customer relationship is the basic foundation on which supply chains are based, and it is the success of negotiations in these pairs that the success of the entire supply chain depends (Thomas et al., 2013). Negotiations are at the heart of every relationship.

There are many, both prescriptive and normative, statements in the literature concerning the seller-buyer relationship, and research on B2B relationships and business-to-business negotiations is becoming increasingly accurate and provides more and more precise guidance and descriptions. However, most buyer-seller negotiation arrangements relate *implicitly* to the situation in traditional supply chains. Thus, the present study speaks of a certain gap in research on negotiations, and in particular on the specificity of negotiations, in broadly understood reverse flows. The nature of reverse flows and makes it possible to formulate the study that

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negotiations concerning such flows differ significantly from negotiations in the conditions of traditional "forward" logistics channels. This article summarizes a study aimed at reviewing the hypothesis of a specific nature of negotiations in reverse channels and at creating characteristics of such negotiations and formulating conclusions and guidelines for management in enterprises "closing" the supply chain loop.

### **Literature Review**

The closed loop in a supply chain is a possible result of implementing a reverse logistics concept that applies to all end-of-life products such as product returns, returnable packaging and waste that are likely to be remarketed. The essence of a closed loop based on the concept of reverse logistics is to direct the streams generated in the outbound channels in such a way that they return to the production and sales and feed production with raw materials. The literature on the subject provides many descriptions of reverse logistics channels. They are said to be based on environmentally conscious principles and laws as well as on profit and cost optimization, that there are factors complicating the marketing process, that forecasting for product returns and adjusting to the product life cycle changes is more difficult, that disposition options for a returned product depend on its condition, financial implications are not clear, and above all, they are referred to as stochastic (Ilgin and Gupta, 2013). It also mentions a lack of transparency and stability of flow processes, inability to control the product life cycle and difficult negotiations with business representatives (Tibben-Lembke and Rogers 2002; Starostka-Patyk, 2012 and 2016).

Business is familiar with different types of closed loops, such as those related to production, distribution and consumption (Lai et al., 2013; Scharry and Skjøtt-Larsen, 2002). However, the existing literature on the subject does not provide much information on the conditions and manner of conducting negotiations in closed loops. Govindan, Soleimani and Kannan (2015) have analysed 382 publications on reverse logistics and closed-loop supply chain, their study indicates the thematic areas addressed in these publications. They show that there are issues such as RL and CLSC network designing and planning, vehicle routing problem, decision making and performance evaluation or 3PRLP selection. Among the publications there are a few focusing on the issue of price and coordination, which is undoubtedly related to negotiations (Govindan et al., 2015; Krapp and Kraus 2017; Fereshteh and Fuzhan, 2013). There are also others who draw attention to relationships in closed loops (Östlin et al., 2008); however, as far as the area of negotiations in this particular context is concerned, one can speak of a research gap.

### **Research Hypotheses and Methodology**

The aim of the study was to formulate conclusions as to the conditions and method of conducting negotiations in the closed loop of the supply chain of waste coming from aluminium production, i.e. aluminium dross. The rationale was the nature of this type of closed loop. Aluminium dross is a type of waste generated during the process of aluminium production. It is the material found on the surface of liquid metal in the form of slags and skimmings, which are a mixture of metals, metal oxides and remainders of refining agents, protective coatings, crucible and furnace linings, etc (Czech and Holtzer 2012). The chemical composition of deposits and their physical properties can vary and depend mainly on the type of material and the number of impurities in the charge, melting and refining technology, the type of alloy produced, the technology of dross removal and treatment, the frequency of their removal and the time and manner of their storage (Schlesinger, 2006). From the market point of view, the specificity of dross is that it can be treated as environmentally hazardous waste, but also as a raw material that contains 30-70% of recyclable metallic aluminium. Dross can, therefore, be processed so as to produce products for the metallurgical industry (Czech and Holtzer 2012). Thus, the flow of aluminium obtained from dross constitutes a closed loop related to production.

The problem with the closure of the loop in the case of dross is that its value on the market is relative and variable, which affects negotiations between aluminium producers who want to get rid of the problematic but economically viable waste, and recyclers for whom it is a raw material for further use. This is exactly the place of contact between these entities where the negotiations take on the specificity of a closed loop, which distinguishes them from negotiations in traditional forward logistics channels. This is the key point in a closed loop, as recyclers give waste new value by transforming it into a product or raw material, and must be very careful so as to maintain their projects' profitable. They buy waste, the value of which is determined for them only by the value of products created on its basis. However, it needs to be emphasised that aluminium dross can come from a number of different processes carried out with the use of different technologies and can also be stored for a long time in different conditions, all of which affect its quality. This is a factor that generates a high degree of uncertainty and risk associated with buying and selling transactions for the customer. This is further complicated by the fact that the market for dross with significant aluminium content has become an international business. Offers for the purchase of dross come from numerous countries, also from the outside of Europe. An additional factor increasing uncertainty here is the inability to guarantee regular deliveries to the customer as dross is a waste, which means that its volume depends on the volume of aluminium production. Risk and uncertainty also often increase when the companies involved in the negotiations come from two different countries, thus with cultural, linguistic and geographical differences.

Based on these characteristics, two hypotheses concerning closed-loop negotiations have been formulated:

*H1. Closed-loop negotiators in the supply chain apply intensified confidence-building strategies to reduce risk and uncertainty.*

*H2. In closed loops, negotiations are conducted mainly based on price, following a classical purchasing behaviour.*

The study consisted of two parts. The first part consisted in the analysis of sales documentation (invoices, contracts and orders) and the progress of negotiations, based on e-mail correspondence and talks preceding the purchase/sale transactions of aluminium dross made available for sale by a Polish company processing this specific type of waste, which in the negotiations acted as the buyer. Sellers are aluminium producers, of which there are around 600 in the EU. Most of these plants are small to medium enterprises involved in extrusion and the recycling business, which serve as important actors in local communities (European Aluminium, 2019).

The analysis covered 56 completed transactions and 13 negotiated but unsuccessful transactions of purchase of the Polish aluminium dross recycling enterprise with 8 aluminium producers from Poland, Italy, Lithuania, Latvia, France, Belgium, Germany and Sweden in the period from the beginning of 2016 to the end of 2018 in the EU. The following were analysed: a) the form of communication b) the preparatory phase of negotiations c) the moment of anchoring d) the actual sale price in relation to the initial offer made e) the sustainability of the resulting business relationship. All examined transactions took place within the framework of a newly established cooperation with new partners and were not a continuation of previous business relations. The confidence level of this part of the survey was 23%, and since it was considered unsatisfactory, it was decided to extend the survey by including a second part.

In the second part of the study, short structured interviews were conducted over the phone with representatives of 11 companies selling or buying aluminium dross from different EU countries. The respondents to the interviews came from 8 contracting companies indicated in the first part of the survey and 3 other aluminium producing companies. The questions referred to the issues indicated in the description of the first part: the form of communication, preparations for negotiations, the moment of anchoring, the actual selling price and the nature of the emerging business relations, in which, in particular, assessment of sustainability of the relationship and the experienced uncertainties was focused on. The latter was measured using the Likert scale.

## **Results and Discussion**

### The form and nature of the communication

As mentioned, return logistics channels for secondary aluminium have become internationalised and globalized, and the market for waste with aluminium content has an international reach. Offers to buy country-specific waste from a producer may, therefore, be made in other countries. Due to the fact that the subject of the transaction is waste, there is no room for the use of traditional marketing methods,

and therefore direct marketing is often used in the form of an e-mail containing an offer. Negotiations in this market are also often international. In practice, this means that they are usually held in English, and very often it is English used as Lingua Franca (English as a Lingua Franca = ELF), described as the language of interaction between members of two different language cultures, none of which speaks English as their mother tongue (House, 1999). ELF users are less focused on the form and more on communication, with a high tolerance and understanding. These features are characteristic of the communication in the transactions included in the survey. In all analysed transactions, electronic mail has been the dominant form of communication, occasionally complemented by telephone conversations, and by one-off *face-to-face* contacts at times. The details of the communication concerning the transactions under this study are presented in Table 1.

**Table 1. Communication channels in the studied purchase/sale transactions**

	Number of deliveries made	Number of negotiated deliveries which have not taken place	Traditional face-to-face negotiation meetings	Email	Telephone calls
Supplier A	16	1	0	(approx. 640)	(15)
Supplier B	2	2	0	(approx. 40)	(0)
Supplier C	24	1	1	(approx. 286)	(30)
Supplier D	2	1	1	(54)	(8)
Supplier E	8	2	1	(approx. 204)	(25)
Supplier F	2	3	3	(approx. 275)	(30)
Supplier G	1	1	0	(10)	(0)
Supplier H	1	2	0	(1)	(approx. 10)
Total:	56	13	6	1510	118

During the period considered, 56 deliveries have been made, which means that each delivery is preceded by an average of around 30 contacts (mainly e-mail). This rather high result means that the parties have communicated intensively with each other, both in setting the terms of the transaction and the delivery, always in continuous contact, also after delivery. A strong need for exchange of information results from the buyer's uncertainty as to the type, composition and quality of waste material, the transport process, and the supplier's uncertainty as to whether the buyer has made the payment and it is satisfied with the transaction. The supplier's efforts to build a lasting business relationship and the prospect of further deliveries are not insignificant in each case. It is the uncertainty and risk associated with the transactions that determine the intensity of contacts between the buyer and the

supplier. The areas where business partners feel uncertainty and its intensity has been identified in the interviews conducted with the respondents in the second part of the survey. They are presented in Table 2.

**Table 2. Areas and average degree of uncertainty in buy/sell transactions on a scale from 0 to 3 (author's own analysis)**

	seller	buyer
type, composition, quality and characteristics of waste material	0	3
transport	1	1
payment	2,35	0
satisfaction with the transaction and the prospect of further cooperation	1,35	1,35
Note: 0 - no uncertainty (certainty); 1 - slight uncertainty; 2 - moderate uncertainty; 3 - high uncertainty		

Uncertainty in the negotiations included in the present study results from the fact that the buyer will not actually be able to check the purchased material until it has been delivered to the buyer's premises and which, as mentioned above, may turn out to be of low value (low aluminium content, high impurities, etc.). What is more, this is also due to the fact that those potential business partners are geographically remote and come from different countries, and thus from different cultures. In their interviews, however, the suppliers have made it clear that uncertainty decreases with every delivery which follows and when they meet in person, as face-to-face meetings appear to reduce uncertainty in business contacts.

#### Preparatory phase (pre-contractual)

In the initial preparation phase, the parties primarily sought to build trust. Trust is the central driving force of the buyer-supplier relationship (Rašković et al., 2013). In this phase, the parties attempted to mitigate the risk and uncertainty of the buyer as to the object of the transaction. All analysed concluded transactions were preceded by the supplier's efforts to provide as much information as possible on the object of the transaction, which consisted in sending photographs of the material, product samples, laboratory test results and descriptions of the product. At this stage, in all cases, both parties used cooperation techniques that were oriented at collaboration and trust building, in particular increasing the trust of the buyer. In the majority of the cases, the parties used strategies of integrative and distributive negotiations aiming, on the one hand, at making "the pie" look bigger, i.e. creating value in negotiations, where the scope of negotiations was extended by the perspective of subsequent deliveries, homogeneous, repeatable material or the possibility of price renegotiation in case it turned out that the goods differ significantly from the properties declared by the supplier. On the other hand, due to the importance of price itself, these strategies should be defined as distributive.

#### Anchoring

In most of the cases analysed, the moment when the price was mentioned for the first time was crucial for the whole negotiation process. The buyer avoided being the first to quote the price due to the fact that they had not had a possibility of examining the material in question. The supplier also delayed presenting their price offer because they were afraid of quoting too low a price to which the buyer would agree too quickly or – the opposite - too high a price that could discourage the buyer. The offer included each time the price and transport conditions expressed in appropriate INCOTERMS formula. Transport conditions were no longer negotiated afterwards but had a significant impact on further price negotiations. In all transactions analysed, there is no clear reference point in the form of a commonly known market price, which complicates negotiations very much. A certain point of reference is the quotation of aluminium on the London Metal Exchange, so there are occasions when the price is presented according to the formula:

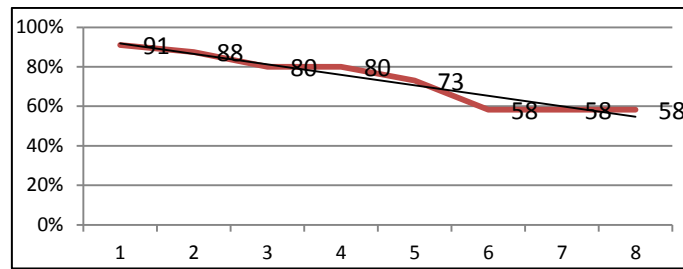
$$\text{price} = (\text{LME} - a) \times \text{metallic aluminium yield} \quad (1)$$

where: LME = price on the London Metal Exchange, a = set-off

This was also the formula proposed by 4 out of 8 surveyed suppliers in their first contacts. Price competition on the market of aluminium dross is quite an important element distinguishing this market from the aluminium market itself, where the main producers compete with each other in terms of product homogeneity through the class of its purity, delivery conditions or quantity. Defining the price of aluminium dross according to the above formula was intended to create the impression that the transaction would be conducted according to logical rules. The moment of anchoring begins negotiations which are primarily focused on the price of the product offered.

#### Agreed purchase price in relation to the initial price offer

Despite the seemingly clear and logical price formula, none of the transactions under the study was based on the presented algorithm, as it has not been designed to take sufficient account of the uncertainty factor resulting from the fact that the actual quality of the offered material is not fully known and the purchase is still burdened with risk for the buyer. The purchase price of each transaction which followed decreased; with one exception, however, namely, that for which fixed-price fixed-term contracts were signed. Figure 1 shows the prices as a percentage of the price that was quoted at the time of anchoring, together with the trend line for transactions with supplier E.



**Figure 1. Price as a percentage of the price of the initial offer in individual transactions with supplier E and the trend line**

As can be seen, the reduction of the price in subsequent transactions in relation to the price of the initial offer was significant, and in the last three transactions, it reached 58% of the price of the initial offer. This decrease in subsequent transactions was the result of the efforts attempted by the buyer, who benefited from the very fact that the price is extremely difficult to determine in the negotiations on waste. There is no market price for this type of waste and the supplier does not have a real "price list". The principle is known from traditional negotiations, according to which the moment of anchoring is of special importance, and the final price always remains around the initial offer, does not apply here either. Such large decrease in price also proves that the supplier is aware of the balance of power or even of the fact that this balance is tipping over to the buyer's advantage. Dross is a kind of waste material which the producer wants to dispose of, and its sale is an objective of secondary importance to them. Therefore, the supplier cannot guarantee continuity of its supply; however, as mentioned above, they still try to promise it. They lack important arguments in their negotiations with the customer. In this way, the supplier gains a significant advantage in negotiating each subsequent delivery, which they proved to use carefully, as the right price is the only factor that decides if the transaction is successful for them or not. It should also be recalled that the transactions under this study took place over a period of two years (2016 - 2018) and the behaviour of the buyers and sellers in the negotiations can be treated as a sign of a certain trend. In this respect, the negotiations described can be treated as distributive negotiations. The same was true for other suppliers. The lowering of the price in subsequent transactions took place on the initiative of the buyer who claimed that there was an increased supply of such waste on the market and consequently a lower price from other suppliers or claimed that the quality of the product had been lower than expected.

#### Sustainability of the resulting business relationship

All analysed transactions were concluded on the basis of contracts for one-off deliveries or short-term contracts or contracts covering several deliveries. A contract for an indefinite time was concluded with supplier C for several deliveries per month. Although the parties declared their willingness to cooperate in the transactions included in this study, the advantage of the buyer who adopts a more



passive attitude is noticeable. The supplier, on the other hand, is the party initiating the contact and more active in maintaining the relationship. Suppliers endeavoured to strengthen relations by expressing their willingness to make further deliveries, taking care of timely delivery, taking an interest in the test results of the delivered material and presenting further offers. Such distribution of power results from a relatively large supply on the dross market. However, this situation may change, and the advantage may shift on to the supplier if the market demand for dross exceeds its supply, happened a number of times over the years. The buyer then operates in intense competition from other dross processing companies and is able to accept a higher price more quickly in order to be able to meet the commitments for which they need raw material, i.e. dross. This price may prove to be so high that the profitability of delivery becomes questionable. The key issue for the buyer remains then to be the upper limit of the price which they are able to pay. This gives the supplier an advantage in negotiations, but eventually, it is none other than the price that will deem a transaction to be successful. This is demonstrated by the fact that among the transactions in the study there are also those which failed because the parties did not reach an agreement on the issue of the price.

Regardless of the outcome of the transactions in the cases described above, both parties declared their willingness to cooperate in order to create a buyer-seller relationship based on partnership, going beyond a one-off delivery. Above all, a partnership requires flexible, strong and continuous relations, which is a key factor of beneficial cooperation (Grundey and Daugélaitė, 2009). In the cases examined, there were no actions aimed at strengthening their relationship. The exchange of information was limited to communicating the essential details of the transaction and its object, and the parties did not go beyond the classical purchasing behaviour described by Cordón and Vollmann (2008). These include the focus on price and delivery, and the age-old "customer is king" business approach and the classic cost-effectiveness assessment. In other words, the transactions under the study represented the simplest possible relation, which is sometimes referred to as interaction (Rupik, 2009) or a typical transactional relation relying primarily on the achievement of one's interests (Tyszkiewicz, 2018). These transactions have not become the basis for closer cooperation and implementation of more advanced relationships, which may result from the fact that they did not manage to develop in the analysed period of time or from the specificity of reverse flows, in which there is no long-term planning due to limited possibilities of forecasting and fluctuations not only of demand but also of supply. The fact that it was not possible to develop long-term business partnerships in the cases examined also needs to be attributed to a strong link between the transaction and the price itself. As the literature on the subject indicates, the buyer often begins to treat one-off compromises on the part of the supplier as a basic element of cooperation and price discounts prove to be rather risky in a further perspective if they have not been well thought through. In the long run, this negatively affects the process of establishing

a certain level of trust, which is vital for the development of lasting business partnership relations.

### Conclusions

The conducted analysis allows for positive verification of the two hypotheses made. The negotiators in the analysed closed loops operate in conditions of high risk and uncertainty, which inclines them to apply intensified strategies aimed at building the trust of the other party. The risk, which is undoubtedly increased to that found in traditional logistics channels, is mainly due to the nature of the material being the object of the transactions. The uncertainty associated with such transaction can be eliminated, at least for the supplier, by meeting their potential business partner face to face. Closed-loop negotiations are based on classic purchasing behaviour. They are carried out mainly on the basis of price, which leads to the application of distributive strategies, although attempts are being made to apply co-operative strategies. Due to the specific nature of the material being the object of the buy/sell transaction it is difficult for companies negotiating the sale of this kind of a waste to establish a lasting relationship with buyers.

The observations from this study have made it possible to formulate conclusions for management areas both at the operational and strategic levels in companies dealing with sales or purchase of aluminium dross. At the operational level, it is advisable that negotiators on both sides prepare particularly and carefully for price negotiations, if necessary, before each transaction. These should be preceded by a thorough analysis of the profitability of the transaction and establishing the maximum and minimum price levels, in order to facilitate the process of reaching an agreement and avoid extended communication. This requires the involvement of other departments including production, accounting and transport in the process of determining the price. Decisiveness and consistency in negotiating the price ensuring that the other party perceives the partner's argumentation as transparent and logical increase the level of trust of both parties, the deficit of which is an immanent feature in the reverse logistics channels. Consistent and logical use of purchase price concessions while avoiding incomprehensible moves by the other party (e.g. an unexpected price increase made by the seller) is also intended to improve mutual trust and communication. The aim is to create a more lasting and in-depth business relationship between the negotiators, strengthen their cooperation and thus improve its quality. For this to happen, companies in reverse logistics channels should give a relatively high priority to negotiations, thereby placing greater emphasis on the competencies and actions of their negotiators and treat negotiations as a tool for achieving their strategic objectives. At the same time, a new area is emerging for research in the field of reverse logistics, which could address questions about the specificity of negotiations in reverse channels in other industries, the conditions for trust and risk in reverse logistics systems, requirements for negotiators, and above all, the ways and methods of building business relations in closed loops of a supply chain.

## References

- Cordón C., Vollmann T.E., 2008, *The Power of two. How smart companies create win-win customer-supplier partnerships that outperform the competition*, Palgrave Macmillan, New York.
- Czech A., Holtzer M., 2012, *Zastosowanie frakcji pylistych pochodzących z mechanicznego przerobu zgarów aluminiowych do produkcji żużli syntetycznych*, Archives of Foundry Engineering, 1(12), Special Issue.
- European Aluminium, 2019. Available at: <https://european-aluminium.eu/data/industry-overview/european-overview-aluminium-plants-location/>. Access on: 24.02.2019.
- Fereshteh M., Fuzhan N., 2013, *Revenue sharing coordination in reverse logistics*, "Journal of Cleaner Production", 59.
- Govindan K., Soleimani H., Kannan D., 2015, *Reverse logistics and closed-loop supply chain: A comprehensive review to explore the future*, "European Journal of Operational Research, European Journal of Operational Research", 240(3).
- Grundey D., Daugėlaitė I., 2009, *Developing business partnership on the basis of internal marketing*, Economics and Sociology, 2(1).
- House J., 1999, *Misunderstanding in intercultural communications: Interactions in English as a lingua franca and the myth of mutual intelligibility*, [in] C. Gnutzmann (ed.), "Teaching and learning English as a global language", Tübingen, Staufenburg.
- Ilgın M. A., Gupta S. M., 2013, *Reverse Logistics*, [In] S. M. Gupta (Eds.), "Reverse Supply Chains", Issues and Analysis, CRC Press.
- Johnston D.A., Kristal M.M., 2008, *The climate for co-operation: buyer-supplier beliefs and behavior*, "International Journal of Operations & Production Management", (28)9.
- Krapp M., Kraus J., 2017, *Coordination contracts for reverse supply chains: a 16 state-of-the-art review*, "Journal of Business Economics".
- Lai Kee-hung, Wu Sarah J., Wong Christina W.Y., 2013, *Did reverse logistics practices hit the triple bottom line of Chinese manufacturers?* "International Journal of Production Economics", 146(1).
- Östlin J., Sundin E., Björkman M., 2008, *Importance of closed-loop supply chain relationships for product remanufacturing*, "International Journal of Production Economics", 115(2).
- Rašković M., Makovec Brenčič M., 2013, *Buyer-Supplier relationships and the resource advantage perspective: an illustrative example of relational and transactional drivers of competitiveness*, "Journal of Competitiveness", 5(1).
- Rupik K., 2009, *Istota i zakres relacji*, [in:] K. Bilińska-Reformat (red.) *Relacje podmiotów rynkowych w warunkach zmian*, Warszawa, Placet.
- Schary P.B., Skjøtt-Larsen T., 2002, *Zarządzanie globalnym łańcuchem podaży*, PWN, Warszawa.
- Schlesinger M.E., 2006, *Aluminium Recycling*, CRC Press, Boca Raton, FL.
- Starostka-Patyk M., 2012, *The Closed-Loop in Supply Chain Management*, Supply Chain Management, 3(1).
- Starostka-Patyk M., 2016, *Logistyka zwrotna produktów niepełnowartościowych w zarządzaniu przedsiębiorstwami produkcyjnymi*, Warszawa, PWE.
- Thomas S.P., Thomas R.W., Manrodt K.B., Rutner S.M., 2013, *An Experimental Test of Negotiation Strategy Effects on Knowledge Sharing Intentions in Buyer-Supplier Relationships*, "Journal of Supply Chain Management", 49(2).

Tibben-Lembke R.S., Rogers D.S., 2002, *Differences between forward and reverse logistics in a retails environment*, California Management Review, 37(2).

Tyszkiewicz R., 2018, *Partnerstwo w relacjach dostawca-nabywca w przedsiębiorstwie*, Academy of Management, 2(1).

### NEGOCJACJE W ZAMKNIĘTEJ PĘTLI ŁAŃCUCHA DOSTAW ALUMINIUM

**Streszczenie:** W niniejszym opracowaniu podjęto próbę scharakteryzowania warunków oraz sposobu prowadzenia negocjacji w zamkniętej pętli łańcucha dostaw zgarów aluminiowych. U podstaw rozważań leży teza, że negocjacje dotyczące tego typu odpadów na linii wytwórcy odpadów (producent aluminium) – odbiorcy (recykler), różnią się od negocjacji prowadzonych w tradycyjnych kanałach logistycznych. Motywem podjęcia badań było ustalenie, że ten typ negocjacji nie został jeszcze opisany w literaturze przedmiotu. Badanie polegało na analizie dokumentacji z 69 negocjowanych dostaw zgarów aluminiowych z różnych krajów UE do polskiego przedsiębiorstwa zajmującego się ich przerobem oraz analizie przeprowadzonych wywiadów ustrukturyzowanych z przedstawicielami 14 przedsiębiorstw sprzedających bądź kupujących zgary aluminiowe z różnych krajów UE. Badanie potwierdziło postawione hipotezy badawcze, zgodnie z którymi negocjatorzy w zamkniętych pętlach łańcucha dostaw stosują wzmożone strategie zmierzające do zbudowania zaufania drugiej strony oraz że w pętlach zamkniętych prowadzi się głównie negocjacje oparte na cenie, bazujące na klasycznych zachowania zakupowych.

**Słowa kluczowe:** negocjacje, logistyka zwrotna, negocjacje w logistyce, negocjacje w pętlach zamkniętych

### 闭环铝供应链中的谈判

**摘要:** 本研究试图描述在铝废料供应链闭环中进行谈判的条件和方式。本研究的重点是废物产生者（铝生产者）和买主（回收者）之间关于此类废物的谈判，它与传统物流渠道中的谈判不同。该研究的动机是确定此类谈判尚未在关于该主题的文献中描述。该研究包括分析来自各欧盟国家的66个谈判交付的铝渣的文件，以及处理其加工的波兰公司的文件分析，以及对来自欧盟各国销售或购买铝渣的14家公司的代表的分析。调查证实了研究假设，即闭环供应链中的谈判者在进行的谈判中采用强化策略来建立对方的信任，而闭环主要是基于经典购买行为的基于价格的谈判。

**关键词:** 谈判，逆向物流，物流谈判，闭环谈判