

THE IMPACT OF MERITOCRACY ON LOGISTICS COMPANIES DURING ECONOMIC CRISES

O IMPACTO DA MERITOCRACIA EM EMPRESAS DE LOGÍSTICA DURANTE CRISES ECONÔMICAS

Submission: 16/08/20

Accept: 09/04/21

Felipe Liberato de Souza¹
Alvair Silveira Torres Junior²

1 Universidade de São Paulo – USP. São Paulo, São Paulo, Brazil.

ABSTRACT

Purpose: meritocracy and incentives for innovation are instruments in the search for efficiency and increased productivity. The objective of this work is to demonstrate the correlation between meritocracy and productivity gains that a franchise network presented in a year of economic crisis in Brazil.

Design/methodology/approach: the method of qualitative and quantitative approach of this research used experimentation, based on interviews, observation and data analysis. Two groups of companies, which totalized 92 companies and 746 professionals participated of the research.

Findings: management based on recognition and reward for employees of a group of companies has shown an increase in productivity of up to 25% in a year of economic recession. In the same period, another group of companies in the same business, but without a meritocracy-based compensation system, achieved a 9% drop.

Research limitations/implications: this work suffered from limitations as to the influence of the local economy of each franchise on the results, impacting the comparisons of the groups that participated in the experimental research.

Practical implications: logistics companies can use this work to define a meritocratic model that encourages employees to seek innovation in processes and contribute to better operational performance.

Social implications: logistics has a strong impact on the competitiveness of companies, from industry to commerce. This work offers visibility of the influence of productivity in logistics companies in the supply chain.

Originality/value: this work contributes to the analysis of the influence of meritocracy in people management, especially in times of economic crisis.

Keywords: Productivity. Competitiveness. Meritocracy.



RESUMO

Finalidade: a meritocracia e incentivos à inovação são instrumentos na busca por eficiência e aumento de produtividade. O objetivo desse trabalho é demonstrar a correlação entre meritocracia e ganho de produtividade que uma rede de franquias apresentou em um ano de crise econômica no Brasil.

Desenho/metodologia/abordagem: o método de abordagem qualitativa e quantitativa dessa pesquisa usou da experimentação, com base em entrevistas, observação e análise de dados. Dois grupos de empresas, que totalizaram 92 empresas e 746 profissionais participaram da pesquisa.

Constatações: a gestão com base em reconhecimento e recompensa aos funcionários de um grupo de empresas mostrou um aumento de produtividade de até 25% em um ano de recessão da economia. No mesmo período, outro grupo de empresas do mesmo negócio, mas sem um sistema de remuneração com base em meritocracia obteve queda de 9%.

Limitações/implicações da pesquisa: esse trabalho sofreu por limitações quanto a influência da economia local de cada franquia nos resultados, impactando nas comparações dos grupos que participaram da pesquisa experimental.

Implicações práticas: empresas de logística podem utilizar esse trabalho para definir um modelo meritocrático que incentive colaboradores a buscar inovação em processos e contribuir para um melhor desempenho operacional.

Implicações sociais: a logística tem forte impacto na competitividade das empresas, da indústria ao comércio. Esse trabalho oferece visibilidade da influência da produtividade em empresas de logística na cadeia de abastecimento.

Originalidade/valor: esse trabalho contribui para a análise da influência da meritocracia na gestão de pessoas, especialmente em momento de crises econômicas.

Palavras-chave: Produtividade. Competitividade. Meritocracia.

1 INTRODUCTION

The precarious situation of the logistics infrastructure in most developing countries requires logistics operators to seek creative ways to increase productivity and reduce costs. According to a study conducted in 2017 by the Brazilian institution Fundação Dom Cabral, with the objective of evaluating the logistical costs for companies and their impact on business, logistical costs in Brazil consume 12.37% of companies' revenues. The study also reveals the high level of dependence on highways, 75.9% of the logistic services are performed using the road modal (Estudos Fundação Dom Cabral, 2017). The research consulted 130 Brazilian companies, whose invoicing was equivalent to 15.4% of Brazil's GDP that year.

Political and economic crises cause the investments of companies, government and international investors to be postponed or cancelled. The consumption power decreases with the increase of unemployment and high inflation. Among the factors that impact the profitability of companies are some market factors, such as the population's confidence in maintaining income and the possibility of consumption (Spitsin et al., 2020).

The outlook report - The Growth of the Brazilian Economy, released by BNDES in April 2018, showed the contribution of domestic demand to two consecutive falls in GDP, both of 3.5%, in 2015 and 2016. In 2017, GDP grew 1.0% compared to 2016, but the growth dynamics, which despite the intensity of the decline observed in GDP in the biennium 2015-2016, was affected by the much more intense drop in investment in the same period, which, with the additional reduction observed in 2017, reached -27% in the accumulated four years: 2014-2017 (Tinoco & Giambiagi, 2018).

With the fall in consumption in 2015-2016, we saw a drop in industrial production. According to IBGE, in July 2016 the accumulated fall in industrial production in Brazil in the last 12 months



reached 9.6%. The drop in consumption and production impacted logistics companies with a sharp reduction in the volume transported for the next two years, 2017 and 2018. The effects of economic recessions are not felt only immediately to events that triggered them, whether political or purely market (Andrietta et al., 2020). These effects impact the production and supply chain for years. Transportation companies presented a negative variation of 0.4% in December 2018 in relation to December 2017, according to the PMS (Monthly Services Survey) of the IBGE (Brazilian Institute of Geography and Statistics).

Usually, the contemporary challenges of the globalized world demanding for quality and sustainability, make companies have strategies to increase productivity (Pochmann, 2009). Technical efficiency provides growth through resource reallocation, process redesign (Ho et al., 2019). In times of crisis, companies' investments in efficiency and productivity are reduced, but the value of each employee's participation in the results is evidenced in recessions (Kim & Patel, 2020). Today's competitiveness, strongly transformed by globalization, cannot be characterized by the moment alone, but with a look to the future. It must encompass the need for company growth with a focus on high quality, resource management, social equality, human development and employee well-being (Capobianco-Uriarte et al., 2019).

Companies need to invest in production efficiency through cost reduction and develop new paths for improvement (Porter & Montgomery, 1998). Paths that in logistics companies go through the understanding of the supply chain that are inserted and the assimilation that the capacity of innovation of services and processes has correlation with the management of people, more specifically with the meritocracy linked to innovation. The search for innovation has a strong connection with moments of economic downturn, either by the search for productivity or by differentiation and competitiveness (Pinto et al., 2019).

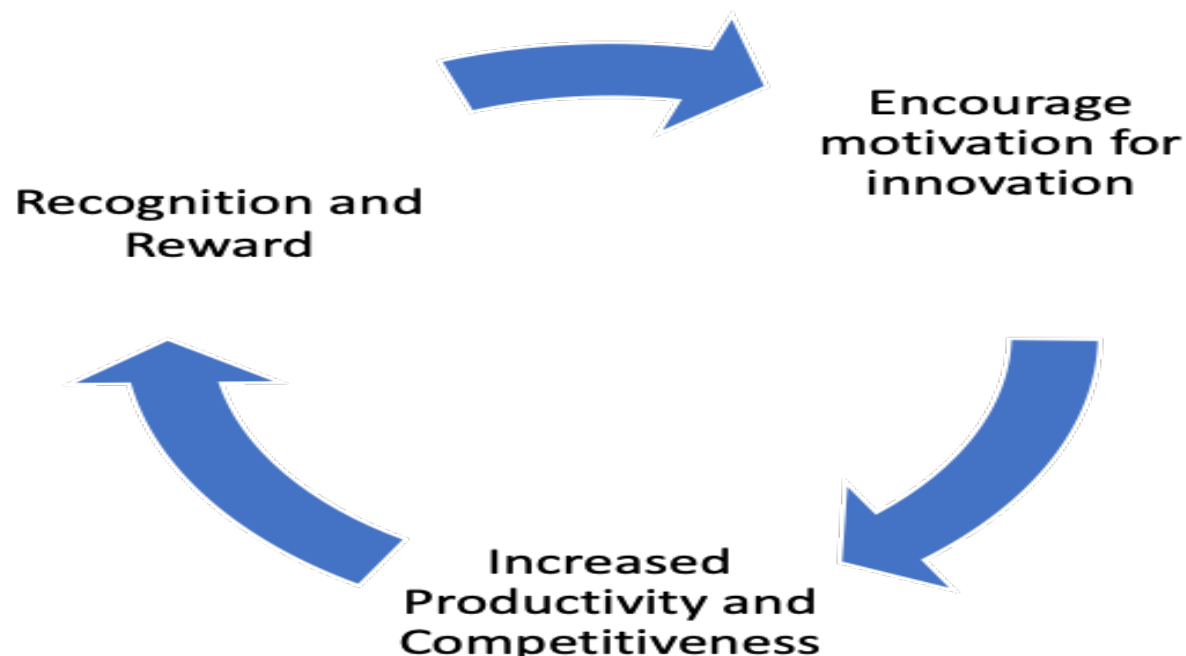
Clearly, among the challenges that the globalized world, at a time of economic turbulence, imposes on companies is the growing demand for high quality standards coupled with reduced production costs. The competitiveness needed by companies in this highly interconnected world basically comes from productivity based on high quality levels and reduced production costs that enable attractive prices (Fahad & Nidheesh, 2020). Thus, companies need to have clear strategies for increasing productivity, with management based on continuous improvement, incentives for innovation, talent retention, recognition and reward. The competitive market leads companies to focus on performance in a broad way, covering quality, flexibility, delivery and efficiency (Musau & Doctor, 2018).

The human factor with the knowledge it generates is the differential for the establishment of innovative processes with consequent increase in the competitiveness of organizations (Zhang & Lucey, 2019). The productivity and creativity of employees can be stimulated by remuneration focused on results (Littler, 2017). Meritocracy management has been driving the motivation of employees to be creative and encouraged to contribute with process innovation and thus increase productivity and competitiveness. As proposed in Figure 1, this meritocracy cycle event can be named: meritocracy management based on recognition and reward encourages the motivation of professionals from all areas of the company, which generates a business environment and organizational climate conducive to creativity and innovation, resulting in increased productivity and competitiveness.

Obviously, companies with higher productivity and competitiveness have greater possibilities of incorporating recognition and reward policies for employees and even suppliers.



Figure 1: Meritocracy cycle - recognition and reward encourages the motivation of professionals for innovation and greater dedication to results, which generates increased productivity and competitiveness. More competitive companies have better conditions for recognition and reward.



Source: author.

This technical report demonstrates how a Brazilian logistics company and its franchise network achieved a 25.18% increase in operational productivity, a 17.12% increase in revenue and a 28.07% increase in the sale of more profitable services in a year with many economic problems in Brazil and political uncertainties (2018). The expectation for GDP that year was 3%, but closed at 1.3%, according to the country's Central Bank. The country risk, according to Consultoria Tendências, went from 152 points in January to 198 at the end of the year, reaching levels above 300 points throughout the year. Unemployment according to IBGE reached 11.7%. The dollar ends the year with a valuation of more 16% facing the Real.

The objective of this work is to demonstrate correlation between the model of people management with focus on meritocracy and the results of productivity gain that the company and its franchise network presented this year of poor economic results in Brazil. The franchisor achieved good results and proved the impact of meritocracy in these results through a project based on the comparison of franchise units of its business that used indicated processes of meritocracy and others (with the same profile) that did not use.

To preserve the confidentiality of information, the companies (franchiser and franchisees) will not be identified and only general characteristics will be detailed.

2 LITERATURE REVIEW

Companies' competitive advantages are based on their capacity to manage resources and their positioning in the market. The performance of the organization depends on the relationship of its strategy with the moment, with the environment in which this strategy is applied (Osiyevskyy et al., 2020).

It is through people and cost management, for example, and its market performance strategy that a company generates value to its client, especially in times of economic recession. Accord-

ing to Porter (1989), companies operate based on three strategies:

- i. Cost leadership: when there is a management strongly aimed at having costs below the market;
- ii. Differentiation: when companies focus on value creation through innovation, by presenting differentials in relation to competitors;
- iii. Focus: when the company focuses on maintaining a sustainable competitive advantage in the long term, maintaining standards of a segment;

The practice of process and product innovation can always become a competitive advantage for companies (Porter & Kramer, 2011). It is through innovation that companies are able to differentiate themselves and obtain greater competitiveness. The constant search for innovation is fundamental in the search for differentiation and greater competitiveness, however it is a process that requires investments and does not always have a rate of return in the short or medium term.

The contemporary challenges of the globalized world demanding for quality and sustainability, make companies have strategies to increase productivity (Kotler & Keller, 2012). Companies invest in efficiency in production by reducing costs and develop new paths for improvement (Matsumoto, 2014). Logistics and transportation companies are charged for consistent improvements in operational and commercial processes because they are part of the value chain of industry and commerce (Simchi-levi et al., 2010).

The production needs raw material to deliver the volume demanded by trade, which in turn needs the finished products in a timely manner for marketing. Neither industry nor trade can consider high stock costs of raw material and finished products. The deadlines are short so that the raw material is available for the production of an industry and so that the final product is intact and fit for sale on the shelves of commerce. Undoubtedly, when the raw material does not arrive in full and in the appropriate time for the production of an industry or when a product to be marketed does not reach a point of sale to meet consumer needs, the losses are considerable. Thus, the competitiveness of an industry or a store is directly influenced by the quality of logistics services. This competitiveness of commerce and industry is framed by the productivity of the logistics involved. Traditionally productivity is measured by the productivity of employees, the productivity of capital invested, but we can also measure productivity by the technical efficiency of several companies involved in a process (Gong & Sickles, 2020).

Logistics processes are performed by people who are encouraged to generate better results. Human resources provide the possibility of innovation through the knowledge they inject into organizations, contributing to their competitiveness (Wang et al., 2020). The good service level of cargo transportation depends on the efficient execution of processes and in order to provide innovations and continuous improvements, besides the continuity of interaction among people. It is necessary to create links between the people who execute a project, in order to give a logical approach, but also with care with emotion, ethics and aesthetics (Bowersox & Closs, 1997). These links are the links of a network of knowledge that we build on the value chain of companies. The capacity of companies to absorb information, market trends and customer needs, gives the company possibilities for innovation (Duan et al., 2020).

People management based on meritocracy encourages process innovation and motivates efforts for better results. The relevance of experimental initiatives based on participative management in results is an organizational innovation in logistics companies. The recognition of efforts that have impacted the results of the organization promotes motivation and improvement in collective performance through socialization and internalization of good conduct (Charron et al., 2017). Many



companies have ways of recognizing individual efforts that highlight a professional and make that results are achieved, goals are exceeded. These recognitions make public the results and often the actions that the professional has adopted to stand out. Therefore, these recognition methods serve as an example to other employees.

Collective goal encourages the efforts of all the company's employees, which must be measured by clear and objective indicators. The collectivization of indicators in measuring team member performance brings positive results to productivity (Stojčić et al., 2019). Logistics companies should, for example, have indicators of on-time delivery, updating information in a delivery system with data on the delivery process, quality of cargo handling with a focus on reducing claims, availability of accurate invoices and payment slips in advance of their due date. Indicators that measure the result of the work of several team members and that make the client be served with quality and loyalty to the company. According to Kotler & Keller (2012), 95% of unsatisfied customers do not complain, just stop buying. The reason for the meritocracy model to recognize and reward collectivity is to establish performance indicators that reduce customer dissatisfaction with the company.

The search for the formation of high performance teams is a common objective for every manager. The recognition of an employee with relevant results is important and contributes to the development of the work team. Leadership is a fundamental force in the company's performance (Katsaros et al., 2020). People management activities, from value-based recruitment, such as talent development and performance recognition, have a significant impact on competitiveness (Psychogios & Prouska, 2019; Stahl et al., 2019). High performance teams are also characterized by the engagement of their members and by being deeply committed to personal growth together with the team. In addition, they seek results beyond expectations and foster healthy conflict that generates discussions that expose points of view without fear of vulnerability. Individual recognition does not emphasize that the individual is inserted in an organizational context and needs the efficient performance of the activities of other professionals. Clearly it can be evidenced that the recognition of an individual can cause an acceleration of the search for productivity in other professionals. However, collective recognition programs enhance and encourage the motivation of employees who are part of a team and enable the strengthening of this team and its characterization as a high performance team (Pompei et al., 2019).

3 METHODOLOGY

Experimental research based on pilot experiments has presented interesting results regarding the application of meritocratic management and its contribution to the formation of high performance teams. In a pilot experiment conducted with 92 Brazilian logistics companies operating in the national territory, and chosen to cover all regions of the country, it was possible to measure the positive impact of variable remuneration on company results and also cultural aspects in meritocracy management. This experimentation was based on a model of participation in results by all employees of the companies, independent of the area they work or the function they perform, and on another specific commissioning for the commercial team. A group of 46 franchises, logistics companies, had the model implemented, in a total of 92 accompanied. The experimentation was done with a total of 746 employees, being 368 of which are remunerated in the meritocratic way proposed by the franchisor. In this group, 71 professionals of the commercial area who are monthly remunerated based on exclusive individual sales indicators, as demonstrated in Table 1. Another 297 professionals from the operational and administrative areas were measured through collective indicators referring to operational performance. The proposed payment of the variable remuneration



to administrative and operational employees took place monthly after determining the operating profit and indicators of increased volume transported and control of cargo breakdowns and thefts.

The franchise network that operates in Brazil in the logistics business proposed to implement a project to experiment a meritocracy-based compensation system. This project was part of a package of measures to face the economic crisis that Brazil was going through, Planned between October and December 2017, the project was executed starting in January and finishing in December of the following year. The 92 franchise companies that were part of the experiment are totally independent from each other and governed by a franchisor, which is an airline that transports fractional cargo in Brazil. The conception of the project was based on the creation of two groups that were used for comparisons. The first group formed by 46 franchise units had a variable remuneration system linked to the collective performance of each franchise and the individual performance of each employee of the sales area of each franchise company. Another group of companies, also made up of 46 franchises, did not have the variable remuneration system in place, but was measured by exactly the same performance indicators as the first group, as described at Figure 2.

The employees of the franchises where the variable compensation model was applied had the results of their work measured through individual indicators related to the activity they perform. Thus, according to Figure 2, employees in the commercial area were measured by the results they brought in three indicators: New Business, Sales Growth in current customers, and Recovery of Lost Customers. The employees in the operational and administrative areas were measured by the indicators Faults/Theft of Cargo and Customer Complaint Index.

Table 1: characterization of the research groups.

	Group 1 (with Variable Compensation Model)	Group 2 (without Variable Compensation Model)
Number of Companies (Franchises)	46	46
Number of Employees Commercial Area	71	77
Number of Employees Administrative and Operational Area	297	301
Individual Indicators Commercial Area	New Business, Sales Growth in current customers, and Recovery of Lost Customers	None
Collective Indicators	Faults/Theft of Cargo and Customer Complaint Index	None

Source: author.

To have greater equality in the formation of the two groups, the units that were chosen for each group always had similar characteristics based on 3 points:

1. **Location:** region of the country, market in which it is inserted;
2. **Type of cargo transported:** specification of the largest volume of air cargo they carry, such as automotive, pharmaceutical or manufacturing cargo;
3. **Type of operation or services they offer:** some franchised units offer services that others do not, such as product packaging, proactive cargo tracking or the transportation of specific cargo as dangerous cargo. The number of franchises that do these additional services was divided between the two groups, making for isonomy in the analysis of the results. It is important to emphasize that only 4% of the total number of franchises offered these additional services, with no relevant impact on the employees' salaries.

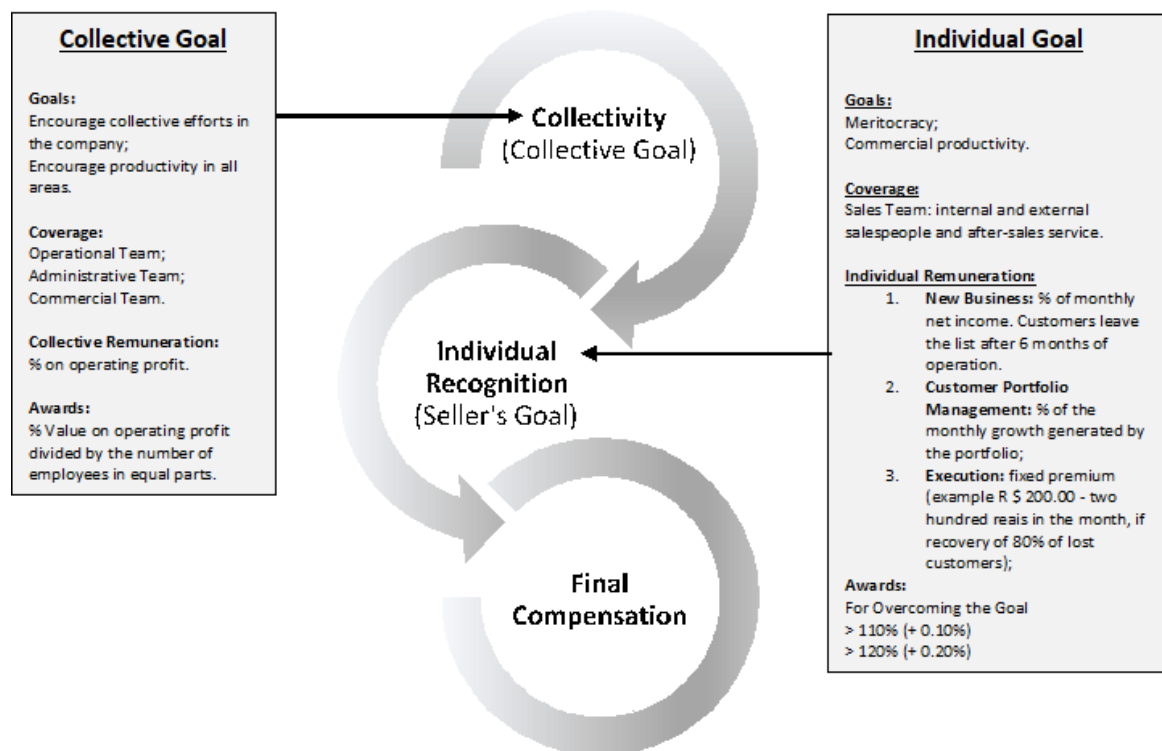


A company in the city of Porto Alegre, RS, was placed in a group and another in the same city was placed in another group, for example. Just as a franchise unit that transports a larger volume of medicines was placed in a different group than another unit that also has this cargo profile as the larger volume transported. In the same way, a franchise unit that is homologated for transportation of dangerous loads was placed in a different group from another with this same condition. To maintain a balance in the samples of each city, in case of impossibility of division between the two groups due to the total being an odd number, the franchise with the smallest volume, with less representativeness, was not followed up, did not enter the research. Of the total 105 franchises, 13 did not participate in the survey because it was considered that they would cause imbalance in the sample.

These three characteristics were the basis for the constitution of the groups and bordered a greater uniformity of the two groups. The objective of this rule was to exempt or reduce the risks of results conditioning based on sales characteristics or unequal conditions of development of the companies of each group. The simple fact that all companies are part of the same business and are guided by a single management model imposed by a franchisor, helps in this equality of conditions.

The proposed meritocracy model, illustrated in Figure 2, involves and engages all the companies' employees because it is based on two aspects: collectivity and individual recognition. It recognizes the collective effort, but reinforces and rewards the individual work of vendors. The proposal of a reward model that has a democratic spirit brings benefits to the organization as a whole (Musson & Rousselière, 2020). Moreover, the model's proposal is not to bring additional costs to the company, since it is structured based on improvements in net results and not on revenues. The amounts paid as variable remuneration are percentages over the results growth.

Figure 2: Meritocracy model - variable remuneration system based on collectivity and recognition by individual efforts.



Source: author.

The quantitative and experimental approach of this research has provided a comparison of sales and operational results based on pre-established performance indicators that underpin the impact that meritocracy has on a company's results. The project began with interviews with franchise managers from the presentation of concepts of the proposal to create a variable remuneration model. A collective presentation was made to groups of franchisees and in the sequence, individual interviews with the main objective of understanding the potential of engagement of managers in the project. The indicators were selected by the franchise based on metrics used to account for shareholders. The indicators are described in table 10. The franchisees chosen to apply the program with indicators, were informed of the calculation procedures.

From a total of 105 franchises, 92 presented conditions and interest in entering the project. From the conclusion of the franchise selection, it was sought to create the two groups of franchises: one with the implantation of the variable remuneration systems and the other without the implanted system. Both groups had their operational and commercial results measured by the same indicators. It was also sought to create two groups with similar franchises, with similar markets, similar management profiles and similar structures.

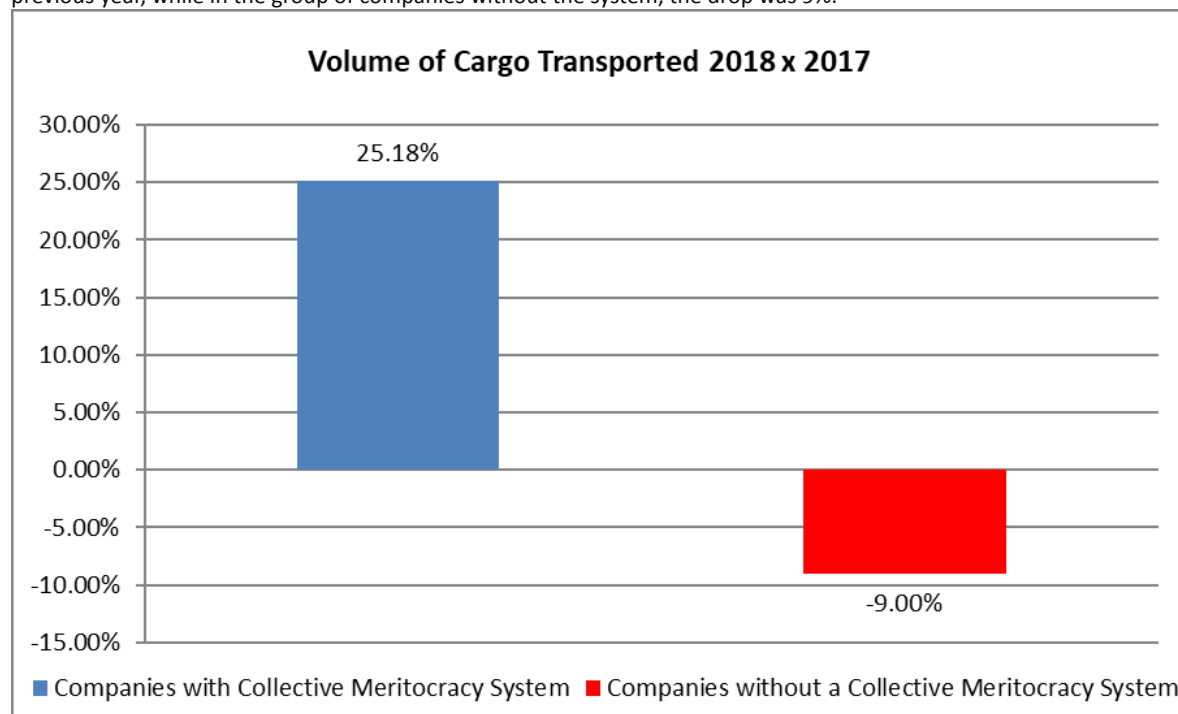
5 RESULTS OBTAINED AND CONCLUSIONS

This project was planned between October and December 2017 and was executed starting January 2018. The year 2018 was a year of economic and political crisis in Brazil, which gave more robustness to the analysis of the influence of critical factors to the productivity of logistics companies such as the drop in consumption and the consequent need to reduce costs, including transportation. The results were measured monthly, always comparing the group of companies that had the meritocracy system in place and the group paid only one salary.

The pilot experimentation on forms of recognition and reward to the employees of the companies showed an increase of productivity in transported loads of up to 25.18% in one year of follow-up (2018), as graphically demonstrated in Figure 3. Comparing with a group of companies without differentiated commissioning by meritocracy. Performance indicators such as sales volume, sales revenues, number of claims for breakdowns and client claims, were followed during one year, from January to December 2018 in the 92 companies that served as the basis for the survey.



Figure 3: in the comparison of the volume transported between companies with variable remuneration tied to collective results and companies without such remuneration, we notice a great difference in results. The group of companies with the collective meritocracy system achieved a 25.18% growth in the volume of cargo transported in 2018 compared to the previous year, while in the group of companies without the system, the drop was 9%.



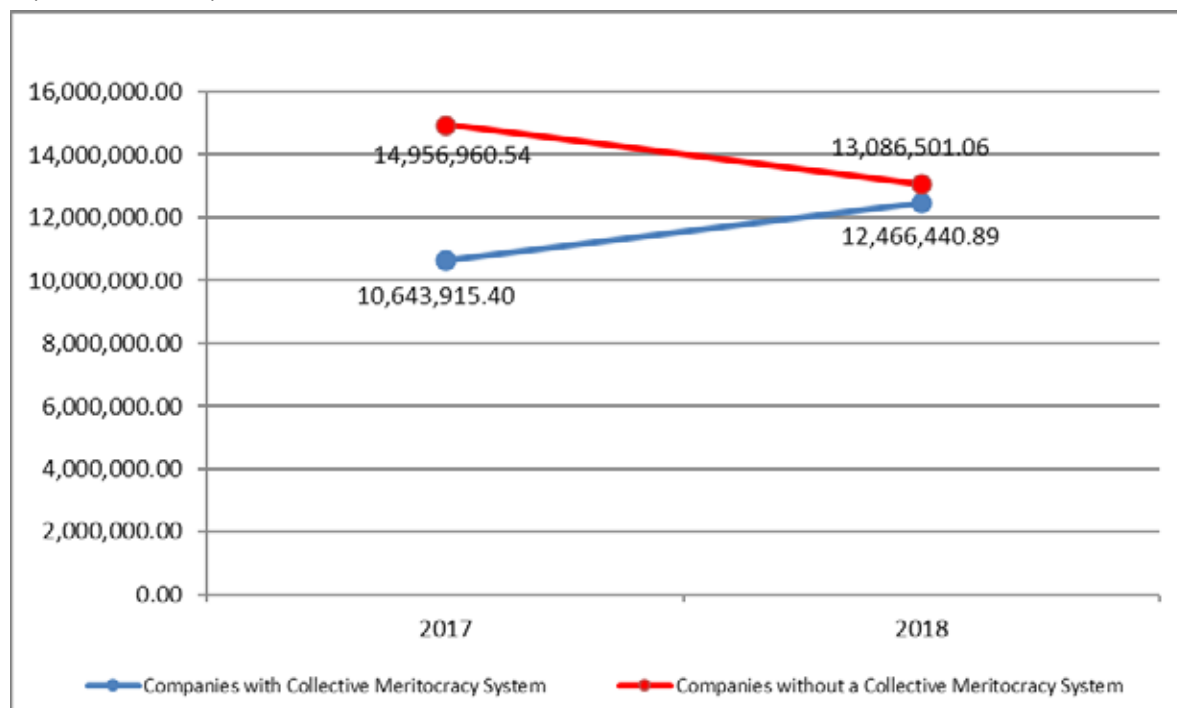
Source: author.

Clearly, the motivation of employees in the sales area, when commissioned, is greater by the search for results. However, it is also remarkable the contribution of employees in the operational and administrative area when they are recognized and paid for results. The collaborative behavior of people and even the search for self collection and participation of all employees among each other have become evident in companies with better results. The relationship between the integral parts of the supply chain is the factor that defines how effective the chain will be in serving the market, reinforcing how much a good relationship between the constituent links of a supply chain is fundamental for competitive advantage (Torres Júnior & Ração, 2011).

Besides the 25.18% increase in operational productivity, the companies of the group with the variable remuneration system in place achieved a 17.12% increase in revenue and a 28.07% increase in the sale of more profitable services in one year (2018), as represented in Figure 4.



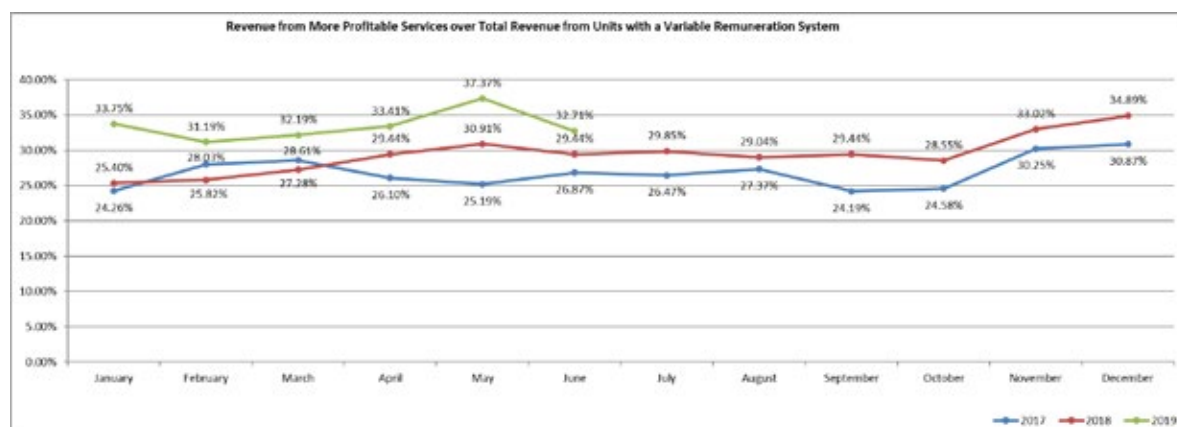
Figure 4: companies with a meritocracy-based variable remuneration collective system had a significant growth in the 2018 average monthly revenue compared to 2017. This fact could not be observed in companies that did not have the system in place in the same period.



Source: author.

Considering only the sale of more profitable services of the logistics company, we have an even more interesting result. These services require greater dedication both from the sales staff and the operation. The services have higher sales prices that require greater dedication of salespeople in the sales processes and offer differentials to customers who require greater care and operational attention. Thus, we can consider the sale of more profitable products as an indicator of greater involvement of company employees, both in sales and operation. Comparing the two groups, we notice in the group with a meritocracy-based system a significant increase in the representativeness of revenue with more profitable services in relation to total revenue. In January 2018 the revenue with these more profitable products in this group represented 25.40% of total revenues. In December of the same year, when the system was completing one year of implementation, still in comparative analysis with and in the adaptation phase, the representativity of the profitable revenue in this group rose to 34.89%. A growth of 37,4%, as it can be graphically analyzed on Figure 5.

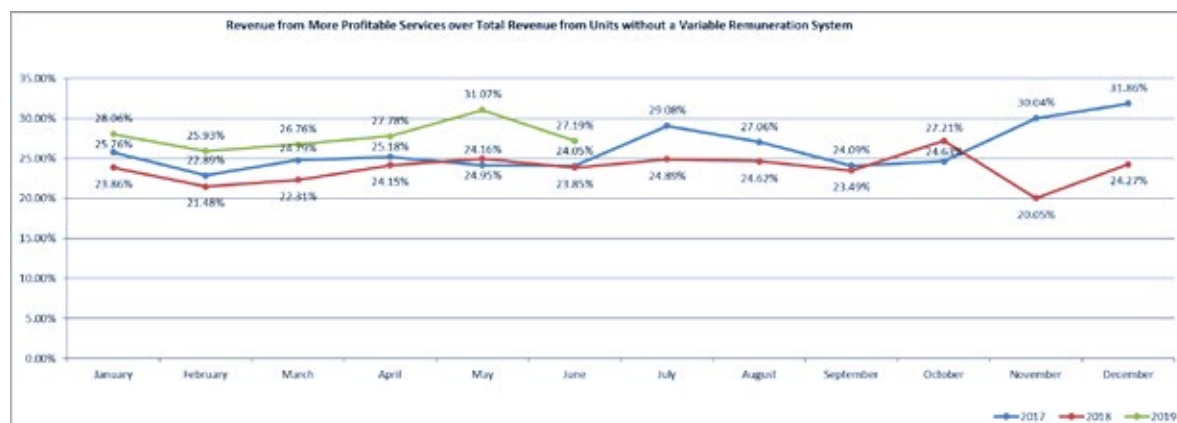
Figure 5: companies with a meritocracy-based variable remuneration collective system had a significant growth in the representativeness of the 2019 average monthly revenue in relation to 2018 and 2017 of the most profitable services. The increase in the representativity of the most profitable services over total revenue was 37.40%.



Source: author.

Comparatively, analyzing the representativeness of the revenue with more profitable services in the group of franchise companies that doesn't have the meritocratic system, we also perceived a growth over the total revenue, but in a more timid way. The result was a growth of 1.75%, going from 23.86% in January 2017 to 24.27% in December of the same year. The representativity of this more profitable service is much smaller in this group without incentive of variable remuneration on the results, as illustrated in Figure 6.

Figure 6: companies without a collective system of variable remuneration based on meritocracy achieved very small growth in one year of experimentation project, only 1.75% when comparing December 2017 with January of the same year.



Source: author.

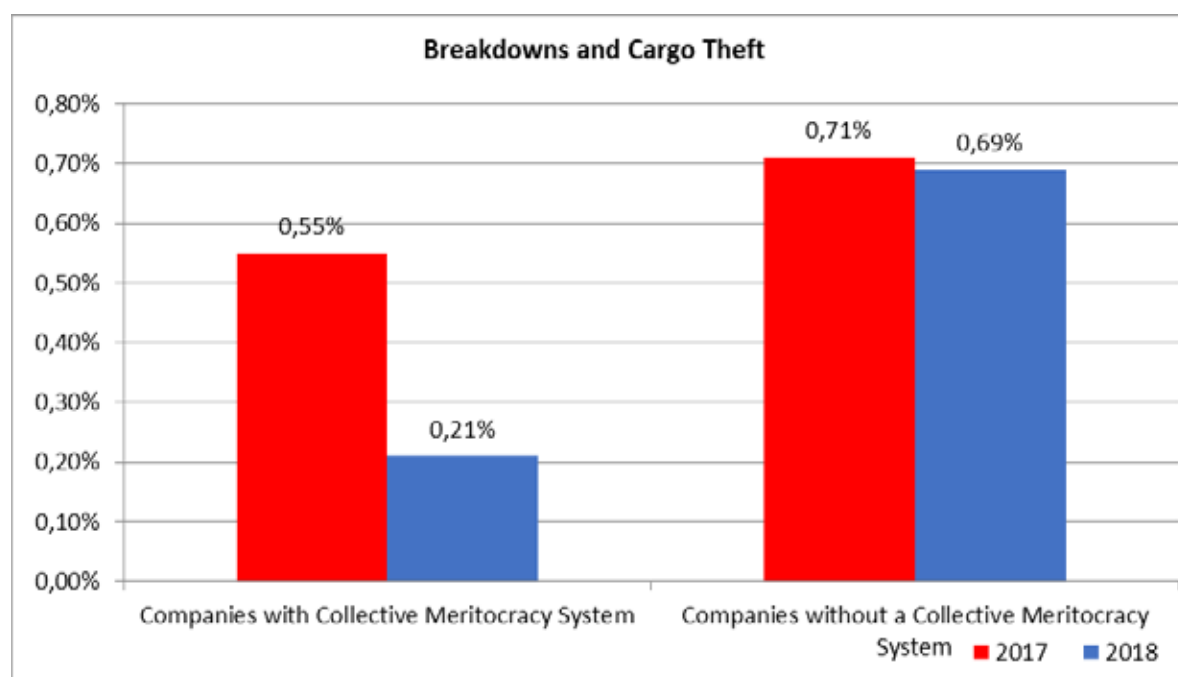
Breakdowns, embezzlement and theft of cargo transported by airlines cause enormous inconvenience to both industry and commerce, so in a meritocratic system that pays for good results achieved, these operational indicators cannot be left out. The compensation processes offered by airlines and/or insurance companies only mitigate losses, but do not restore hours of a production line stoppage or the reputation of a store in front of consumers for not having a product. In addition, the cost of damages for breakdowns and robberies weighs significantly on airlines' financial results. According to the financial statement of the cargo division of a Brazilian airline (analyzed in



this technical report), the average annual cost from 2014 to 2019 with compensation to customers for problems with breakdowns and thefts is in the order of thirty million reais. Cargo breakdowns were responsible for an average of 92.5% of the compensations made by this airline, with the rest being responsible for cargo theft.

Operational indicators also show interesting results in the first year of experimentation. The indicator that measures accidents with the cargo, for example, had a drop with greater prominence in companies with implanted meritocracy. This indicator has a significant impact on customer satisfaction and has a strong influence on the work of operational employees. The care with the load, the handling with attention and zeal translate into greater customer satisfaction with the logistics companies. The total value of cargoes that suffer accidents in the year 2017, adding cargo theft and breakdowns, reached 0.55% of the total value of cargoes transported by companies that in the year 2018 had the meritocracy system. As of the implementation of the system, the drop in claims was clear, closing the year 2017 at 0.21%. This indicator, graphically demonstrated in Figure 7, in companies without the meritocracy system in place fell from 0.71% in 2015 to 0.69% in 2018, a small drop.

Figure 7: Companies with a meritocracy-based variable pay collective system obtained a drop in the indicator that measures breakdowns and cargo thefts. The indicator fell from 0.55% of the value of the cargo in casualty (breakdown and theft) over the total value carried in 2017 to 0.21% in 2018. This drop in companies without variable compensation was from 0.71% in 2017 to 0.69% in 2018.

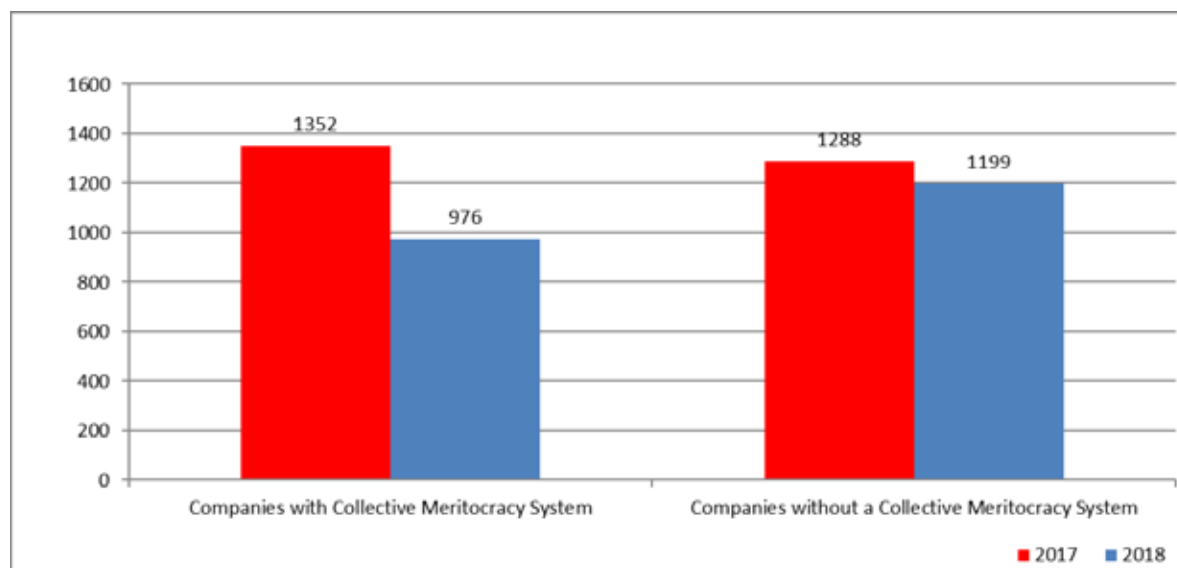


Source: author.

Another clear evidence that the remuneration system has brought good operational results is the analysis of the indicator of complaints in the SAC of the franchiser about each franchise unit (logistics companies). In the group of companies with the meritocratic system in place, the indicator that measures client complaints fell 27.81% in 2018 compared to 2017. In 2017 there were 1,352 complaints, in the following year this number fell to 976. In the same period the number of complaints fell 6.91% in companies without variable remuneration for results, a drop from 1,288 complaints in 2017 to 1,199 in 2018.



Figure 8: companies with a collective system of variable remuneration based on meritocracy obtained a drop in the indicator that measures client complaints of 27.81% in 2018 compared to 2017. In 2017 there were 1,352 complaints, in the following year this number fell to 976. In the same period, the number of complaints fell by 6.91% in companies without variable remuneration for results.



Source: author.

The commercial area of any company must pursue the objective of oxygenating its client portfolio, it is new clients and the growth of current clients that will increase the company's revenues. It is noticeable in companies that have their growing revenue, that their salespeople are focused on new business, new opportunities in current customers and in recovering from falling customers. Thus, a participatory management based on meritocracy needs to recognize individual efforts of its sales team. Sales professionals who bring consistent results make good management of your customer portfolio, and therefore, an indicator of commercial execution is also proposed in the variable compensation model. This indicator should measure the real influence of salespeople's actions on business results. Salespeople are also encouraged to seek additional results if there is the possibility of extra rewards. Thus, the existence of a bonus that remunerates for exceeding the target is always an interesting incentive.

At the same time, no commercial team is able to play its role and achieve its goals if the operation or production is not efficient, if the financial and administrative areas are not able to see and have the customer as the reason for the existence of the company. Therefore, recognizing and rewarding the efforts of all the company's employees collectively are fundamental actions in a meritocratic management.

Process innovation encompasses the management and accumulation of ideas, knowledge and inventions. Innovation makes it possible for organizations to use internal and external ideas. Thus, the importance of the existence of a culture of innovation in cargo transportation companies is highlighted, encouraging internal entrepreneurship, the search for continuous improvement and increased productivity. The meritocracy is a management tool capable of encouraging or even awakening the motivation of a company's professionals in the innovation of operational and commercial processes. It is possible to improve the execution of cargo transportation in order to offer better levels of services to industry and commerce, increase efficiency and reinforce value in the supply chain through meritocracy. People are fundamental in the processes of change.

The meritocracy reinforces the possibility of achieving strategic goals and objectives by recognizing the individual and collective efforts of employees, who feel valued and consequently motivated to new challenges. Among the benefits of a meritocratic system of management are the improvement of the use of talents, the adaptation of people in functions related to the psychological profiles of each individual, bringing more personal satisfaction to the employees, better results for the company and greater profitability to the business, from the improvement of productivity.

The proposed meritocracy model is based on recognition and reward for collective and individual efforts, in order to value the efforts of each employee and all areas of the company, which causes the level of customer satisfaction with the company to be improved and also causes sales to be driven by commissioning focused on new business, opportunities in current customers and recovery of falling customers. The meritocracy model based on performance indicators aimed at customer satisfaction and increased sales, shares the company's net results with employees, recognizes talent, rewards efforts and makes the company have the constant possibility of innovation through the creativity and motivation of its employees. This generates customer satisfaction, improved organizational climate with motivated employees and company growth.

It is important to emphasize that the motivation of employees and the recognition and reward for individual and collective results, generate a healthy competitive environment, where talents are highlighted and able to drive the development of other individuals in the organization. It is also important to emphasize that the focus of the meritocracy system on individual results reinforces the recognition of each employee and does not let the efforts of each professional stop being rewarded. At the same time, the collective award for jointly achieved results generates participation, a sense of collaboration and encourages the development of high performance teams.

The transport of cargo is a part of the value chain of companies and impacts on the productivity and competitiveness of producing companies and also on the marketing of products. The integrity of the cargo transported, without breakdowns and compliance with agreed deadlines, are factors that impact both the production and sale of products. Imperfections of the cargo handling processes in transportation are responsible for cargo breakdowns, loss / theft, as well as sales processes, cargo acceptance, cargo release and transportation from one point to another, are responsible for failure to meet delivery deadlines and lack of information or errors of information to customers of logistics companies. These processes are complex and framed by a series of factors that impact the safe transportation of cargo, without damages, with speed and clear information to customers.

People are fundamental in cargo transportation processes. Therefore, the incentive to internal entrepreneurship, the search for continuous improvement and increased productivity are fundamental in logistics companies. In this sense, the meritocracy presents itself as a tool to motivate the search for innovation in operational and commercial processes. This technical report demonstrates how a variable remuneration system based on individual and collective results can bring benefits to the industry and trade supply chain.

An organized variable compensation system based on collective and individual meritocracy provides a friendly environment for innovation, creativity and the consequent improvement in productivity of any company, more specifically logistics companies. It is important to point out that this project was planned and executed in a year of economic and political crisis in Brazil. This factor brought an interesting vision of the impact that macroeconomic factors and governmental uncertainties bring to the management of companies.



6 STUDY LIMITATIONS AND RECOMMENDATIONS

Based on the results of the pilot experiments and considering that specific studies of each company are necessary and that we cannot generalize them, it was verified that it is possible to obtain productivity increase with participative management and meritocratic processes that recognize, reward and motivate individual and collective efforts. The results suggest academic and practical contributions. Academic contributions, for giving relevance to interdisciplinary studies, involving Operations and People Management; and practical contributions, in the sense of instigating managers to formulate integrated management indicators, considering intra-entrepreneurship and internal innovation.

This work suffered from limitations as to the influence of the local market of each franchise on the results and impacting on the comparisons of the groups that participated in the experimental research. Therefore, it is recommended that in future studies it be considered a previous study of regional GDP forecast, using this indicator in the composition of results.

REFERENCES

- Andrietta, L. S., Levi, M. L., Scheffer, M. C., Alves, M. T. S. S. D. B. E., Carneiro Alves De Oliveira, B. L., & Russo, G. (2020). The differential impact of economic recessions on health systems in middle-income settings: A comparative case study of unequal states in Brazil. *BMJ Global Health*, 5(2), 1–11. <https://doi.org/10.1136/bmjgh-2019-002122>
- Bowersox, D. J., & Closs, D. J. (1997). Brazilian logistics: a time for transition. *Gestão & Produção*, 4(2), 130–139. <https://doi.org/10.1590/s0104-530x1997000200002>
- Capobianco-Uriarte, M. de las M., Casado-Belmonte, M. del P., Marín-Carrillo, G. M., & Terán-Yépez, E. (2019). A bibliometric analysis of international competitiveness (1983-2017). *Sustainability (Switzerland)*, 11(7). <https://doi.org/10.3390/su11071877>
- Charron, N., Dahlström, C., Fazekas, M., & Lapuente, V. (2017). Careers, connections, and corruption risks: Investigating the impact of bureaucratic meritocracy on public procurement processes. *Journal of Politics*, 79(1), 89–104. <https://doi.org/10.1086/687209>
- CUSTOS LOGÍSTICOS NO BRASIL. (2017). [https://acervo.ci.fdc.org.br/AcervoDigital/Relatórios de Pesquisa/Relatórios de pesquisa 2018/Apresentacao_Custos_Logisticos_no Brasil 2018_FDC_revRVC abr18 \(002\).pdf](https://acervo.ci.fdc.org.br/AcervoDigital/Relatórios%20de%20Pesquisa/Relatórios%20de%20pesquisa%202018/Apresentacao_Custos_Logisticos_no%20Brasil%202018_FDC_revRVC%20abr18%20(002).pdf)
- Duan, Y., Wang, W., & Zhou, W. (2020). The multiple mediation effect of absorptive capacity on the organizational slack and innovation performance of high-tech manufacturing firms: Evidence from Chinese firms. *International Journal of Production Economics*, 229(December 2019), 107754. <https://doi.org/10.1016/j.ijpe.2020.107754>
- Fahad, P., & Nidheesh, K. B. (2020). Determinants of CSR disclosure: an evidence from India. *Journal of Indian Business Research*. <https://doi.org/10.1108/JIBR-06-2018-0171>
- Gong, B., & Sickles, R. C. (2020). Non-structural and structural models in productivity analysis: study of the British Isles during the 2007–2009 financial crisis. *Journal of Productivity Analysis*, 53(2), 243–263. <https://doi.org/10.1007/s11123-019-00571-8>



- Ho, A. T. Y., Huynh, K. P., & Jacho-Chávez, D. T. (2019). Productivity and reallocation: Evidence from ecuadorian firm-level data. *Economia*, 20(1), 83–110. <https://doi.org/10.1353/eco.2019.0009>
- Katsaros, K. K., Tsirikas, A. N., & Kosta, G. C. (2020). The impact of leadership on firm financial performance: the mediating role of employees' readiness to change. *Leadership and Organization Development Journal*, 41(3), 333–347. <https://doi.org/10.1108/LODJ-02-2019-0088>
- Kim, K. Y., & Patel, P. C. (2020). Broad-Based Employee Ownership and Labour Productivity During the 2008 Recession: Evidence from Public Firms in Europe. *British Journal of Industrial Relations*, 58(2), 396–423. <https://doi.org/10.1111/bjir.12508>
- Kotler, P., & Keller, K. L. (2012). *Administração de Marketing*. Pearson Prentice Hall.
- Littler, J. (2017). Against Meritocracy: Culture, Power and Myths of Mobility. In *Against Meritocracy: Culture, Power and Myths of Mobility*. <https://doi.org/10.4324/9781315712802>
- Matsumato, L. D. M. (2014). *Abordagem da Cadeia de Suprimentos na Perspectiva das Dimensões da Estrutura Organizacional: Um Estudo d Caso na Cadeia de Serviços Logísticos* [Universidade de São Paulo]. <https://doi.org/https://doi.org/10.11606/d.12.2014.tde-12032015-174253>
- MUSAU, E. G., & DOCTOR. (2018). *Supply Chain Determinants of*.
- Musson, A., & Rousselière, D. (2020). Exploring the effect of crisis on cooperatives: a Bayesian performance analysis of French craftsmen cooperatives. *Applied Economics*, 52(25), 2657–2678. <https://doi.org/10.1080/00036846.2019.1693699>
- Osiyevskyy, O., Shirokova, G., & Ritala, P. (2020). Exploration and exploitation in crisis environment: Implications for level and variability of firm performance. *Journal of Business Research*, 114(April), 227–239. <https://doi.org/10.1016/j.jbusres.2020.04.015>
- Pinto, H., Pereira, T. S., & Uyarra, E. (2019). Innovation in firms, resilience and the economic downturn: Insights from CIS data in Portugal. *Regional Science Policy and Practice*, 11(6), 951–967. <https://doi.org/10.1111/rsp3.12243>
- Pochmann, M. (2009). Qual desenvolvimento? Oportunidades e dificuldades do Brasil. *Contemporâneo Publisher Brasil*.
- Pompei, F., Damiani, M., & Ricci, A. (2019). Family firms, performance-related pay, and the great crisis: Evidence from the Italian case. *Industrial and Corporate Change*, 28(5), 1193–1225. <https://doi.org/10.1093/icc/dty051>
- Porter, M. E. (1989). *Vantagem competitiva: criando e sustentando um desempenho superior*.
- Porter, M. E., & Kramer, M. R. (2011). Criando valor compartilhado. *Harvard Business Review*.
- Porter, M. E., & Montgomery, C. A. (1998). *Estratégia - A Busca da Vantagem Competitiva*.
- Psychogios, A., & Prouska, R. (2019). Managing people in small and medium enterprises in turbulent contexts. In *Managing People in Small and Medium Enterprises in Turbulent Contexts*. <https://doi.org/10.4324/9781315102610>
- Simchi-levi, D., Kaminsky, P., & Simchi-levi, E. (2010). *Cadeias de Suprimentos, Projeto e Gestão – Conceitos, Estratégias e Estudo de Caso*.



- Spitsin, V., Ryzhkova, M., Vukovic, D., & Anokhin, S. (2020). Companies profitability under economic instability: evidence from the manufacturing industry in Russia. *Journal of Economic Structures*, 9(1). <https://doi.org/10.1186/s40008-020-0184-9>
- Stahl, G. K., Brewster, C. J., Collings, D. G., & Hajro, A. (2019). Enhancing the role of human resource management in corporate sustainability and social responsibility: A multi-stakeholder, multidimensional approach to HRM. *Human Resource Management Review*, August, 100708. <https://doi.org/10.1016/j.hrmr.2019.100708>
- Stojčić, N., Anić, I. D., & Aralica, Z. (2019). Do firms in clusters perform better? Lessons from wood-processing industries in new EU member states. *Forest Policy and Economics*, 109(October). <https://doi.org/10.1016/j.forpol.2019.102043>
- Tinoco, G., & Giambiagi, F. (2018). O Crescimento da Economia Brasileira 2018-2023. *Departamento de Pesquisa Econômica Do BNDES*, 60. [https://web.bndes.gov.br/bib/jspui/bitstream/1408/14760/1/Perspectivas 2018-2023_P.pdf](https://web.bndes.gov.br/bib/jspui/bitstream/1408/14760/1/Perspectivas%202018-2023_P.pdf)
- Torres Júnior, A., & Ratão, B. (2011). Relacionamento na Cadeia de Abastecimento – Estudo de Caso de Uma Pequena Empresa Distribuidora. *Gestão & Regionalidade*, 27. <https://doi.org/https://doi.org/10.13037/gr.vol27n79.879>
- Wang, S. X., Lu, W. M., & Hung, S. W. (2020). Improving innovation efficiency of emerging economies: The role of manufacturing. *Managerial and Decision Economics*, 41(4), 503–519. <https://doi.org/10.1002/mde.3116>
- Zhang, Q. A., & Lucey, B. M. (2019). Globalisation, the Mobility of Skilled Workers, and Economic Growth: Constructing a Novel Brain Drain/Gain Index for European Countries. *Journal of the Knowledge Economy*, 10(4), 1620–1642. <https://doi.org/10.1007/s13132-017-0505-x>

AUTHORS

1. Felipe Liberato de Souza

Institution: Universidade de São Paulo – USP, São Paulo, São Paulo, Brazil.

Master in Entrepreneurship from FEA-USP, specialization in Business Management from Fundação Dom Cabral, in Negotiation and Leadership from Harvard University, MBA from Fundação Getúlio Vargas, Specialization in Higher Education Teaching from Fundação Getúlio Vargas, Specialization in Business Management from Universidade Federal de Lavras and Graduated in Business Administration with emphasis on Entrepreneurship from Federal University of Itajubá. Professor in a lato sensu graduate program at the National Institute of Technology and Business - INATEN.

E-mail: felipeliberato@usp.br

ORCID: <https://orcid.org/0000-0003-3624-7577>

2. Alvaír Silveira Torres Junior

Institution: Universidade de São Paulo – USP, São Paulo, São Paulo, Brazil.

PhD Professor at Business College from Universidade de São Paulo – FEA-USP-SP. Research Leader at NUPEXO – operational excellence research group at FEA-USP. Member of the permanent body in Professional Master's Degree in Entrepreneurship at FEA-USP. PhD in Organizational Communication at Universidade Metodista de São Paulo – UMESP -SP, Master's Degree in Management at Pontifícia Universidade Católica de São Paulo – PUC-SP, Graduate in Production Process Technology at Universidade Estadual Paulista Júlio de Mesquita Filho – UNESP-FATEC-SP.

E-mail: alvaír@usp.br

ORCID: <http://orcid.org/0000-0002-6065-233X>



Contribution of authors

Contribution	[Author 1]	[Author 2]
1. Definition of research problem	√	√
2. Development of hypotheses or research questions (empirical studies)	√	√
3. Development of theoretical propositions (theoretical work)	√	√
4. Theoretical foundation / Literature review	√	√
5. Definition of methodological procedures	√	√
6. Data collection	√	
7. Statistical analysis	√	
8. Analysis and interpretation of data	√	√
9. Critical revision of the manuscript	√	√
10. Manuscript writing	√	√
11. Other (please specify)		

Conflict of Interest

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

Copyrights

ReA/UFSM owns the copyright to this content.

Plagiarism Check

The ReA/UFSM maintains the practice of submitting all documents approved for publication to the plagiarism check, using specific tools, e.g.: CopySpider.

