



Buyer-seller Negotiation on Camera Vision System: Brazilian Case

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Abstract

In this article, a Brazilian automotive company engages in a buyer-seller, Type II negotiation, to reduce alternators' production costs. It identifies the possibility of replacing an imported bearing with a cheaper Chinese one, saving \$0.36 per piece. However, the change requires acquiring a new vision camera to detect the correct color of the bearing on the production line. The company negotiates with the Supplier, offering a high-quality solution that costs \$10,000, exceeding the available budget of \$6,363.64. In a scenario like this, companies freeze and look for more viable alternatives. This work proposes best managerial practices to elucidate how to resolve this impasse by presenting this descriptive and unique case study.

Keywords:

Automotive sector; buyer-seller negotiation; Type II negotiation.

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1. INTRODUCTION

This case describes a buyer-seller negotiation that took place in Campinas, Southwestern Brazil, regarding the application of the acquired concepts took place in an automotive company responsible for the production of alternators, where a project to reduce the costs of a rotor bearing is being elaborated, an indispensable part that ensures the proper functioning of the alternator. For compliance and ethical purposes, the real names of the involved parties and their companies are hereby omitted.

The alternator is responsible for transforming mechanical energy into electrical energy of the vehicle in which it is installed because the alternator has a rotating pulley connected directly to the vehicle's engine by a belt, which, when the rotational begins, the rotor internal to the alternator is also rotated and generates the electrical energy to be stored in the vehicle's battery. Other internal components of the alternator are also indispensable for its proper operation, such as the stator, regulator, and rectifier bridge.

Negotiation has been defined as a “process of communication by which two or more parties seek to advance their interests or those of the persons they represent through an agreement on the desired future action.” (Salacuse, 2003, p. 11). Business negotiations have attracted scholar attention recently (Dias, 2023; Dias, 2023a; Dias, 2023b; Dias et al., 2023; Navarro & Dias, 2024; Santos & Dias, 2024).

Negotiation has also been studied as business negotiations (Dias, 2023; Dias, Pereira, Vieira, et al., 2023); buyer-seller negotiations (Dias, Toledo, Silva, et al., 2022; Dias, Lafraia, Schmitz et al., 2024; Dias, Pereira, Teles & Lafraia, 2023; Dias, Leitão, Batista & Medeiros, 2022); virtual negotiations (Santos & Dias, 2024); Nonmarket Negotiations (Navarro & Dias, 2024); at the bargaining table (Dias, Pereira, Teles & Lafraia, 2023); retail negotiations (Valente & Dias, 2023); military negotiations (Dias, Toledo, Silva, Santos et al., 2022; Dias, Pires et al., 2022; Dias, Almeida, Silva, Russo, et al., 2022); contract negotiations (Cunha & Dias, 2021; Dias, Nascimento et al., 2021).

This article refers to a buyer-seller negotiation between two parties and multiple subjects, following the Four-Type Negotiation Matrix (Dias, 2020), as depicted in Figure 1:



Figure 1 The Four-Type Negotiation Matrix
Source: Dias, 2020. Reprinted under permission.

In the next section, we describe the methods applied to this article.

2. METHODOLOGY

In this article, we employed a qualitative study with interpretive philosophy and an inductive approach, following Saunders, Lewis, and Thornhill (2009). We investigated one buyer-seller negotiation between two parties for the acquisition of a vision system camera and other items to a Brazilian automotive company in São Paulo state as the unit of analysis, following Yin (2004), combined with direct observation by one of the authors.

3. PROJECT OBJECTIVE

Seeking cost reduction and greater dominance in the competitive market, the automotive company's project team sought alternatives that could replace the internal bearing of the rotor, which is currently marketed by the Seller, which has prices according to the national market, but does not compare to the Asian market, where the price has a greater tendency to fall and less bureaucracy for commercialization.

4. PROJECT DEVELOPMENT

After identifying a supplier suitable for the sale of bearings with the same characteristics as the seller bearings, the commercial sector appointed it, and we started validations as soon as possible. They need to be quick. Customers have been notified about the change in W12/25, and everyone is extremely excited about it. We will reduce \$0.36/piece, a significant improvement in the automotive industry. After product validations and testing, we begin testing the rotor assembly process.

Currently, the seller bearing is similar to all alternators. In contrast, the Chinese company's bearing will need to use three different models in the manufacturing process (it is possible to visually distinguish the models through the different colors of each one). On the production line, there is already a camera considered a Poka-Yoke, which only releases the part if it detects the presence of the bearing. However, it does not check pigmentation, and it is necessary to replace it for a model that, in addition to detecting the presence of the bearing, will need to detect the correct color of the same according to the alternator reference configured on the production line for the car model that is being manufactured.

5. NEGOTIATION OF THE MONITORING SYSTEM

The negotiation took place in the headquarters of the buyer, in the arrangement illustrated in Figure 2, as follows:

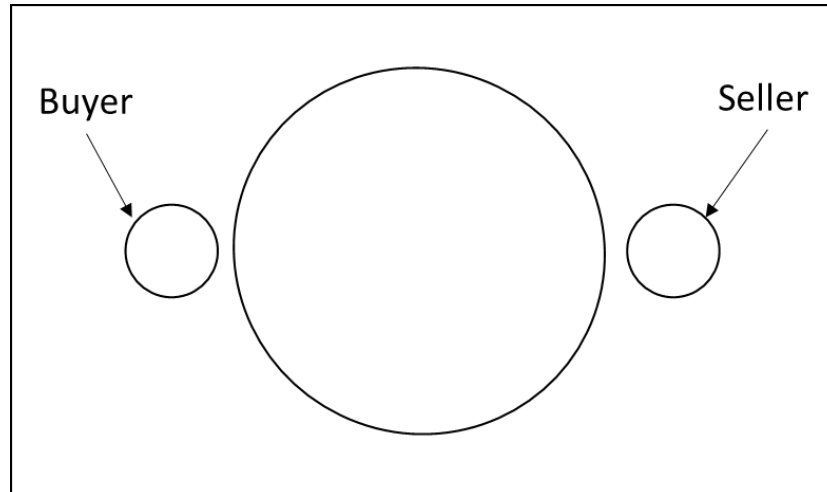


Figure 2 Typical Type II bargaining table.
Source: elaborated by the authors

Figure 2: Business Negotiation Canvas. Currently, the supplier is the company that offers high-quality cameras and vision systems for automotive companies. Whenever we buy products from this supplier, we have no problems with the quality and durability of the products, in addition to offering personalized assistance 24 hours a day. Knowing this supplier's system, we know that it works with tabulated values because even though they have commercial representatives in Brazil, the company is American and cannot change the price. At W14/25, we contacted a brand representative who visited the automotive company's Campinas plant to understand our process and indicate the best camera for our bearing verification system. He even took some samples and sent videos of the camera installed in the branch, detecting and failing the parts that were not in accordance with the specifications configured in the system.

We found the system we needed; we only had to raise the necessary funds for the purchase since the catalog stated it would cost \$10,000, and we had only \$6,363.64 available for projects.

We looked for other alternative in the market. We found two other companies with more affordable values that have already supplied to us in the past. However, their maintenance and customer service histories are not as satisfactory as the suppliers, so we left them as a possible future option if the negotiation with the supplier was not possible.

Another alternative would be the visual verification of the bearing in the final firewall process of the production line, but it does not guarantee 100% reliability in the system. Even if the operator marks the part as seen and approved, the system is not proof of human errors. This alternative would be proposed to the management if the purchase of the camera was not released and the risk to the organization was exposed as well.

To elaborate on the options, we looked for the factory maintenance manager who reported to us major problems with backups, camera licenses in general, and system updates that are

frequent, and whenever maintenance technicians need to perform these tasks, they lose days or even weeks to perform these activities, which he has already looked for options and training available in the market. However, most of them are above the amount released by the organization or require the technician to travel for an extended period to other organizations.

The supplier also told us that if we could find solutions to these problems during our negotiation, he could make the remaining \$3,636.36 available in three months, when maintenance will receive the partial budget for end-of-year purchases.

With this information, we scheduled a meeting with the supplier team, where we discussed our points related to the lack of funds available at the moment. The negotiators proposed buying our current camera to reduce the value of the new camera, but this goes against the compliance rules of the automotive company, and it was not possible to accept this negotiation.

So, we expose the problems faced by maintenance technicians today, who have significant difficulties with backups, frequent system updates, and licenses made available to restore devices.

They showed us in the contract that for two years, we have free assistance for maintenance and monitoring of the system; we can use this resource every time we need to carry out preventive activities, with the presence of a specialized technician, creating a team rotation so that everyone can follow the operations and carry out the deployment to the rest of the maintenance group. They also committed to sending self-explanatory material on system features that will facilitate daily activities, reducing maintenance time for handling the cameras.

Regarding payment, we proposed the advance payment of R\$ 35,000.00 reais (it will be advantageous since the automotive company has as a standard the payment of suppliers within 90 days after receiving the product) and the rest after the installation of the camera in the company (considering that we will only have this money after June, when maintenance will receive a part of the year-end budget), Enough time for the camera to arrive import and be installed for use.

The seller accepted the proposal; however, they will pass on the contractual information to the head office and will soon return to us with the conclusion of the contractual process.

6. IMPLICATIONS AND DISCUSSION

This article introduced a buyer-seller negotiation in the automotive sector, specifically in Campinas, Southwestern Brazil, where a project to reduce the costs of a rotor bearing was being developed. The company identified the possibility of replacing an imported bearing with a cheaper Chinese one. However, the change required acquiring a new vision camera to detect the correct bearing color on the production line.

The alternator is responsible for transforming mechanical energy into electrical energy of the vehicle in which it is installed. Other internal components of the alternator are also

indispensable for its proper operation, such as the stator, regulator, and rectifier bridge. Negotiation has been studied as business negotiations, buyer-seller negotiations, virtual negotiations, nonmarket negotiations, at the bargaining table, retail negotiations, military negotiations, and contract negotiations.

The automotive company aimed to reduce costs and gain market dominance by replacing the internal bearing of the rotor. They identified a suitable supplier for bearings with characteristics similar to the seller's and implemented validations and testing to reduce costs. The goal was to reduce \$0.36/piece in the automotive industry. The supplier offered high-quality cameras and vision systems, but the company had to raise funds for the purchase. Two other companies with more affordable values were considered, but their maintenance and customer service histories were not as satisfactory as the supplier's.

The automotive company successfully communicated its maintenance issues to the Supplier, leading to creative negotiation and a flexible payment plan. Supplier's offer of free two-year service and support materials was crucial in reducing costs and improving vision system efficiency. The cost-benefit analysis helped identify the benefits of replacing imported bearings and purchasing a new vision camera. The successful negotiation demonstrates partnership and collaboration.

Therefore, in this negotiation, there are five points to be discussed as the key success factors, as follows: (a) effective communication: The buyer was able to present its maintenance issues to the seller, which allowed the Supplier to understand the company's needs better and offer more appropriate solutions. (b) They engaged in a Creative negotiation: The automotive company proposed an installment payment plan that met its financial needs, and the Supplier accepted the proposal, demonstrating flexibility and willingness to find mutually beneficial solutions. (c) Service and support are key to the negotiation: The Supplier's offer of free two-year service and support materials was an important point in the negotiation, as it helped reduce costs and improve the efficiency of the vision system. (d) Cost-benefit analysis: The automotive company identified the benefits of replacing the imported bearing with a cheaper Chinese-made one and quantified the costs and benefits of purchasing the new vision camera. Finally, (e) Teamwork: The successful negotiation demonstrated the importance of teamwork between the automotive company and the Supplier, where both parties worked together to find solutions that met their needs.

In addition, the case has some implications in other fields or subfields of research, such as (a) role-play simulations (Dias & Silva, 2021; Dias, Netto, Oliveira et al., 2021; Dias, Andrade, Sotoriva, et al., 2021; Dias & Lopes, 2021; Dias, Lopes, Cavalcanti & Golfetto, 2020); trust in negotiations (Dias & Lopes, 2021; Dias, 2021); teaching materials on business negotiations (Dias, Waltz & Oliveira, 2021; Dias, 2020a; Dias, 2020b; Dias, 2020c; Dias, Duzert & Lopes, 2021); intangible assets negotiations (Sartori et al., 2020; Dias, Lopes & Teles, 2020; Dias & Lopes, 2020; Dias & Navarro, 2020; Dias, Lopes & Duzert, 2020).

6. CONCLUSION

The successful agreement between the buyer and seller produced a solution that satisfied their demands, providing free help and supporting tools to guarantee the effectiveness of the vision system. The buyer lowered the alternator manufacturing costs by substituting a less expensive Chinese counterpart for the imported bearing. Effective communication and creative bargaining helped the parties reach a mutually beneficial agreement, highlighting the need for teamwork in business.

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