

Case for Teaching

Avon Brazil: Optimization of Logistics Processes in a Direct Selling Company



Avon Brasil: Otimização dos Processos Logísticos em Companhia de Vendas Diretas

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INTRODUCTION

On that Thursday in January 2017, as Pedro headed to his first day of work at Avon Cosméticos Brasil’s main office, he was reflecting on the paths that had brought him to that moment in time. After several years working in smaller affiliates in Latin America, he was now about to become the supply chain director, a position he had long wanted, of one of the company’s main operations worldwide.

He was very happy to be returning to his own country, but he was aware of the challenge he had accepted when he had been invited to take over the position three months earlier by the regional vice president: old competitors were growing, new entrants were eager for market share, and he was going to an operation that was very proud of its past achievements, but that needed to become more efficient in various processes. Under his responsibility, logistics activities were going to be decisive for the good results of the direct selling company.

During the journey, Pedro remembered the previous week’s video-conference, when he was officially introduced to the entire executive board of the Brazilian operation. He recalled the impressions he had of each member of the board, but mainly of the comments made by José Roberto, who was known internally as JR, and who had been the manager of the logistics area for a long time, but had now been assigned to a new position in the plant’s management team. In a friendly manner he said how fortunate Pedro was to be arriving in Brazil when an investment project had already been put together that was awaiting final approval by the head office: “The whole project has already been structured and approved locally, and the budgets have been received... You’ll have to finish preparing the material to present it for global approval in May... Isn’t that great?”

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JEL Code: A2, L66, N16.

Cite as: Medeiros, F., Di Serio, L. C., & Moreira, A. (2021). Avon Brazil: Optimization of logistics processes in a direct selling company. *Revista de Administração Contemporânea*, 25(4), e190212. <https://doi.org/10.1590/1982-7849rac2021190212.en>

Editor-in-chief: Wesley Mendes-Da-Silva (Fundação Getulio Vargas, EAESP, Brazil)

Associate Editor: Paula C. P. de S. Chimentí (Universidade Federal do Rio de Janeiro, COPPEAD, Brazil)

Reviewers: Both of the reviewers chose not to disclose their identities.

Peer Review Report: The disclosure of the Peer Review Report was not authorized by its reviewers.

Received: June 04, 2019

Last version received: October 19, 2020

Accepted: December 07, 2020

of invited reviewers until the decision:

	1	2	3	4	5	6	7	8	9
1 st round	👤👤👤	👤👤👤							
2 nd round	👤👤👤	👤👤👤							
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JR had led the development of this logistics investment project, which comprised buying new equipment and undertaking expansion work. Internally, the project was called the Avon+ Project.

Pedro took on the position with its various challenges in this hectic business environment, and had questions: Should he pursue final approval of the capital investment needed for the Avon+ Project, an investment plan that had already been outlined by his predecessor, and simply take credit for implementing it? Or should he assess the current status of the processes and use continuous improvement tools that could increase the efficiency of the logistics processes, reduce costs, increase service levels and, as a result, reduce or even avoid any capital investment altogether?

THE MARKET

During the 2010s in Brazil, major corporations had been working hard to improve their logistics networks, and to understand the strategic importance that the operations area has, not only in relation to the release of resources through cost reductions, but also for generating value by

way of the services provided to its customers. In this context, the concepts of lean manufacturing and the series of tools such as 5S, kaizen, just in time, TPM, etc., started to play an essential role in the improvements that were applied. Especially in times of low growth rates, recessive economic environments, and fierce competition, the optimization of logistics processes was essential for protecting profitability and guaranteeing company survival. This aspect was underlined by the CEO of the Brazilian operation: "... our market is increasingly competitive, the pressure on prices and product innovation is constant. Logistics processes are a determining factor in our direct sales business and it is the company's constant task to seek more efficiency in order to improve the profitability of the operation."

Starting in 2015, the size of the cosmetics, toiletries, and fragrance (CTF) market shrunk, according to studies that were published in the Market Panorama produced by Abihpec (Brazilian Association of Personal Hygiene and Cosmetics Companies) (Figure 1). According to this association, there were more than 2,600 companies in this sector in Brazil, 20 of which are considered large, with net sales in excess of R\$ 200 million/year, and representing three quarters of the total market.

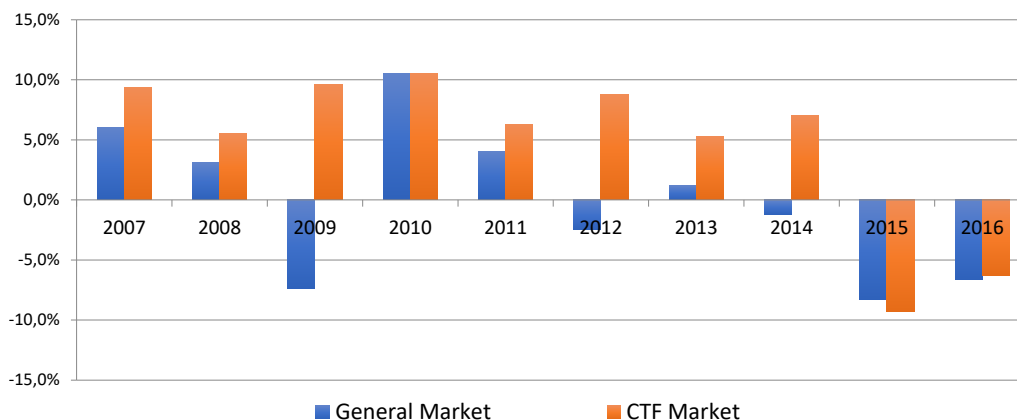


Figure 1. General market growth vs. cosmetics, toiletries, and fragrance market.

Source: Prepared by the authors based on Abihpec (2018).

According to Ilos (Logistics and Supply Chain Institute), distribution and logistics costs corresponded to 12.3% of GDP and represented 7.6% of company net revenue, on average, considering transportation, inventory, and warehousing costs.

In direct selling companies, where there is a distribution and home delivery process, this percentage

was even higher. A study published in 2016 by the Boston Consulting Group showed that 26% of all beauty and personal care products were marketed through direct sales and that logistics costs represented up to 13.1% of the revenues of these companies that covered a large geographical area.

CASE STUDY: AVON COSMÉTICOS BRASIL

Avon Cosmetics (Avon Products Inc.), an American company, was founded in 1886 by David McConnell in Manhattan, New York. Initially called the California Perfume Company, the company was renamed Avon in 1930. It started the concept of the direct selling of cosmetic products, thus providing thousands of women with work opportunities at a time when they could not even vote.

Internationalization of the company started in the 1920s and 1930s when it reached Canada and Europe. In the 1950s, it arrived in Latin America and in the 1980s in Asia and Africa. Avon has been operating in Brazil since 1958. In 2019, the company reported on its sales and distribution operations in more than 70 countries via its 6 million female sales representatives.

According to the 2015 annual report, Avon's total billings globally were \$5.7 billion, with 74% of sales in the cosmetics category and the other 26% of its 'fashion and home' business, which included beauty, fashion, and well-being products and household items. In this year, Avon was the second largest direct selling company in the world, and leader in the cosmetics segment.

In the mid-2010s, Avon's Brazilian operation was the most important in sales volume in the world. It also had the biggest sales force, with approximately 1.5 self-employed sales reps. The company had a plant in São Paulo and distribution centers in Bahia, Ceará, and São Paulo, the latter being the most important in terms of operation volume. The company had the highest level of construction certification for preserving the environment, and was highly automated.

Avon Cosméticos' main competitors in the Brazilian market in direct selling were Natura, which reported revenue of R\$ 7.9 billion; O Boticário Group, which had

expanded its business beyond the franchise model; Jequití, a company that was part of an important Brazilian economic group; Mary Kay, a strong international competitor; and Hinode, which had enjoyed exponential growth and had sales of around R\$ 2.7 billion.

The direct selling model

The World Federation of Direct Selling Association¹ represents the most important direct selling associations in the world, including ABEVD (Brazilian Association of Direct Selling Companies). It defines direct selling as a system for marketing consumer goods and services based on personal contact between sellers and buyers, outside a fixed commercial establishment. There are two categories of this model: (a) the more traditional, where there is only one level of sales representative, or consultant, who buys the products from the companies and sells them to the end consumer; and (b) multilevel companies, where the sales rep can receive commission on his own sales, but also on the activities of the other sales reps who are in his network.

There is an important difference between direct selling and traditional retail as far as the value chain is concerned. In the traditional model, there may be three agents capturing value between the plant and the consumer; a distributor, a wholesaler, and a retailer from which the final consumer purchases the product. In direct selling, consultants or sales representatives are those who collect part of the value of the business between the plant and the end customer (Figure 2). This allows direct selling companies to have a relatively higher gross margin, but the distribution logistics costs, because of the door-to-door delivery model, are significantly higher, meaning that the operating profit of both models is similar.



Figure 2. The value chain in the traditional system vs. direct selling.

Source: Prepared by the authors.

Direct selling in the world

According to WFDSA data, the direct selling market worldwide, which includes a range of different products, reached \$ 182.6 billion in 2016, representing growth of 1.9% compared to the previous year. The US and China were the biggest markets, each with 19% of global sales. They were followed by Germany and South Korea, with a

further 9% each, and Brazil, which represented 5% of the sales. Figure 3 shows the world’s ten biggest direct selling companies in sales volume in 2016.

The leading category in direct sales worldwide was well-being products, with 35% of global sales, followed by cosmetics with 32%. In third place, with 12%, were durable products for the home, followed by clothes and accessories with 7%.

Top 10 direct selling companies in the world

Position, country of headquarters, and billings in USD billion in 2016



Figure 3. Top 10 direct selling companies in the world.
Source: Prepared by the authors with information from [Direct Selling News \(2017\)](#).

The logistics operation of Avon Cosméticos Brasil: A diagnosis in search of optimization

Automation technologies for logistics operations have evolved significantly in Brazil since the 1990s, with the economy stabilizing and opening up to international business. Many technologies have been developed for automating warehousing and order picking processes, as well as systems for optimizing transport routes, from systems that integrate the entire logistics chain — supplier, manufacturer, and distribution center (DC) — to highly-automated equipment for receiving and warehousing products, for sorting and dispatching orders, and for loading delivery vehicles. Even in an emerging country, where labor costs are

much lower than in developed countries (which might limit companies investing in leading edge technologies, because the use of labor is economically more viable), Avon was considered a leader in automation with the most modern equipment available.

Improving logistical efficiency through the acquisition of equipment and physical extensions had, until then, been the *modus operandi* of the Brazilian affiliate. It was this type of investment that created the image of a pioneer and made Avon a benchmark in the market.

Pedro also noticed people’s pride in the company, which was positive and desirable for any manager who wants to diagnose and implement change. But he also

noted that this pride was tinged with certain arrogance, as if the company's history in the logistics area guaranteed its current and future competitiveness. In the words of one of the supervisors: "... we're good and we're a benchmark in what we do. We deliver products to millions of customers ... there are always other companies wanting to get to know our logistics area ..." According to another supervisor: "we've always had the best equipment available. This is what sets us apart from the competition."

Pedro knew that despite the image that had been built up over the years, there was a lot of work to be done in the area to put Avon at the forefront of logistic processes again, because the reality was that at that time, in addition to the low efficiency of the operation, there were a lot of comments coming from the sales force about the poor quality of the service.

The Avon+ Project, which had been conceived by the previous supply chain management, followed the pattern of decisions taken on previous occasions in the affiliate: it tried to solve logistics problems by acquiring new and more modern equipment, carrying out expansion work and hiring new people.

With the growth of the company in previous years, the product reception and warehousing areas had become problematic: the space for unloading was no longer big enough for all the traffic it received, and the storage area was full to capacity, so expansion work was being planned. A consequence of this physical expansion was that the new space would entail a reduction in the truck parking area. The solution found was to rent land nearby and set up a waiting structure, where the trucks would wait before being directed to the parking lot of the main building where they would unload their goods.

New support equipment, such as hydraulic leveling ramps, forklifts, conveyors belts, and stacker cranes, would be acquired for the new docks in the goods reception area, for the warehouse and for the order picking area, thus expanding total capacity.

The total investment of the project was approximately \$4 million, with an estimated lead time of eight months before the potentially expected results would begin to appear. It would start with formalizing the rental agreement, and adapting and building the truck parking lot structure, ending with the new equipment being finally installed.

For JR, the former director, convincing the CEO and other colleagues on the board that the solution for the internal logistics problems and for improving service levels involved an investment of millions of dollars was an exhausting process. After all, the whole company had to suffer cuts and reductions in order to accommodate

the project; investments in marketing and new product development were the most impacted.

Pedro spent the first three weeks of work going through the usual internal integration process and understanding the Avon+ Project. He concluded that a more detailed diagnosis of the processes was needed, so over the following five weeks he decided to concentrate on analyzing and diagnosing the situation of five large and important activity groups in the area.

1) *Product reception*

The product reception process is the operational stage within the supply chain, where the level of maturity of the whole chain becomes apparent. It is at this stage in the process that the accuracy of the inventory that enters the warehouse following the preliminary stages, such as demand planning, purchasing, manufacturing, and internal logistics, is detected.

In its main distribution center, this operation had an average vehicle unloading time of 48 hours, which included everything from the vehicle arriving at the gatehouse until it left by the same way. According to a 2015 survey by Ibope, which measured 357 companies in 11 sectors in the Greater São Paulo metropolitan area, the average time of this operation was around 5 hours, which showed there was an important opportunity for managing this process.

(a) Yard management — the movement of trucks was intense, and there were no clear signs or procedures in place for organizing the flow of vehicles.

(b) Dock management — the unloading space of each dock did not have enough pallets for unloading an entire truck. Goods were stored after unloading and each of the pallets had been manually checked, which was done by way of notes. There was no standardization of the codes or the information that would be needed on each pallet.

(c) Stock occupation — there were not enough positions for the pallets in the process that had existed until then, and it was going to be necessary to establish a routine for balancing the entries and exits of the distribution center operation in order to maintain the most adequate stock occupation level to avoid a bottleneck.

(d) Supplier scheduling — there was no prior scheduling of product deliveries, because the perception was that this removed flexibility from the supplier and the docks when receiving the goods. Suppliers were also reluctant to accept the concept of prior scheduling: in a city like São Paulo, where traffic interferes with the dynamics of deliveries, the team responsible believed that imposing a time slot was an additional problem.

(e) Management of products on consignment from other companies and the flow of obsolete products — part of the inventory was constantly dedicated to low turnover items and this, of course, should comprise a very small part overall. In mid-2016, stocks in this particular operation reached more than 35% of those destined for low-turnover items.

(f) Performance indicators — in addition to the situations noted above, there were no known, standardized productivity indicators in the reception process stages. Each dock had its own team of workers and none of the professionals had productivity notes that were minimally comparable between teams.

Pedro wondered about the future impacts of increasing the capacity of these sub-activities using new machinery and building extensions without a proper transformation of the way these activities were carried out.

2) Warehousing and moving products

The finished goods warehouse in Avon's main operation was in a very complicated situation from the point of view of its processes. There were bottlenecks in receiving and warehousing products because of an occupation rate that exceeded 117%, which meant that there were products stored in corridors and places outside the main building.

To solve the product reception and warehousing situations, for example, the Avon+ Project was considering physically extending the area: part of the parking lot would be used for construction and, since the space for trucks would reduce, a nearby plot of land would be rented for parking.

"Building work and new machinery are going to solve the problem..." thought Pedro. "... but how long is it going to last?" Initiatives for optimizing inventory density, improving the accuracy of forecasts, and increasing storage and supply movement productivity would also generate consistent results. So creating a culture of continuous process improvement would be an important internal change: "But is this the right moment for such an initiative?" Pedro thought.

3) Picking orders

The order picking stage is when orders are processed for dispatch to end customers. At this stage, management indicators, such as productivity, safety, and quality were mastered better than at any other stage in the operation. Most of the resources, people, and machines were also allocated to this stage in the process.

In direct sales distribution centers it is common to oversize the picking equipment (sorting), but to undersize

the packing equipment. In the case of Avon, the packing area was adequately sized in terms of equipment, but it worked with an OEE (overall equipment effectiveness, or efficiency index of the operation machinery) of less than 60%, when the ideal figure is above 90%. Huge failures and long downtimes were detected for emergency maintenance and minor repairs.

During the diagnosis process, inefficiencies were also detected in an area that was considered simple and of little relevance: the final box labeling process. If all the previous steps reached the desired level of efficiency of 90%, then the labeling area would not have the necessary capacity for dealing with it.

Both the acquisition of new equipment and the hiring of personnel were included in the Avon+ Project.

So-called 'campaign changes' took place periodically: these were sales campaigns in the cycle that required the position of a product to be reconfigured in order to gain in productivity. It was found that in each cycle, DCs spent 5% to 10% of all the available worktime in activities related to changing campaigns. Comparing this with a common manufacturing process in companies, this would be the equivalent of setting up machines when the line is changed from one type of product or production to another. How could losses and waste be reduced and, mainly, how could the distribution center's campaign change indicators be balanced?

Pedro soon concluded: "Concepts and pillars of total productive maintenance would be essential here."

4) Transporting and delivering orders

Many variables needed action by the company due to relevant elements that had an impact on direct sales, such as geographic spread, home delivery, high order numbers, and short sales cycles. Some of the topics at this stage were:

a) Punctuality in deliveries

This refers to delivery punctuality and uses a term that is known in the market as 'on time deliveries' (OTD), which is the percentage of deliveries made on time in relation to the total number of deliveries to be made on a given and promised date. At Avon, this rate was 92%, and discussion revolved around whether improving this figure might positively affect sales and the loyalty and engagement of the sales representatives.

b) The satisfaction of the sales representatives

Sales reps are important players in the Avon direct selling process and their satisfaction with the company in various aspects, including logistics issues, translates into greater engagement and bigger sales. At Avon, sales

reps were classified into several groups according to their marked characteristics, such as: higher sales (top sellers), opinion makers, entrepreneurial sales reps and consumers. This classification had to obey multiple factors, such as the average ticket, length of the relationship, geographic region, among others.

c) Vehicle availability and load factors

Vehicle availability and delivery efficiency were fundamental factors for the success of transport operations and elements of competitive differentiation that could result in relevant aspects, such as customer loyalty and the engagement of sales representative teams. Contracts with transportation service providers ensured consistent and measurable service levels that made control mechanisms possible.

The operation investigated showed consistency in its vehicle availability indicator of more than 99%, a comfort level experienced by few companies in the market. The transportation area played an exemplary role in leading the search to improve vehicle load factors that, because of the configuration of sales and fluctuations, were not always complete.

d) Risk management in transportation

With regard to public security, there were regions in the country with high accident rates that needed to be dealt with by Avon, as the losses recorded were considerable in these places, and led to increased costs. Pedro needed to use a methodology to find solutions for minimizing these losses.

5) *Reverse logistics*

Reverse logistics was the process whereby products from exchanges, returns, or customer complaints were reprocessed at Avon's distribution center. These could either be reincorporated into inventory, or destroyed if there was no possibility of reuse.

This operation at Avon was outsourced to a logistics operator hired to separate products that came back and that could still be used. But there was no agreed service, and the process was slow and not integrated into the distribution center's operations: when these products were reincorporated into inventory, they were commonly unsaleable.

FROM DISCUSSION TO PRACTICE: HOW CAN THE EFFICIENCY OF AVON COSMÉTICOS' LOGISTICS PROCESSES BE IMPROVED?

In direct selling, logistics efficiency plays a fundamental role in customer and sales rep satisfaction, and in improving sales results and margins. Avon Cosméticos was going through a period of decreasing market in the middle of the 2010s when Pedro, the new supply chain director, assumed the position in Brazil.

Based on internal discussions and diagnosis of the status of Avon Cosméticos' logistics operations, Pedro could proceed with the approval of the Avon+ Project: improving the efficiency of logistics processes by acquiring new equipment and physical expansion was the path that was known and historically used by the company in Brazil.

On the other hand, Pedro foresaw a series of benefits for the company that would result from engaging the leaders of the areas and using the well-known tools of continuous improvement. He could revolutionize the way the affiliate acted with regard to increasing its productivity and improving service levels, by initiating a transformation in the company's innovation culture in Brazil. He estimated that the investments necessary for developing people, training, eventual consultancy services, and the occasional purchase of equipment were around a quarter of the planned investment in the Avon+ Project. But the path was long and uncertain: would he be able to implement changes and generate results in a timely manner if he chose this path?

Pedro needed to make a decision quickly and it had to be shared with Avon Brasil's board of directors — May was less than 30 days away and the affiliate needed to present its numbers and projects at the company's global meeting.

Teaching Notes

■ ABSTRACT

This case study aims to develop in each student analytical competencies by evaluating current logistics processes and, from this understanding, to use the knowledge gained on tools and theories of continuous improvement to propose solutions and discuss strategic alternatives for the company to improve its processes. Efficiency in logistics operations plays a key role in the results of direct sales companies because there are thousands of customers and daily deliveries that bring complexity to the process. The new Supply Chain Director took over the position in a difficult period of falling market in the country. Thereby he implemented internal discussions to evaluate the status of various processes and to engage leadership. He intends to find ways to improve logistics processes through capital investments or by using continuous improvement tools that could provide cost reductions and increase service levels. The case can be used in undergraduate courses, graduate courses, and also in professional education in themes related to business management, supply chain, logistics, and industrial operations.

Keywords: logistics; supply chain; optimization; direct selling; continuous improvement.

EDUCATIONAL OBJECTIVES AND RECOMMENDED USE OF THE CASE

The teaching objectives of the case study are to: (a) stimulate discussion with regard to the status and effectiveness of Avon Cosméticos Brasil's logistics processes; and (b) stimulate discussion based on the concepts and tools of continuous improvement. In addition to issues inherent in good business management, it is expected that students will use the theoretical tools that are available in continuous improvement and be able to explain how theory can help increase productivity, reduce costs, and increase competitiveness. Students are expected to reflect on the challenges experienced by the company's professionals, understand the dynamics of this industry, and seek to associate the various approaches and methodologies for continuous improvement for solving the dilemmas of the supply chain director. If, based on study of this case, we can arouse in students a constant questioning of the effectiveness of the processes that surround them, then we understand that the case will have made a notable contribution.

Pedro was under pressure to choose between two alternatives. On the one hand, he could pursue approval of the Avon+ Project that he had inherited from the previous management, and which consisted of investments in equipment and physical expansion to improve productivity

■ RESUMO

Este caso de ensino visa a desenvolver no estudante a capacidade de análise situacional de processos logísticos e, a partir desse entendimento, utilizar conhecimentos adquiridos sobre ferramentas e teorias de melhoria contínua para propor soluções e discutir alternativas estratégicas para a companhia melhorar seus processos. A eficiência nas operações logísticas tem papel fundamental nos resultados de empresas de venda direta, afinal, são milhares de clientes e entregas feitas ponto a ponto que levam complexidade ao processo. O novo diretor de *supply chain* da Avon Cosméticos assumiu a posição no país numa fase de dificuldades e mercado em queda. Desse modo, ele implementou discussões internas para levantar o status de vários processos logísticos e engajar as lideranças das áreas. Assim, ele pretendia encontrar formas de melhorar os processos logísticos seja por meio de investimentos de capital, seja utilizando ferramentas de melhoria contínua que proporcionassem reduções de custos e aumento dos níveis de serviço. O caso pode ser usado em cursos de graduação e pós-graduação *stricto e lato sensu*, além de educação profissional com temas ligados à gestão, *supply chain*, logística e operações industriais.

Palavras-chave: logística; *supply chain*; otimização; venda direta; melhoria contínua.

and service levels. This was historically the company's *modus operandi* when it came to projects for improving the performance of its logistics processes. On the other hand, he could head up a process optimization initiative and use known tools for continuous improvement, reducing capital investments and reverting it to the benefit of those areas that had been most impacted when the Avon+ Project was approved locally, such as marketing and product development. This trade-off must be explored and appreciated when discussing and analyzing the case.

This case can also be studied from the perspective of a series of approaches and methodologies for continuous improvement, while focusing specifically on one of them. This will depend on the level and maturity of the students and the depth of the analysis of the tools of continuous improvement that is established by the teacher when developing this course.

Recommended additional bibliography

In addition to the material listed in the bibliography, we suggest other texts that can assist in discussions and contribute toward increasing students' knowledge of relevant aspects addressed in the case: [Lawson and Samson \(2001\)](#), [Teece \(2010\)](#), [Johnson, Christensen and Kagermann \(2008\)](#),

Quinn and Hilmer (1994) and Frei (2006). The complete references are listed in the end.

DATA SOURCE

The Avon Cosméticos case study provides important information about the status of the company's logistics processes and the challenges faced by the new supply chain director when he took over the Brazilian affiliate, one of the most important worldwide, in the mid-2010s. He needed to optimize processes, reduce costs, and increase profitability for the business to survive.

In preparing the case, primary data were collected by the first author, an Avon executive: interviews were conducted with those leaders of the operations areas who were involved in the company's logistics operation. The author's experience with the change process implemented at Avon also enriches the description of the case. Public data from the direct selling market and the global and Brazilian personal hygiene market were also used.

SUGGESTED QUESTIONS FOR DISCUSSION

A set of questions was prepared that can guide discussion of the case, but the authors stress that neither the discussion nor the questions should be limited to the material presented here. The teacher must feel free to explore the case using other approaches or questions that generate pertinent reflections in his/her students.

Question 1. In your opinion, what are the advantages and disadvantages from the company and Pedro's perspective of continuing with the Avon+ Project?

For an analysis of the case in class, it is suggested that half of the students split into groups and discuss the disadvantages, and the other half discusses the advantages. They then subsequently share their findings. If they have not already been explored, the following points should be discussed by the groups: (i) Do you consider that the internal processes were properly assessed, mapped out, and compared to market benchmarks when developing the Avon+ Project?; (ii) Might the negative impacts on investment levels in two important areas, marketing and product development, be reflected in Avon's future competitiveness vis-à-vis its competitors?

Question 2. How do you assess Pedro's concern with regard to the closeness of the global meeting and the need to develop the new project? Based on what the case showed, do you think this could be a real problem?

The aim is to have a discussion on the relevance of Pedro's diagnosis, his concerns with the timing and deadlines

(political issues may arise), and his view on the priorities and impacts of each alternative.

Question 3. How do lean concepts contribute to the correct diagnosis and improvement of the logistics processes? Name a tool that could be used and why. List the main problems found by Pedro in the goods reception area after he carried out his diagnosis.

If the student has already had contact with the lean concept in previous sessions of the course (preferable), or has to research the subject when assessing the case, we would stress the importance of the concept in the search for process efficiency.

Question 4. The order picking area had the largest allocation of resources, people, and machinery, but Pedro's diagnosis indicated that it was not very effective and that there were several points for improvement. How could the concept of TPM (total productive maintenance) help with the constant machine downtimes?

The TPM concept is relevant for solving some of the problems raised by Pedro. It is important for the students to have had contact with the concept previously so they can develop possible courses of action.

Question 5. Reverse picking was ineffective, despite its potential for increasing the availability of products for sale. Do you think that the problem was caused by the fact that Avon outsources this activity? What could be done about its partnership with the logistics operator? Under what conditions and why would internalizing the reincorporation of products make sense in your opinion?

ANALYSIS OF THE AVON COSMÉTICOS DO BRASIL CASE

The case suggests discussing the strategic path to be taken by Pedro from the two alternatives that are available to him: pursuing approval of the Avon+ Project, which proposed hefty investments in equipment and expansion, or diagnosing current processes in greater depth and proposing the use of tools for improving them, thus reducing the capital investment required.

The authors' previous experience shows that the time needed for discussing the dilemmas and reaching a conclusion is effective when distributed as follows: at most 20% of the total time available for discussing the Avon+ Project option, and at least 80% of the time discussing the option of improving the logistics and packing processes or sub-activities.

Pedro took over at the Brazilian affiliate facing a series of challenges and a logistics investment project that had already been approved locally. The company was trying

to optimize its processes and improve service levels, and it was believed that the Avon+ Project would, once again, put the company at the forefront of logistics operations. Based on information about the case, the following are points that favor the Avon+ Project:

- . A common strategic decision in the company and one that is less susceptible to disagreement;
- . Security: from Pedro's point of view, it proved to be the least risky decision, taking into account the background and the effort already invested in it;
- . Readiness: the project had already gone through the local approval stage and was practically finalized for global presentation;
- . Politically easier: it had already been approved by the local board. Pedro would avoid further discussions and the process of convincing people that a new project would generate value.

The disadvantages, or points that were unfavorable to choosing the Avon+ Project, are:

- . Maintaining an internal culture that focused little on process improvement and that understood greater productivity as being only the result of investments in expansion, hiring new people and buying new equipment;
- . Capital investments of this magnitude generate greater financial impacts on the company's results because of the increase in fixed assets. They also have an impact on cash flow;
- . Stopping the capacity to innovate in products and services: the product development and marketing areas would have suffered the greatest impact at the time; there would be fewer resources for innovating, creating products, and promoting them in an increasingly competitive market;
- . Retaining bad and unproductive processes that, in the guise of new buildings and equipment, could only be covered up for a limited time.

As an alternative to the Avon+ Project, another way to approach the problem would be to start a process improvement project based on Pedro's diagnosis.

Considering the relevance of all the work Pedro had done in five weeks, and which gave him a broad understanding of the situation, his concern with regard to the time available to put together a new project to present to global management seems unnecessary. He could certainly put together a project aimed at improving processes that would reduce capital investments. He would be offering

clear advantages that would be readily accepted both locally and globally:

- . A significant reduction in planned capital investments in Avon+;
- . The freeing-up of resources for the new product development and marketing areas;
- . The start of important changes in the company, with the creation of a culture that focused on continuous improvement.

Furthermore, if everything went according to plan, the Avon+ Project would only start showing full results from the eighth or ninth month after implementing it. In this time span, Pedro could start a process improvement project in several areas and begin reaping results. This was, therefore, a viable initiative and a clear opportunity to improve service levels with less investment.

Reception: Where the problems begin

Ballou (2001) mentions that a logistics system is measured in terms of availability, operational performance, and service reliability. The system must have three important objectives: to reduce costs, reduce invested capital, and improve service.

In Pedro's initial diagnosis of the reception area, lean concepts could help at several critical points that required attention:

- . The average unloading time was very high compared to benchmarks: from the arrival of the truck to its departure, Avon took 48 hours while in the market the time was around 5 hours; the lack of a delivery scheduling mechanism favored this unusual situation;
- . From analyzing the sub-activities, it is clear that there were no established movement procedures in the yard, and the docks were also under-dimensioned;
- . The deliveries were checked manually and there was no code-reading system for entering the items;
- . There was also not enough space in the stock area for receiving all the pallets, a situation aggravated by the lack of a routine for balancing entries and exits;
- . Allied to all this, there were no standardized and known productivity indicators to measure the performance of the teams.

There are several points for improvement in activities related to the receipt of goods, and the lean manufacturing concept would help by emphasizing the need to assign a value to activities and create order to increase the efficiency of the process. Lean thinking combines concepts of lean

production with principles of waste elimination and value creation (Womack & Jones, 2003). Its principles are used to identify the value stream, increase quality and reduce costs. A common tool in a lean system is the kaizen philosophy, which states that everything can be constantly improved. It involves holding an event to improve performance in the organization, and to develop a support system for continuous improvement over the long term (Aken, Farris, Worley, & Doolen, 2004). The event must follow this sequence: (a) training to divulge the methodology to those participating; (b) mapping out the flow of the area and collecting quantitative data; (c) brainstorming in order to identify the actions necessary for eliminating waste; (d) carrying out the actions; and (e) presenting the results achieved.

In addition to creating a delivery scheduling mechanism, Avon could standardize merchandise labels for use by all its suppliers, thus avoiding any delivery requiring manual checking. Teams should also create forecasting processes for the entry and exit of items that would avoid use exceeding the area's capacity. All this would be combined with the use and monitoring of clear team performance indicators.

Picking orders: A lot of resources and a lot of problems

Even though more resources were allocated to this area with the idea of serving the customer better and more quickly, we see that the processes were inefficient.

TPM (total productive maintenance) could help because it is a work philosophy that penetrates all areas of the organization, and is a management system that aims to eliminate all loss or waste. The ultimate goal of TPM is to maximize the use of assets:

“Any physical asset that is required to perform a certain function will be subject to a variety of efforts. These efforts will generate fatigue and this will cause the deterioration of this physical asset, reducing its resistance to fatigue. This resistance will be reduced to a point where the physical asset may no longer perform as desired, in other words, it may fail” (Moubray, 1992, p. 130).

TPM is normally represented as pillars (Figure 4): autonomous maintenance; planned maintenance; focused improvement; training and education; safety, health & environment; quality; early equipment management; TPM in administration.

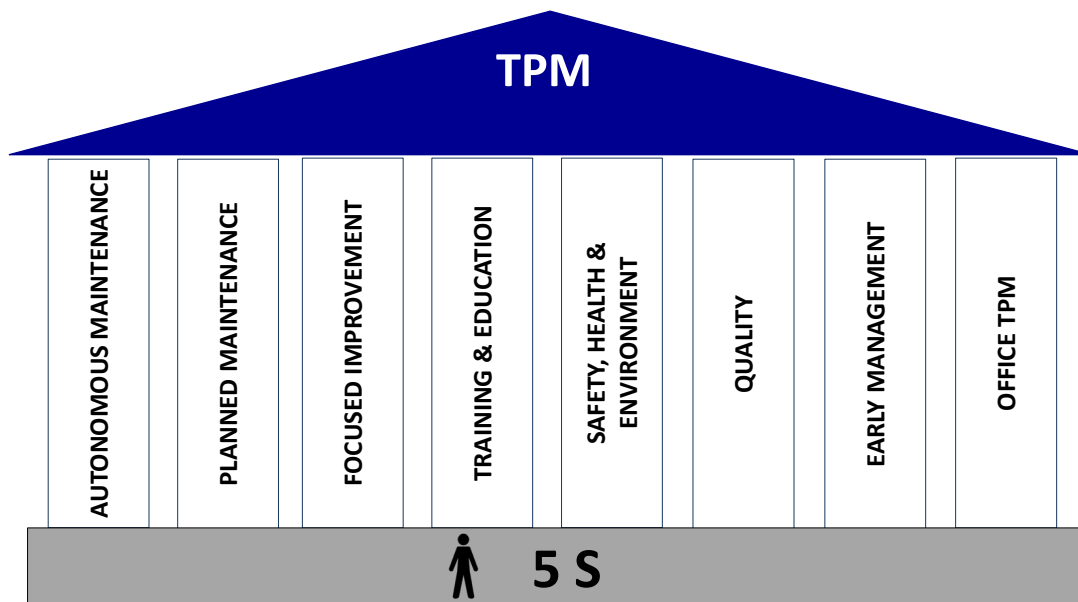


Figure 4. Pillars of total productive maintenance.

Source: Prepared by the authors, based on Moubray (1992).

After training, awareness raising, and the formation of facilitators, the TPM philosophy could be implemented in the picking area to eliminate bottlenecks in the packing area. Operators could be empowered through training in basic maintenance, minor repairs, lubrication, quick changes, etc., giving them greater autonomy and a sense of responsibility (accountability). All of this creates new levels of waste elimination and quality improvement, and leads to real safety and productivity gains.

The TPM philosophy could also help in eliminating losses in production processes and improving overall equipment efficiency (OEE). This measure could be used in several areas in the search for maximum use of the installed capacity and increased availability of machines through zero breakage.

Reverse logistics: A little explored potential until then

The fact that the service was outsourced would not be a problem per se, as long as service levels were agreed between Avon and the logistics operator: deadlines for withdrawals, evaluation of the conditions, and re-incorporation into inventory. We note that this service was not very effective by the fact that they mention that often when the product was reincorporated, it was no longer fit for sale.

Assuming that the volume was high, internalizing the work of consolidating and processing returns could speed up the use of these items and reduce shortages in the order picking process. A study of the layout of the reverse picking line showed that by incorporating the activity into the line

could also increase the use of returned items and reduce destruction costs.

Using the lean concept, a study to detect unnecessary activities that could be eliminated, maintaining only operations that add value to the end activity, could increase line efficiency and product availability.

A summary of the decisions taken by Avon Cosméticos

Pedro chose not to present the Avon+ Project, but developed another project based on a reassessment of all the logistics processes and the use of tools for continuous improvement. For the teacher's knowledge and to enable discussion about other improvement tools, see Table 1 for a summary of the methodologies that were applied, the actions implemented, and a description of the results that were achieved.

Product reception

Results: Projects based essentially on the 6 σ (six sigma) methodology and originating from an initial kaizen made it possible to reduce the average time, which initially was at least 48 hours or more, in 2016, to a new standard of 3 hours in 2017, corresponding to a reduction of more than 90% in the number of hours. The drastic improvement enabled a restructuring that reduced the number of people and machines in the area by 38%. Figures 5 and 6 below show the evolution of the waiting time indicators, which reduced by 90% compared to 2014, while productivity increased by 67%.

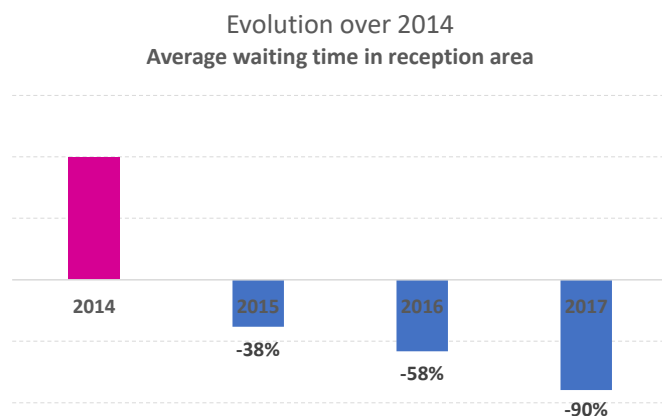


Figure 5. Change in waiting times.

Source: Prepared by the authors.

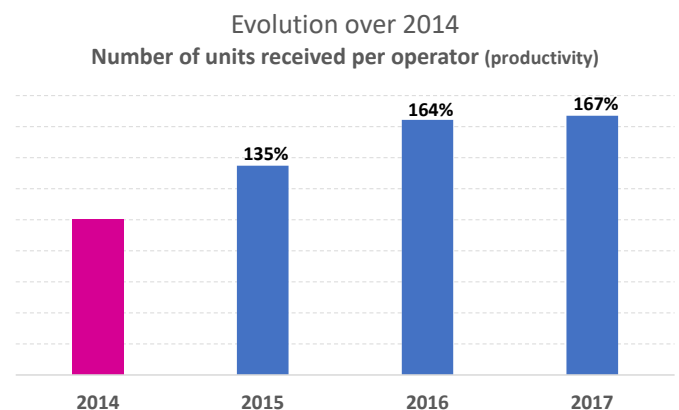


Figure 6. Evolution of productivity.

Source: Prepared by the authors.

Table 1. Summary of the actions per area and results.

Area	Main methodologies applied	Actions implemented	Main results
Product reception	Lean six sigma	Yard management: identifying points that do not add value. Color-based identification system created for each stage in unloading, and an audio system for communicating with the drivers.	90% reduction in the average waiting time for unloading in the area. 67% increase in productivity (units received per operator).
	Kaizen	Dock management: system introduced for identifying boxes and palettes using Avon's own printed barcode for use by all suppliers.	
	SIPOC	Resource allocation: standardizing activities in the reception areas and introducing KPIs.	
	G-ROT	Scheduling suppliers: a dock schedule was created for suppliers to establish their delivery time.	
Warehousing and movement	Lean six sigma	Management of products in consignment: the Yellow Belt project for actively managing obsolete and consigned products.	80% reduction in the value of losses per inventory adjustment. Increase in the accuracy of inventories for level six sigma: 99.9%. 212% increase in productivity in the area.
	Kaizen	Mapping out and identifying bottlenecks: a movement flow diagram provided visibility to all operation handling.	
	DMAIC	Stock occupancy: the Green Belt project was created for balancing the entries and exits of the operation in order to maintain the stock occupancy level below 90%.	
	G-ROT	Project created for deciding on quotas per line/product segment, by which each product manager/planner would have a limited reception space.	
Picking orders	Lean six sigma	Elimination of the packing operation bottleneck using TPM: training, formation of facilitators, operator empowerment and autonomy for basic maintenance, small repairs, lubrication, cleaning, quick changes, and others.	Increase in the OEE (efficiency rate of the operation machinery) from 60% to over 90%. Reduction in turnover and absenteeism in the operation by more than 80%. 32% increase in specific productivity in the area (picking/hour/px). 82% increase in the order processing capacity in the area (throughput). 58% reduction in time taken to change a campaign. Level 5 sigma reached in process quality.
	5s	Adoption of the OEE and elimination of losses caused by stoppages: more than four hundred types of loss detected and eliminated.	
	Kaizen	SMED training — quick change for reducing losses and dispersion, and balancing the campaign exchange indicators.	
	DMAIC	Project for adjusting the workday to boost morale and reduce turnover, absenteeism, and accidents.	
	SMED	Routine management: operational areas started having daily 20-minute meetings to discuss indicators and solve problems.	
	Design thinking	Creation of skills and competencies with the headquarters of the HR department for improving motivation and engagement.	
Transporting and delivering orders	Lean six sigma	Creation of a strategic transportation plan, with guidelines for the area to evolve services and reduce costs.	Level 5 sigma reached in delivery punctuality (OTD — on time deliveries) at 99.3%. 7 percentage points increase in large vehicle loads. 75% reduction in claims in the most critical location (RJ).
	G-ROT	Sales and transportation meetings introduced for sharing activities and anticipating actions.	
		Monitoring deliveries using GPS and smart delivery systems.	
		Sales reps categorized and improvements in the services on offer.	
Reverse logistics	Lean	'Milk run' methodology set up to improve the load levels of trucks and reduce transportation costs.	74% reduction in products unavailable for picking orders. 21% reduction in expenditure on reverse logistics relative to the values of returned sales.
	TPM	Study for reducing claims, training personnel, and the use of technology for tracking deliveries.	
	G-ROT	Reverse logistics process internalized to improve the return and use of devolved products.	
		Study of the layout for allocating reverse logistics processes on the lines.	

Note. Source: Prepared by the authors.

Warehousing and moving products

Results: There was an increase in efficiency in the product transfer process between DCs, with an accuracy of over 99.9%. Excess inventory was reduced and greater synergy was created between the planning areas, which led to management in the warehouse area developing a culture of simple techniques for calculating productivity, and a mindset of continuous process improvement. Figures 7 and 8 show, respectively, the results of the 80% reduction in inventory adjustments, due to the six sigma accuracy that was achieved, and the evolution in productivity in the warehouse and order handling area, which grew by more than 200% in the period.

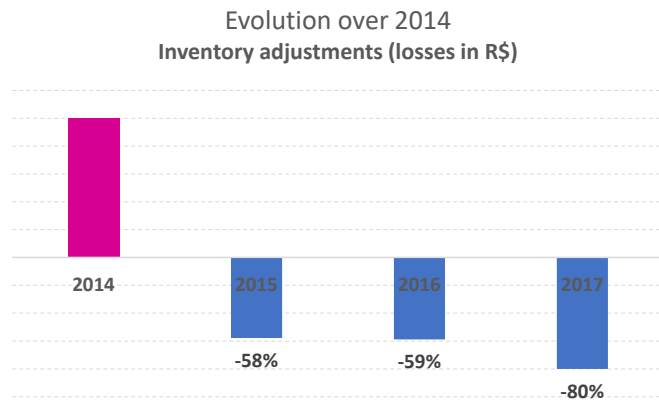


Figure 7. Evolution in inventory adjustments.
Source: Prepared by the authors.

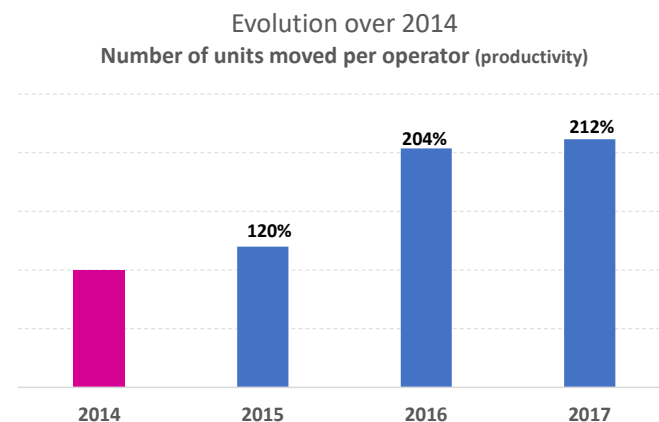


Figure 8. Evolution in productivity.
Source: Prepared by the authors.

Picking orders

Results: Figures 9 and 10 show, respectively, the evolution in the performance indicators that measure productivity in the order picking area (increased by 32% in the period), and the hourly capacity of the whole picking process (increased by 82% in the period).

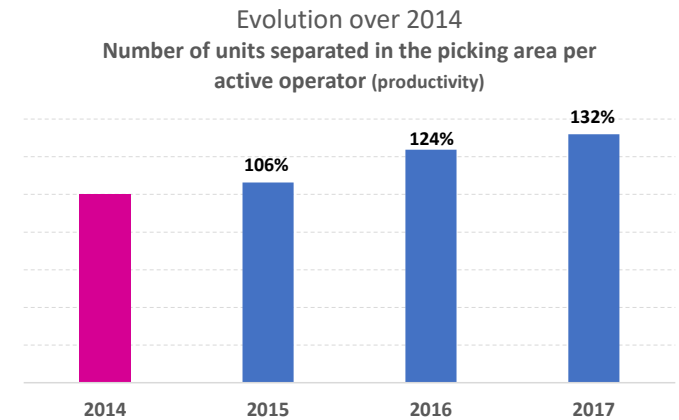


Figure 9. Evolution in picking productivity.
Source: Prepared by the authors.

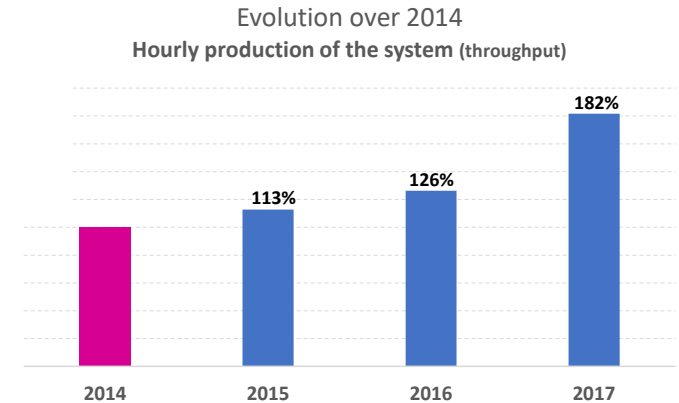


Figure 10. Evolution in production/hour.
Source: Prepared by the authors.

Transporting and delivering orders

Results: (a) **Delivery punctuality:** about 30% of the volume of orders that were delivered changed hands, which raised the rate of goods delivered within the promised time. There were improvements in tracking deliveries via GPS and delivery intelligence systems using SaaS (software as a service) with no investment in IT infrastructure; (b) **Satisfaction of the sales reps:** sales rep groups were

categorized and three main projects were implemented that were based on lean 6 sigma culture methodologies. The positive assessment of the service jumped from 72% to more than 90%, and reached 99% in one-off campaigns; (c) **Vehicle availability and occupation:** there was a 7 percentage points improvement in a delivery methodology called 'milk run' that, according to the Lean Institute Brasil, "is a method for accelerating the flow of materials between plants, in which vehicles follow a route to make multiple loads and deliveries at many plants" (Lean Institute Brasil, 2020, online); (d) **Risk management in transportation:** there was a gain because of a reduction in losses, but also an increase in the retailers' satisfaction rate. In 2017, there was a reduction of 75% when compared to 2014.

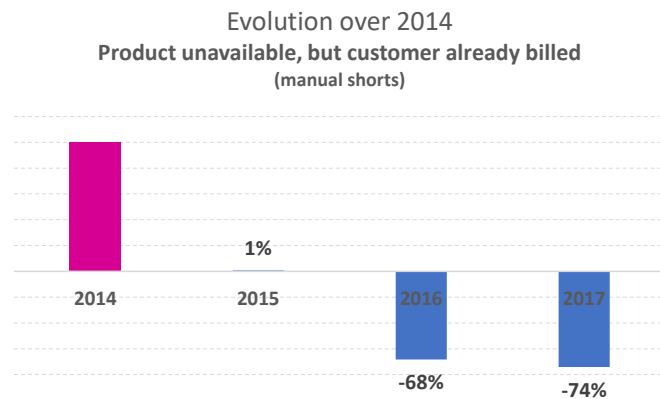


Figure 11. Missing products when picking.

Source: Prepared by the authors.

Reverse logistics

Results: Internalization of the operation reduced the so-called 'shorts' (products that are in stock, but not in the correct position for picking at the time the order is being picked) by 74% (Figure 11), while a layout study improved the location of the reverse picking production line. These actions increased the level of product reuse by 48%. Applying TPM concepts meant that 86% of returned products were reused and reverse logistics costs reduced by 21% (Figure 12).

NOTE

1. World Federation of Direct Selling Association. (2018). About directselling. Retrieved from <https://wfdsa.org/about-direct-selling/>

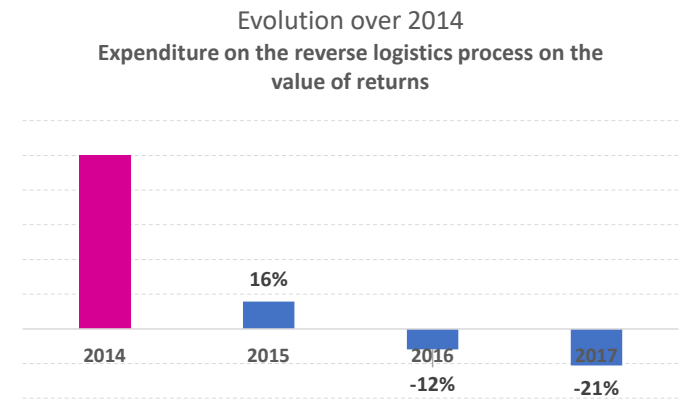


Figure 12. Evolution of reverse logistics costs.

Source: Prepared by the authors.

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Funding

The authors reported that there is no financial support for the research in this article.

Conflict of Interests

The authors have stated that there is no conflict of interest.

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1st author: conceptualization (equal); data curation (equal); formal analysis (equal); validation (equal).

2nd author: conceptualization (equal); project management (equal); supervision (equal); validation (equal), writing (equal).

3rd author: conceptualization (equal); project management (equal); validation (equal), visualization (equal); writing (equal).

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