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Evaluation of Procurement Logistics at a Multinational Company Manufacturing Thermal Insulation

SUMMARY

Nowadays, supply (purchasing) logistics must keep up with the accelerating macro-environmental changes (COVID-19, war, transportation route obstacles), be able to support the goals of the corporate strategy, current projects and potential innovations. We conducted a literature review and secondary research by comparative analysis of publications related to the topic by domestic authors. We prepared a purchasing cost analysis for a multinational company operating in the construction industry, which was chosen as the subject of the analysis. As primary research, we conducted expert interviews within the framework of qualitative research, which revealed the tools used by the purchasing department of a Hungarian construction production company (optimization and simplification of purchasing processes) to reduce purchasing costs in the face of increasingly expensive raw material prices. Through evaluation analysis (calculations), we confirmed the role of quantity discounts, changes in transportation methods, and changes in suppliers (factory in the same country or within the company group) in reducing procurement costs, in addition to lower purchase prices.

Keywords: acquisition, procurement logistics, centralization, HORECA holding, collaborative model, procurement cost reduction

Jel-kódok: M31, M37

INTRODUCTION

The covid-19 pandemic has had a huge impact on the entire world, including the hungarian population (vida-popovics, 2021). However, it has also had an impact on the business world, and new strategies had to be introduced in the field of procurement. The macro environment has changed, such as a changing, uncertain economic situation, increased use of technology (strengthening of online spaces), the definition of various new regulations, which have had a ripple effect on the micro environment (suppliers and customers) and the internal environment of the company. Raw materials arrived in europe from another continent even weeks later. During the covid-19 pandemic, several companies increased the level of their safety stocks, thus ensuring uninterrupted production and sales. The optimal safety stock varies from time to time, increasing if the

demand side forecasts are uncertain, or when longer delivery delays may occur. Incoming deliveries should be timed to the point in the inventory level at which the company would reach the safety stock level (Bélyácz-Pintért 2023).

In the construction industry across Europe, delays have also occurred in major projects, they have not started, or they have been abandoned.

Literature and secondary research

According to Chikán (2020), we can distinguish four subsystems of corporate logistics: waste management (return) logistics, distribution logistics, production logistics and supply (purchasing) logistics. Of course, these logistics areas are closely interconnected, and their optimal operation is inseparable from each other.

There is no uniform agreement on the interpretation of supply logistics in either the domestic or international literature. However, many similar terms have become widespread, which in many cases mean the same thing. Such terms include, for example, purchasing, procurement, supply, materials management, purchasing logistics, and inbound logistics (Benkő, 2017,14). In this work, in addition to the name of supply logistics, we will use purchasing logistics as a synonym.

The main tasks of supply logistics are the planning and preparation of procurement and deliveries. It is responsible for delivering all the items and services required for basic processes from external sources to the organization on time. (Szegedi-Prezenszki, 2017)

The new challenges posed by today's modern globalizing world (Chikán, 2020. p.56) have forced a new kind of vision, meaning that economic organizations had to reinterpret the concept and scope of „procurement” to better adapt to the intellectual and economic challenges of today. Supply (purchasing) logistics must now keep up with the accelerating world, be able to support the goals of the corporate strategy, current projects and possible innovations. Supply logistics is able to shape procurement markets, manage supplier relationships, and with its optimal operation provides a framework for value-creating, successful operational processes (Szegedi – Prezenszki 2008. 49-51).

The task of procurement, as a corporate function, is to provide the given enterprise with the raw materials and resources necessary for its operation, in accordance with the needs of production. In a broader sense, procurement is a process that creates and collects all the inputs necessary for the com-

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pany's activities, adapting to the strategic goals of the company. (Szegeci-Prezenszki, 2017)

Around the turn of the millennium, the scope of supply logistics mainly extended to the continuity of production and sales. After the turn of the millennium, procurement leaves production from its static role as a service provider, purchasing decisions are becoming increasingly complex, the rapid development of information technology and e-commerce offers purchasing the opportunity to use its available resources (one of which is suppliers) in the most efficient way, relationship management is playing a greater role in purchasing and thus in supply logistics (Vörösmarty 2002, 18-19). Previously, logistics was only a cost factor in corporate processes, but today this perspective has changed and is considered as a strategic factor providing competitive advantage. (Szentesi et al., 2024).

Baily-Farmer (1994., p. 69.) traditionally interpreted the purpose of purchasing as the fulfillment of the 5 M, according to which it must acquire the right quality goods or services in the right quantity, at the right time, from the right supplier, at the right price. In terms of its task, materials, semi-finished and finished products that are directly incorporated into products must be made available in accordance with the needs of production. In addition, the materials, services and tools necessary for the operation of the company must be provided, these resources will be the subject of indirect procurement (Lakatos, 2018.p.35). Nowadays, however, the scope of procurement is much more complex and its objectives have expanded significantly (Vörösmarty, 2002).

Supply logistics, as a corporate function in the field of procurement, can primarily be linked to the company's production and sales processes, which is why it is often referred to as procurement logistics. We can also find this name in the work of Rekettye et al. (2022, p.103), when the authors assign the tasks of procurement logistics to the production processes that build on each other. Thus, first of all: in the planning-construction-control phase, it must maintain a continuous supply of procurement needs arising from production needs. Secondly, it supervises and manages the supply of materials and internal material movement in order to ensure material processes. Thirdly, it stocks the materials that are the subject of procurement (in this case, excluding services). Finally, it registers suppliers with appropriate information management, places orders and also assumes the role of supply management. We can read a similar approach from Lakatos (2018), who says that the joint task of supply logistics and procurement is to produce the company's transformation processes, inputs and connect consumers directly or indirectly (Lakatos, 2018.p.20). Thus creating a supply chain or, in other words, a value chain. By carrying out its activities, supply logistics actually facilitates the implementation of material flow, thus directly contributing to the creation of value for the company, and can therefore be classified as one of the primary activities according to Porter (1985). A well-chosen procurement strategy can not only reduce costs, but also create a much more advantageous market position for the company. The most important issues are the following: maker or buy, choosing the right inventory mechanisms, choosing the supplier base, and applying centralization or decentralization (Kopcsay, 2016.pp. 105-107.)

In corporate practice, centralized and decentralized procurement methods are not sharply separated, but rather will form complementary procurement methods or will exist in a completely alternative way.

The main advantages of centralized purchasing are price advantage (Vörösmarty-Tátrai, 2017; Chikán-Demeter, 1999; Baily-Farmer, 1994), power (Vörösmarty-Tátrai, 2017) or position superiority (Chikán-Demeter, 1999) and economical resource utilization, better inventory management, unified administration (Baily-Farmer, 1994), and more manageable liquidity (Chikán-Demeter, 1999). The disadvantages of centralized purchasing are less standardized; in a comparison by author, differences can be highlighted. Inflexible (Vörösmarty-Tátrai, 2017; Baily-Farmer, 1994), individual needs are pushed into the background (Vörösmarty-Tátrai, 2017) or excluded (Chikán-Demeter, 1999), transportation costs are higher, transportation is slower (Vörösmarty-Tátrai, 2017), poorer communication, lack of local knowledge (Baily-Farmer, 1994), organization, transportation, coordination require more time and energy investment (Chikán-Demeter, 1999).

The collaborative model is characterized by relationship orientation and partnership (Novák, 2008; Sípos, 2008; Földesi, 2006), and its further characteristics are the negotiated selection WIN-WIN strategy (Novák, 2008), trust (Novák, 2008; Sípos, 2008), flexibility, reliability, quality performance (Földesi, 2006). Its aim is for a company to improve its competitiveness, therefore, working together by defining a coordinated, common goal is important (Szabó, et al. 2021). Conflicts arising from the formulation of common goals can be resolved through negotiations (Pintér, 2010).

The collaborative model assumes long-term cooperation, cooperation instead of competition is the typical form of behavior, and chain members see each other as partners, not opponents (Szegeci 2017). Partnership and good cooperation typically go hand in hand with the so-called applying the „win-win” concept, meaning that the benefits gained are shared between the cooperating partners (Valentyiny, 2021).

Building Industry

The year 2019 brought sustainable and stable growth to the construction industry. The year 2020 brought a standstill in both the building materials trade and the economy. One of the reasons for the decline was the fact that the preferential housing VAT could be applied for until December 31, 2019, which had a mitigating effect on the incentive for 2020. Construction production fell, by approximately 3.4% in the first quarter compared to the previous year. Industrial producer prices increased by approximately 8.5% at the same time (HVG.hu, 2020).

As the economic effects of the COVID-19 virus advanced, it increasingly affected the economy, including the building materials trade. There was a decrease in turnover in the sector (Szepesi, 2020). The pandemic has caused significant consumer panic worldwide, which was most noticeable in the case of durable and storable goods, as the accumulation of reserves gave people a sense of control over the crisis and reduced their sense of vulnerability (Keane – Neal. 2021). Confinement, closures, rising unemployment and increasing uncertainty contributed to the panic atmosphere, which led to a decrease in planned purchases (Coibion et.al., 2020). The sales turnover of

the construction materials product group increased by 43.27%, which exceeded the growth of total retail sales turnover by 9.27 percentage points from 2016 to 2020 (KSH, 2020).

The growth in demand in the construction industry, increased by state incentives, may be hampered by inflation in raw materials observed worldwide, but especially in Europe. Prices rose significantly, but demand did not respond to the price increase by decreasing (Gyenis, 2021). Fearing the closures experienced in the first wave of COVID-19, consumers began to panic-buy construction materials, and often brought their construction material purchases earlier than planned (Gyöngyössi, 2021). In 2021, to an average increase in raw material prices of 15-20%, contractors responded by increasing their construction prices by an average of 8%. The unsustainability of the situation became obvious. The Government decided to take action to protect domestic consumers. The source of the problem is the increase in exports due to domestically produced raw materials, the weakening of construction material imports, and thus the presence of oversupply in the domestic market. The Government has imposed an export ban on construction materials from October, and has proposed a pre-emptive right for construction materials. It was possible to consider and exploit the opportunities for purchasing building materials outside the EU, thereby alleviating demand pressure on the supply side (Szepesi, 2021).

The chosen thermal insulation manufacturer has factories and warehouses in several countries. The 9 factories operate in a similar manner, but there are differences in organizational levels. In some factories, all departments are located on site; purchasing, production, warehouse logistics. In other factories, however, part of the supply (purchasing) and distribution (sales) logistics has been centralized, and not necessarily in the same country. The Budapest headquarters handles the raw material procurement of 5 factories and the transport organization of 7 factories, so the logistics processes of the foreign factories are mostly carried out by Hungarian employees.

METHODOLOGY

We conducted a literature review and secondary research by comparing publications by domestic authors on the topic, focusing on procurement methods in supply logistics, models for collaborating with suppliers, and the analysis of procurement costs in multinational construction companies.

We conducted qualitative primary research, in which we conducted expert interviews. During our primary research, we examined at the selected construction company what tools and steps the employees of the purchasing department can use to reduce procurement costs, in the face of rising raw material prices due to the COVID-19 pandemic and subsequent macro-environmental changes, and what benefits centralized procurement brings. The goal was to optimize and simplify procurement processes and reduce procurement costs. We would like to demonstrate through an evaluative analysis that, in addition to the fact that the employees of the purchasing department try to agree on a lower purchase price with the supplier, there are other ways to reduce purchasing costs.

Expert interviews

According to Babbie (2004), qualitative research can reveal explanatory relationships and patterns. In agreement with this,

we chose the structured expert interview among the qualitative research methods because we believed it could be suitable for a deeper exploration of a specific problem area – in this case, the procurement analysis of a construction product manufacturing company. According to Steinar (2005, p. 63), the qualitative expert interview is a research method that allows a privileged insight into the fundamental experiences gained in their work.

The interview subject is the head of the purchasing department of the company under study. We explored the factors influencing procurement, the relationship with suppliers, the organization and operation of the purchasing department, and processes that affect each other in a chain reaction, covering the effects of the COVID-19 pandemic. As a purchasing specialist, the interviewee has an experienced understanding of the operational activities of procurement and its role at the tactical and strategic levels.

RESULTS

The price increase can be observed for all raw materials of the examined construction insulation manufacturing company, the beginning of which is typically associated with the period of the first wave of the COVID-19 epidemic. A further significant increase can be observed after the outbreak of the war, and then with the subsequent inflation. In addition, the most recent price increase for the main raw material was caused by the fact that the raw material did not arrive from Asia on time to the suppliers. These shipments pass through the Suez Canal, where 64% fewer ships were allowed to pass in April 2024 compared to last year due to the attack by the war group. Due to the more difficult procurement of raw materials and increased demand, the material price increased slightly in 2021, but the price really increased mainly in the post-COVID period. The purchase price of one material increased by 53% in 2023 compared to 2020. The supplier is in a monopoly position when purchasing this material, so there is no possibility of obtaining a more favorable purchase price than other suppliers. The price of the main raw material began to increase drastically during the COVID-19 pandemic, then decreased slightly in 2023, although in the spring of 2024 it was more than twice the average price in 2020.

In addition to the ever-increasing raw material prices, the company under review is trying to make production more cost-effective in various ways. One of the largest projects of the purchasing department in recent years has been to reduce the density and thickness of the plastic content of various packaging materials. This has also reduced procurement costs and, with less plastic used, environmentalists. The reduced-thickness packaging material is just as qualitatively suitable for the manufactured product as the thicker one, so more factories have switched to using it. The supplier's production cost increases slightly, thus the unit price of the reduced-thickness product is higher. By reducing the plastic content, one of the Hungarian factories of the examined company saves 4,168.00 Euros per month. Further cost reductions can be achieved by using the recycled polymers mentioned earlier. It is not possible to completely replace pure polystyrene beads with it, but the higher the percentage of recycled material that the factories are able to add to the mixture during production (the purchase price is more than 30% lower in April 2024), the more favorable the production cost will be.

The examined company already has multi-year partnerships with its suppliers for most raw and packaging materials, and long-term cooperation is the main characteristic. Suppliers can basically be classified into three categories:

- permanent, contractual partner
- occasional supplier (used when the permanent partner cannot deliver)
- long-known supplier, but only agreed for a shorter period of time and for specific quantities

There are advantages and disadvantages to using suppliers classified into each category, a combination of all three and proper coordination ensures the supply of materials. Permanent partners are reliable, they deliver on time, as long as their own stocks are at the appropriate level and there are no road regulations or other obstacles.

It may happen that the permanent supplier cannot deliver the necessary material, so it is necessary to turn to occasional suppliers. It takes more time and energy to organize each delivery, since we are not their permanent customers, they do not prioritize our orders. While the permanent, contracted supplier works with a lead time of 2-3 weeks, with an occasional supplier this time can double, which is why it is good to keep safety stocks. While the deal is being made, the safety stocks cover the quantities necessary for the production processes. It is fortunate that there are suppliers available to whom the examined company can turn when the permanent, contracted partners cannot deliver for some reason, but this only happens 1-2 times a year in the case of a job. In order for the occasional supplier to respond to our request more quickly, it would be advisable not to contact them only when there is a “problem” with the procurement, but to place 2-3 orders with them per year even when everything is going smoothly with the permanent, contractual supplier. This way, the occasional supplier would feel more appreciated, and when they are really needed, they would be much more communicative.

Suppliers that we entrust from time to time, although we would not need them, usually offer a price for a certain quantity that is more favorable than the prices of permanent, contractual partners. Of course, these can be achieved with special conditions, for example, the entire quantity must be delivered within a certain time interval or the payment deadline is much shorter than usual. Although the level of stocks increases in this way, thereby increasing the cost of holding stocks, it is still worth it for the company due to the lower purchase price, since the overall production cost is reduced.

Supplier ‘A’ is delivering the main raw material in April 2024 at a price of 1,802 EUR/mt, while supplier ‘B’ is offering a price of 1,630 EUR/mt for 200 tonnes of raw material. The condition of this preferential price is that all 200 tonnes must be ordered from supplier ‘B’ with a loading date in April. An average delivery is 25 tonnes, so the savings by accepting the offer are 4,300 EUR per delivery, or 34,400 EUR in total for 200 tonnes. While the savings per order may not seem large, the total savings are already significant. The purchasing department tries to conclude contracts with similarly favorable purchase prices several times during the year in order to lower the purchasing cost. If the purchase cost is lower, the production cost will also be lower, since lower-value raw materials are used and the production cost is a significant influencing factor in calculating the price of the finished product. Thus, it can be stated that the compa-

ny can achieve a reduction in the price of the finished product if they are able to obtain their raw materials at a lower price, even occasionally.

In the case of occasional/new suppliers, the procedure is also prolonged by the fact that the exact chemical composition of the desired raw material must be checked and approved by the company’s chemical engineer. The purchaser requests the documents from the supplier, forwards them to the chemical engineer and, after approval, negotiates the remaining details with the supplier. These include price, delivery time, quantity (capacity at the supplier). With a new supplier, it is also possible that payment is requested in advance for the first deliveries, rather than after transportation. The disadvantage of this is that the company’s capital is reduced earlier, it is tied up, and the supplier starts organizing transportation after the payment is received, so it can take several weeks for the material to arrive.

Thorough quality control is essential for the first delivery. In the case of packaging materials, this is easier, because it can mostly be determined by visual inspection whether it is damaged, and when it is fitted to the machines of the production line and started to be used, it is quickly visible whether it seals the product properly or not. In the summer, when the finished product is exposed to sunlight all day and the packaging material may melt, it indicates that it is of inadequate quality.

The testing process is more difficult for raw materials because the given raw material must be used for production to see whether or not it behaves like the proven material provided by the other supplier. If the raw material is of inadequate quality, it affects the quality of the finished product or even causes disruptions to the machines on the production line. In order to resolve the quality complaint more quickly, it is recommended to organize a joint meeting, at which the purchaser connects the technical staff of the supplier and the company itself, so that the specialists can discuss the properties of the material, share experience and find possible solutions to the problem.

All raw materials and packaging materials have a lead time specified by the supplier. The length of the lead time depends on the geographical distance from which the supplier procures the raw materials, how often they produce, how far away the factory is, and what mode of transport they choose.

For example, gaseous materials arrive at a German factory by rail because the extraction point within the factory can only be reached by rail. Rail transport times can vary greatly within Germany, from 1 week to 1.5-2 months. Due to regular rail strikes in recent years, they are completely unpredictable. The employees of the purchasing department found the following procurement solutions for this gaseous material: they were able to order a 50-ton tank of one of the gases, which the factory can continuously extract, always as much as they need. For this gas, deliveries are usually scheduled earlier than would be necessary in terms of inventory levels, but the considering the risk of late arrival, this timing is justified. Unfortunately, it is not possible to store a larger tank on the factory premises for the other gas, so incoming deliveries from this gas must always be unloaded into the factory’s own gas tank at the same time. The capacity of the tank in the factory is 25 tons and, in addition to the factory’s consumption, at least 1 delivery per month was required, which became unfeasible due to railway delays. Thus, deliveries arrive by truck, then are lifted by crane inside the

factory onto a railway wagon to reach the unloading point, and after unloading, the empty tank is placed back on the truck by crane. It requires more organization, but in this way the factory's supply can be ensured.

From January 2024, the company switched to road transport and transfer by crane. Renting your own tank is a fixed monthly cost, meaning that the factory always receives the delivery in the same tank, as the lifting arms and connections of the tank in the factory are special and the rented tank is adapted to them. The tank rental is 33.60 euros/day, payable for every day of the month, regardless of whether it is being delivered to us or is in the supplier's warehouse. If the company under review did not undertake to pay this, the supplier would not be able to 100% guarantee that it will deliver a tank equipped with the usual connections to us, which would either mean that the factory would not be able to lift the material, or the tank in the factory would need to be permanently rebuilt with connections, which would require additional costs and a call for a specialist. The other significant cost was rail transport, which is the payment of the rail car rental tariff set by Deutsche Bahn.

In 2023, the railcar rental fee for all transports was always the price set for the higher demand period, 136 euros/day from the first to the sixth day, and then 266 euros/day from the seventh day. Due to the unpredictable lead time, it happened that the transport arrived just in time, but it was waiting for unloading on the factory premises for several weeks. The railcar rental fee is charged to the examined company from the day the transport was started until the 2nd day after unloading. This meant an average of 14 days per month. Counting these 14 days, the average monthly rental of the railcar was 2,944 euros, or 35,328 euros per year. Although the introduction of road transport created slightly more work for the employees in the factory due to the use of cranes, the annual savings are significant. Thus, in addition to ensuring timely arrival (the transit time can be calculated by road), the procurement of raw materials has become more cost-effective.

The purchaser is assisted by historical production data, the monthly consumption rate of the given material for a given factory and the production plan, which can be found in SAP. In SAP, the purchaser checks the stock levels, which are in the best case current, and in order to discover any differences, the warehouse workers take an inventory once a month, and update the inventory level. Taking into account the current inventory level, any planned factory shutdowns (i.e. loss of raw and packaging material consumption) and the lead time set by the supplier, the purchaser can determine the date of the next shipment. It is mandatory to maintain the specified safety stocks, and the maximum inventory level can be the amount of the safety stock and the amount of the shipment that has just arrived. Higher inventories are maintained in cases where there may be a shortage of the given raw material. Thus, there is a risk that production may stop or pre-ordering may occur when the supplier announces a drastic price increase, usually due to an increase in the price of its own raw material. Maintaining an optimal inventory level is important for the company under review, to which the purchasers adhere, since if inventories are too high, the company's liquidity decreases, because part of the company's capital will be used up too early. Maintaining too high a stock level is not cost-effective, and pre-ordered products are inevitably subject to obsolescence.

However, maintaining a stock level higher than the minimum level does occur, as there are suppliers who offer different prices for certain order quantities. For example, a supplier that produces two types of packaging materials. The consumption of the two packaging materials is lower separately, so ordering smaller quantities is sufficient. The consumption is fluctuating, so usually only one of them needs to be ordered at a time. One of the purchasers does this at the company under review, but the supplier invoices it at a higher price. Another purchaser combines the orders of the two packaging materials, even if it is not absolutely necessary to use one of them, because the material arrives at a lower price (5 euro cents/kg above 3,000 kg).

The size of the safety stocks is re-evaluated, reviewed and modified if necessary on a monthly or quarterly basis. They take into account the losses during the production periods, as well as the macro- and micro-environmental factors that affect the suppliers and their materials. The purchasers can determine in which factory and for which material it is necessary to modify the size of the safety stock, to adjust it to the current market situation. On average, however, depending on the material, the amount required for 1-1.5-2 months of production is the size of the safety stock.

Procurement is centralized in the examined company, since there is a procurement department per country, not separately for each factory. There is no common warehouse per country from which to transport to the factories, the supplier delivers to the factories separately from its own site/factory. The Hungarian procurement department is located in Budapest, with four employees. One of the advantages of centralized procurement is a discount (rebate) on order quantities. For the specific raw material, the ordered quantity of the 3 factories reached 2,000 tons in the first quarter of 2024, with a quantity discount of 20 euros per ton, a saving of 43,192 euros was achieved.

If another subsidiary of the group of companies starts producing a raw material (for example, a main coloring material) that it needs, it can obtain it at an even more favorable purchase price (0.24 euro cents/kg discount) by purchasing within the group of companies than from an external supplier. Calculated for a Hungarian factory, the annual saving is 3,180.00 euros.

Expert interview

Since COVID-19, the procurement department has had to face new challenges. At the organizational level, it is difficult that buyers work online, so if the data and stock levels in the system do not correspond to reality, the work done by the buyers does not correspond to the real need. Since the buyers are not personally present in the factories, they have to rely on the employees there in many aspects, which has been problematic recently, because more and more expert employees are retiring, and there is usually little time available to train new colleagues. Therefore, it takes longer to get the right information. Another challenge is inflation, which, although lower in Western Europe than in Eastern Europe, increases the price of all raw and packaging materials. Some suppliers have been forced out of the market and the range of suppliers has therefore decreased. Since the COVID-19 epidemic, a wave of price increases has been observed, and the number of material supply problems is also increasing. Despite the everyday challenges, the purchasing department strives to perform as well as possible, to organ-

ize and execute purchases on time, in quantity and quality. For this, long-term, stable supplier relationships are essential. They also contribute to cost-effective operation by monitoring the raw material market, so that a lower price can be agreed upon during price negotiations. Although the company under review conducts centralized purchasing, they encourage the various factories to visit local suppliers (decentralized), also in order to obtain cost-effective purchasing. For example, switching from the previous French supplier to the local German supplier saves 2,820.00 Euros annually. With the rising price of raw materials, such a reduction is very favorable. Another example is the 'beams', plastic bases used in the assembly of the finished product into a pallet, which are placed at the bottom of the pallet. A local supplier also approached the factory and was able to offer a much more favorable price (annual savings of 64,328.00 GBP, which is the annual salary of 2 factory workers) instead of the previous foreign supplier. Among the things mentioned in the interview, it is also important to mention how it is worth preparing for a negotiation with a supplier. You need to arrive at the negotiation prepared, think in advance about what kind of quality of relationship you are striving for, which is typically long-term cooperation (collaborative model). Starting from this, we also shape the communication, which, if necessary, we adapt to the negotiation style of the business partner. Gather information about the supplier in advance, whether he can supply us (including several subsidiaries of the company group), and share information prepared for the supplier so that they can realize how much and what quality of materials we need. In the case of a quality problem, the main aspect that we take into account before reacting is to maintain long-term supplier relationships. Thus, we first collect all the necessary information within the company, examining that we did not cause the error in any way, and then we first contact the supplier. We assume that the supplier is acting in good faith and that he will investigate the complaint based on the information available to us. During the negotiations, we will assess the value of the damage caused by the quality complaint and forward it to the supplier.

CONCLUSIONS

The examined construction insulation manufacturing company is able to effectively monitor the raw material market and take advantage of the advantages of centralized purchasing by operating a centralized purchasing department. In addition, factories are encouraged to look for local suppliers, so they conduct hybrid (centralized and decentralized) purchasing to some extent. Taking advantage of quantity discounts provides a great saving opportunity for the company.

During the COVID-19 epidemic, the suppliers of the examined company also started to raise their prices drastically, but production did not have to be suspended at all, and in fact, it had to be increased compared to the previous period.

We verified with an evaluative analysis (calculations) the role of quantity discounts, modification of the transportation method and supplier change (within the country or within the company group of the manufacturing company) in reducing procurement costs in addition to the lower purchasing price.

Through expert interviews, we explored the tools used by the purchasing department of a Hungarian construction man-

ufacturing company (optimization and simplification of purchasing processes) to reduce purchasing costs in the face of increasingly expensive raw material prices.

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