

ESSAY ON BLINDNESS: THE PATHS OF CAMARÕES GESUND IN THE COVID-19 CRISIS

ENSAIO SOBRE A CEGUEIRA: CAMINHOS DA CAMARÕES GESUND NA CRISE DA COVID-19

ENSAYO SOBRE LA CEGUERA: LOS CAMINOS DE CAMARÕES GESUND EN LA CRISIS DEL COVID-19

MARIA SALETE BATISTA FREITAG

PhD

Universidade Federal de Goiás - Brazil

ORCID: 0000-0002-6993-1685

mσαlete@ufg.br

RICARDO MESSIAS ROSSI

PhD

ORCID: 0000-0002-2198-0576

rrossi@ufg.br

FERNANDA PAULA ARANTES

Doctoral student

Universidade Federal de Goiás - Brazil

ORCID: 0000-0002-2198-0576

arantes.fp@ufg.br

LOURIVAL RIBEIRO CHAVES JÚNIOR

Master

Instituto de Ensino Superior do Sul do Maranhão - Brazil

ORCID: 0000-0002-6332-3240

lourival.ribeiro7@gmail.com

Submitted on: 06/11/2021

Approved on: 02/16/2022

Doi: 10.14210/alcance.v29n2(mai/ago).p241-240



LICENÇA CC BY:

Artigo distribuído sob os termos Creative Commons, permite uso e distribuição irrestrita em qualquer meio desde que o autor credite a fonte original.



"She had kept her eyes open as if sight had to enter through them rather than be rekindled from within, suddenly she said, I think I can see, it was best to be prudent, not all cases are the same, it even used to be said there is no such thing as blindness, only blind people, when the experience of time has taught us nothing other than that there are no blind people, but only blindness" (Saramago, 1997, p. 324)¹.

¹ Saramago, J. Blindness. (1997). London: The Harvill Press.

ABSTRACT

Dilemma: the teaching case presents the dilemma of a company in the marine shrimp segment, the Camarões Gesund, given the moments of crisis experienced during the Covid-19 pandemic. Return to export, considering previous experience, or focus on serving the domestic market by exploring new segments.

Educational purpose: the case constitutes an opportunity for reflective learning and understanding of how the company's past experiences, either in coping with crises or in applying new strategies, contribute to the development of an organization's dynamic capabilities.

Contextualization: this teaching case describes the challenging situations faced by Camarões Gesund in times of crisis, in particular the one caused by the Covid-19 pandemic. At a time when 90% of its revenue came from restaurants, they had to remain closed for more than one hundred days during the pandemic, maintaining, after this period, limitations on face-to-face service. In this sense, the aim of the case is to contribute to student's reflections in times of crisis experienced by the company, especially those generated by pandemic.

Main theme: application of dynamic capabilities concepts in the assessment of situations and decision making in moments of crisis.

Audience: Business Administration undergraduate courses and professionals in a technical or managerial career.

Originality: in addition to presenting a dilemma in a pandemic context, an innovative aspect of the case is the analogy with the blindness novel as one of the points of reflection. From the didactic and pedagogical point of view, it is proposed alternatives for applying the case also in online classes, adopting interactive tools.

Keywords: Dynamic Capabilities. Sensing Capacity. Seizing Capacity. Transforming Capacity. Teaching Case.

RESUMO

Dilema: o caso para ensino apresenta o dilema da empresa do segmento da carcinicultura marinha, a Camarões Gesund, face aos momentos de crise vivenciados por ela durante a pandemia de Covid-19. Voltar a exportar, considerando experiência anterior, ou focar no atendimento ao mercado interno, explorando novos segmentos.

Objetivo educacional: o caso se constitui como uma oportunidade para o aprendizado reflexivo e compreensão de como as vivências passadas da empresa, seja no enfrentamento de crises ou na aplicação de novas estratégias, contribuem para o desenvolvimento de capacidades dinâmicas de uma organização.

Contextualização: o caso para ensino descreve situações desafiadoras enfrentadas pela Camarões Gesund em períodos de crise, em especial, aquela provocada pela pandemia de Covid-19. Em um momento em que 90% do seu faturamento era originário de restaurantes, estes permaneceram fechados por mais de cem dias durante a pandemia, mantendo, após esse período, limitações ao atendimento presencial. Nessa direção, o caso visa contribuir para a reflexão dos alunos sobre os momentos de crise vivenciados pela empresa, em especial aquela causada pela pandemia.

Tema principal: aplicação de conceitos de capacidades dinâmicas na avaliação de situações e tomadas de decisões em momentos de crises.

Público: graduação em Administração de Empresas e profissionais em carreira técnica ou gerencial.

Originalidade: além da apresentação de dilema em contexto pandêmico, entende-se como aspectos inovadores do caso sugerir como um dos pontos de reflexão a analogia com o Ensaio sobre a Cegueira. Do ponto de vista didático e pedagógico, propor alternativas para aplicação do caso também em aulas on-line, adotando ferramentas interativas.

Palavras-chave: Capacidades Dinâmicas. Capacidade de Detecção. Capacidade de Apreensão. Capacidade de Reconfiguração. Caso para Ensino.

RESUMEN

Dilema: el caso de enseñanza presenta el dilema de una empresa del segmento de camarón marino, la Camarões Gesund, ante los momentos de crisis vividos durante la pandemia del Covid-19. Volver a exportar, considerando las experiencias previas, o enfocarse en dar servicio al mercado interno, explorando nuevos segmentos.

Objetivo educativo: el caso constituye una oportunidad para el aprendizaje reflexivo y la comprensión de cómo las experiencias pasadas de la empresa, ya sea enfrentando crisis o aplicando nuevas estrategias, contribuyen al desarrollo de las capacidades dinámicas de una organización.

Contextualización: este caso de enseñanza describe situaciones desafiantes que enfrenta *Camarões Gesund* en periodos de crisis, en particular la causada por la pandemia de Covid-19. En un momento en que el 90% de sus ingresos provenían de los restaurantes, estos permanecieron cerrados por más de cien días durante la pandemia, manteniendo, pasado este período, las limitaciones al servicio presencial.

Tema principal: aplicación de conceptos de capacidades dinámicas en la evaluación de situaciones y toma de decisiones en momentos de crisis.

Público: licenciatura en Administración de Empresas y profesionales de carrera técnica o gerencial.

Originalidad: además de presentar un dilema en un contexto de pandemia, se entiende como aspectos innovadores del caso sugerir la analogía con el *Ensayo sobre la Ceguera* como uno de los puntos de reflexión. Desde un punto de vista didáctico y pedagógico, proponer alternativas de aplicación del caso también en clases online, adoptando herramientas interactivas.

Palabras clave: Capacidades Dinámicas. Capacidad de Detección. Capacidad de Aprehensión. Capacidad de Reconfiguración. Caso de Enseñanza.

IF YOU CAN LOOK, SEE

Located in northeastern Brazil, *Camarões Gesund Produtos Marinhos S.A.*² is known nationally for the production of the *Litopenaeus vannamei* species of shrimp. The company is run by Klaus and Joana, the founding partners, and Miguel, the technical director. It has been supplying the Brazilian market with shrimp for 38 years. Between 2000 to 2005, its production was aimed at the foreign market, a period when the company expanded its capacity to serve new markets.

Moments of great turbulence caused by the unfavorable exchange rate, starting in 2006, and in 2011 the outbreak a deadly virus that attacked and destroyed its raw material - shrimp - led the company to react by adjusting its resources in order to remain competitive in the market.

At the beginning of 2020, production and sales were booming and the company's share of the domestic market was growing, with 90% of its revenues coming from restaurants all over Brazil. The scenario was optimistic, especially given the turbulent periods it had faced. But then came a new blow that took everyone by surprise and once again, placed the company under great strain: a new and lethal virus, this time affecting humans, was spreading around the world, with levels of severity varying from continent to continent, and from country to country, causing deaths, business closures, and economic instability. For the more than one hundred days at the height of the pandemic, with restaurants closed throughout the country, and considering the possibilities of improvements in foreign market due to the positive advances in controlling the waves of the virus and the favorable exchange rate for exports, Klaus, Joana, and Miguel - the company directors - were considering whether *Camarões Gesund* should resume exporting, based on their previous experience, or whether to focus on serving the domestic market, exploring new segments. They pondered on the possibility of having the best of both worlds, making the most of their know-how in the domestic market, while continuing to explore new possibilities beyond Brazil's borders. Either way, solutions were needed quickly.

WHAT DO I SEE IS TRUE?

It was February 28th, 2020. Joana, the operational director of *Camarões Gesund Produtos Marinhos S.A.*, was at Los Angeles International Airport, returning home to Brazil after a well-deserved vacation in Hawaii, where she had had an amazing time. While waiting to board, drinking coffee with a friend and something caught her attention: people wearing masks, especially East Asian people. As she boarded the aircraft, she noticed more people wearing masks. She commented to her friend:

— Wow, some East Asians really are into wearing masks all the time!

He then replied:

— Don't you think this is also because of the coronavirus?

² The names of the company, characters, and systems are fictitious.

That's when the penny started to drop. After her vacation in Natal, Rio Grande do Norte, where she lives, Joana had to travel to attend an international event. However, before leaving, she was informed that the event had been cancelled due to Covid-19. In Natal, she was on her way to a company meeting when she learned that the three professionals who had traveled with her to the event had become infected by the virus, and she then returned home,

where she remained, in isolation, for twenty days. For Joana, used to a routine full of commitments and contacts, both in the office environment and on the farms and the plant where shrimp is farmed and processed, these were tough times.

REVISTA ALCANCE – ELETRÔNICA – VOL. 29 – N. 2 – MAI/AGO. 2022

Isolated and remote, Joana had plenty of time to reflect on this unique, global situation. Together with her partner, Klaus and the technical director, Miguel, she runs a company that sold more than 2,500 tons of shrimp in 2019, with shrimp farms located in some municipalities of the coast of Rio Grande do Norte. The news was the same everywhere: the pandemic was spreading rapidly. As the director of a company with over six hundred employees, in a segment based around a living animal - the shrimp - Joana was very concerned about how they would cope with the new scenario.

Firstly, protocols had to be put in place to prevent people becoming infected by the virus, although the directors did not know exactly what protocols. They couldn't help but think about the severe, and often irreversible effects the pandemic could have, and the staff reductions it could entail. These questions lingered for some time.

They were also keen to maintain the financial health of the company, and to continue supporting the employees and their families, as well as the communities around the farms and the plant. This was something they felt to be essential, during these difficult times. Then, the directors began to focus on company's financial figures. The most worrying factor was that ninety percent of their revenue came from restaurants all over Brazil; but all the restaurants had temporarily closed their doors – some even permanently.

There were many uncertainties about what was happening, especially in relation to the outer context. Impacted by the tension of such an unexpected situation, a thought came to Joana's mind: I think we must be blind! The factors that worried her most were not knowing how long the restaurants would be forced to close for, and how to adjust the production and processing of products accordingly.

Suddenly, the directors were faced with a huge dilemma: in the current situation, should Camarões Gesund continue to focus on serving the domestic market, seeking to explore new segments, or should it resume its exports? This was something it had already done in the past, but that was fraught with currency exchange rate uncertainties other potential barriers to international trade.

Faced with an uncertain scenario, the directors looked back over the different periods in the path of Camarões Gesund: the company's origins; its verticalization through the production of its own raw materials; start of processing activities; exports to the external market; dealing with exchange rate fluctuations; and coping with the white spot virus that affected shrimp. From each of these past situations, the directors took some elements that had worked, and used them to deal with their "blindness" in the face of this new pandemic. Thus, by relating the solid experiences of the past with the situation caused by the Covid-19 crisis, they glimpsed a cloudy scenario, with new situations that they had absolutely no idea about how to overcome.

FOCUSING ON THE PAST. THE SALT FLATS AS A PLACE OF OPPORTUNITIES

At the beginning of the 1980s, Brazil was going through a sharp recession, with a huge growth in foreign debt and mean inflation of eighty percent a month. Salt producers in Rio Grande do Norte began to go bankrupt, and the large areas of salt flats became obsolete. With this scenario, European investors identified an opportunity: farming shrimp in the salty waters. Thus, in 1983, Camarões Gesund was established at the site of the former salt flats in Canguaretama (RN). The company's founder, German immigrant Klaus Fischer, had a clear additional vision in face of the opportunity: to generate employment and income.

Klaus wanted to build a farm to produce sea shrimp and work with aquaculture in a sustainable way, generating development and knowledge for communities along the river banks. Right from the start, the company faced significant challenges: regularization of the area, carrying out the appropriate planning, foreseeing the required investment, and adapting the layout to farming without negatively impacting the environment. It was interested in molding the company's plans to make them ecologically friendly, adapting the business accordingly.

Having passed these stages, it was now time to obtain the main input: shrimp hatchlings. The first shrimp farming initiative took place in an artisanal way, through the capture of wild hatchlings, which were later placed in the tanks. However, this plan was not successful, so Klaus scheduled a meeting with the other two directors, Joana and Miguel, to discuss a new strategy to obtain the input. Despite the failure of the initial experiment, Klaus opened the meeting with great motivation to move the project on:

— Good morning everyone! The experiment with wild shrimps did not bring good results. We now have to think of new alternatives. I know we will find a solution.

Miguel:

— The hatchling is a key piece in the whole process. Therefore, the best thing to do would be to farm shrimps in tanks from the outset.

Joana agrees, but ponders:

— It's a good idea, but will mean adjusting our operational capacity and other internal resources of the company, do you agree?

Klaus:

— Yes, we will need to adjust our internal processes, expand the structure and develop competencies. However, I think it will place the company in a more secure position.

And so, it was decided to grow shrimp in ponds from the very beginning. This experience was also a learning curve for the business. It mobilized resources, and followed the pattern of the farmed sea shrimp production chain: it set up a maturation and larviculture lab in 1989, with the capacity to produce sixty million post-larvae (hatchling) per year. It also adapted the old salt flats, creating farms for producing and growing the shrimp, and structured its processing and freezing plants for the consumer market.

In a process of improvement, the directors decided to import a shrimp species from the Pacific; *Litopenaeus vannamei* (white-footed shrimp). In 1997, this became the exclusive product of Camarões Gesund, and is a species that is still very robust worldwide, producing high yields.

Having solved the post-larvae problem, the company reconfigured its organizational resources and strengthened its knowledge base. It began to conduct research, performing tests and learning more about the technical part of the inputs to ensure better raw material.

SEEING BEYOND... MOBILIZING RESOURCES....CAPTURING VALUE

As productivity expanded, the company would put the fresh shrimp on ice and ship them to the domestic market. But for destinations further away, this resulted in loss of quality, which was an issue of concern for the managers. This led the company to develop another innovative experiment in resource mobilization, creating its processing plant in 1997. This increased the added value of the shrimp, attracting interest from the foreign market. The directors then realized that the company had the required structure to serve both the domestic and the foreign markets, and so they decided to start exporting.

From 2000 to 2005 the company was more focused on exports, and the directors had to study and assess the new markets (the United States and Europe). They soon realized that demand was high, and this would give the company an advantage it did not have in Brazil. Their products were of better quality than those of their domestic competitors, but this factor was not so valued by the domestic consumer market. They used this strategy and partnered with large international retail chains, thus strengthening the brand and establishing it broadly. This was also an opportunity for the directors to engage and learn from all segments of the company, further supporting the new strategy.

As a result of the high-quality standards from post-larvae to the final consumer, the company began to identify its weaknesses; manufacture its own feed, import some of the inputs; train the teams of its partner retail chains in the proper handling of the product; and offer healthier shrimp. Its team became more aligned, and the leadership excelled in their constant experimentation and discovery. In 2001, Camarões Gesund was awarded the Quality Assurance Seal by a French retail chain.

Recognizing its compliance with the standards of environmental preservation, working conditions, production practices, and social responsibility, the partnership with the French retailer advanced fruitfully, until seventy percent of the shrimp sold by the French chain was being by Camarões Gesund. This fact attracted the interest of other European retail chains, and production was increased intensively (Figure 1).

Figure 1.

Harvesting shrimp



Source: image given by Camarões Gesund (2020).

CAPABLE OF LOOKING, PREFERRING NOT TO SEE

In 2006 exports accounted for seventy percent of sales, but the directors could not have foreseen what was to come: the exchange rate variation. The dollar had fallen from R\$4.00 to R\$1.50. The directors had to decide on the next steps and, after a long discussion, they came up with a solution.

Klaus:

— These are challenging times! The exchange rate variation has made exports unviable, and the domestic market cannot absorb production at the current pace.

Joana:

— Nobody expected this, and the company was all geared up for exports. I can't see a way out.

Miguel:

— The solution may be to sell off one of our production units.

Klaus:

- That's it! Downsizing is the way out, even if this is contrary to what we've been doing up until now. But these times require an inverse logic that we need to figure out how to deploy. We will need to redesign the company, and realign resources.

Joana:

- The most painful part of all this is having to lay off staff. I hope we don't have to do that.

Still in the early stages of the company's adaptation, the team of directors was sure that the worst was over. But they could not have imagined what was to come next: a virus, called white spot, that rapidly kills the shrimp in the post-larvae stage, reducing survival from almost one hundred percent to just fifteen percent. The situation was dire again.

Klaus:

— It seems to me that the threat of this white spot is more serious than the one caused by the exchange rate variation. Do you agree?

Michael tries to relax:

— The recent challenges have “warmed us up”! This may help us in our search for a new way out.

Joana:

— This time we'll have to resort to what's left of the company's financial reserves. The scenario is not at all encouraging, Miguel.

Klaus then concludes:

— A virus similar to this white spot must have appeared somewhere else in the world. I'll do some research.

In his research, he discovered something different in Asia. A type of shrimp with improved genetics, more resistant to the white spot virus. He immediately called the other directors, declaring, triumphantly:

— I think we can mitigate this situation. We will have to find a way to co-exist with the virus!

Following the call, Miguel said:

— Improving shrimp genetics is important, but it could take too long. We don't have this species of shrimp here in Brazil. The situation demands a faster solution. I'm working on something here.

After a targeted and rapid research, Miguel developed a sustainable system that treats the water entering and leaving the tanks. A closed system to control white spot, and that does not harm the environment. The assimilation of this system by the company illustrated its ability to innovate.

With the technological innovations introduced to the production system, the company created Clean Wasser, a unique system worldwide that promotes sustainability. It was 2014, and the impacts of the white spot were controlled and production was gradually rising again. Klaus sighed. What a brilliant idea! The invention had given immunity to the shrimp, oxygen to the company, and sustainability to the environment, all in one shot.

The system won an international award as an innovative idea in aquaculture. Around this same time, the fourth largest business group in Asia, an international leader in aquaculture and holder of a large research center, Thai Xāhār, began to take an interest in Camarões Gesund. Also a leader in shrimp genetic improvement, and holder of the best breeding stock in the world, the company decided to invest in Camarões Gesund by becoming its partner. After the necessary procedures, in 2018 Camarões Gesund became a Joint Stock Company, and Thai Xāhār acquired forty percent of its shares.

By February 2020, with production on the rise, the company mastered the larviculture technology, and held a significant share of the domestic market. After such chaotic times, the directors had plans, and could finally envisage moments of calm. All well and good, if it were not for the arrival of a new virus whose destructive power would be far greater than that caused by the white spot. Although the new virus did not kill shrimp, it was lethal to many humans, impacting all sectors of society. This virus was fasting becoming a pandemic disease: Covid-19.

WANTING TO SEE BUT NOT ABLE TO

After twenty days of lockdown, Joana went to the company headquarters. At a meeting, partners discussed the first challenges posed by the Covid-19. The situation was worse than they thought, and they did not know how they could manage to keep the company afloat. The main concern was to protect the employees and their families. To calm things down, she suggested:

— Let's follow all the protocols recommended by the authorities, temperature measurement, wearing of masks, raising awareness in the community around the company, keeping a safe distance from other people, in short, make sure our team is safe!

And they did as Joana suggested (Figures 2 and 3).

Figure 2.*Employees working in the processing*

Source: image given by Camarões Gesund (2020).

Figure 3.*Member of the health team checking other employees' temperatures.*

Source: image given by Camarões Gesund (2020).

Having adopted the safety protocols, another major concern began to cause concern to the team.

Joana:

- There is another issue that worries me a lot, over ninety percent of our revenue comes from sales to restaurant chains. I've just heard that the government is declaring that all restaurants must close for the foreseeable future, to prevent the spread of the virus. Of the 250 tons a month we produce, only 15 will be absorbed by the other segments. We have no cold storage warehouses.

Miguel adds:

- We also should bear in mind that the core element of our production is a living animal. We cannot simply stop production and close the plant, lay off the employees, or put them to work at home. The whole production cycle takes three months, we can't just stop. Production depends on on-site handling and treatment by humans!

Klaus:

- There are many sensitive issues. But right now, taking care of our six hundred and sixty-eight employees is the main priority!

But Joana warns:

- You are right, Klaus. But I'm afraid dismissals are going to be inevitable.

The meeting was tense, leaving an uncomfortable atmosphere. Still shaken, the directors recalled all their past experience, and the skills the company already possessed, to build and rebuild when faced with situations of hardship. While they lived in hope, they could not see any clear way out. And the pressures imposed by the harsh and unexpected situation only increased, rapidly.

With this roller coaster of emotions, the directors could see new possibilities, since one of the company's priceless resources rested on their good reputation with the banks and customers that were still purchasing shrimp. They began to believe there might be a way out after all! However, they were not clear about the situation of the restaurants – the issue that worried them the most.

As these customers were restaurant chains operating in different states of Brazil, with each state having its own dynamics in relation to the pandemic and its control measures, it was impossible to know the order in which they would reopen. This situation of uncertainty led the leadership to almost lose hope. They could not see any alternative.

The directors could not measure the impacts that the gradual reopening of customer stores would have on sales. All these unanswered doubts only increased over the months, leaving the directors overwhelmed with questions: What limit should be set for production? How could they organize the work shifts so as to prevent excessive burden? What other sales channels should they look for? Would the producing farms and the plant have to be adapted?

A LIGHT AT THE END OF THE TUNNEL

Immersed in this tortuous and unclear situation for three months, the team brainstormed several questions.

Joana expressed her concern:

- We can't stop production all at once. Our main input is a living animal!

Klaus:

- But we don't have the structure to store production. How are we going to solve this? Also, we cannot lose our employees who are already trained in the jobs and committed to the company.

Miguel adds:

- The processing and logistics areas are structured to serve the biggest customers – the restaurants, which will be closed until goodness knows when.

Klaus:

- The immediate solution not to lose production is to rent cold storage warehouses. I have already obtained a quotation. It will cost R\$120,000 per month to store five hundred tons of shrimp.

Joana, however, warns that storage would not be enough:

- With the restaurants closed, only a small number of customers was left to absorb the stock. We will need to stop production, there is no other way!

Realizing that the restaurants would not be reopening any time soon, they initially decided to reduce production by fifty percent. But a few weeks later, production had to be drastically reduced to twenty percent, as there was insufficient market demand to absorb it. Layoffs were needed: almost two hundred employees had to be dismissed. The leadership discussed whether it would be prudent to adjust the structure, and whether this was the best solution. These reflections were aimed at renewing their spirits.

After much thought, they discussed proposals to encourage the restaurant chains to start offering delivery services, as they had reached just over thirty percent of the previous year's revenues. For Joana, this could be a way out of the company's difficult situation since, she supposed, people were still consuming shrimp, but now at their homes instead of eating out. Therefore, she thought that encouraging restaurants to sell through delivery systems would be a way to reverse the financial scenario of Camarões Gesund. She also considered it important to invest more in building relationships with the other segments, such as grocery stores and supermarkets.

The proposal was well received by the other directors, but considerable adjustments in production, processing, and distribution would be needed to make it operational. The board of directors could not foresee the impacts of these changes on the company's post-pandemic recovery. Remaining hopeful, even in face of so many tensions due to the chaotic situation, Joana insisted:

- Let's think positive! We need to innovate, and this will be an opportunity to do that. Let's develop our creativity, and move away of the commodity, the whole shrimp, in bulk.

Miguel warned the team that, although the pandemic had been going on for months, in Europe and other countries trade was starting to open up again. Joana was optimistic:

- Great! It could be a good idea to start exporting again, resume the activities, even if in the medium term. What's the exchange rate today?

Klaus, however, was more cautious:

- It is a very high risk, and everything is very uncertain, maybe it is not feasible. We need to analyze the scenario in more depth before making any decisions.

The team's moods were tempered by the uncertainties regarding imported inputs and their prices, since most inputs to produce the shrimp feed were imported, local suppliers did not have stock, and the pandemic was global. On the one hand, the dollar was favorable for exports, but on the other, importing the necessary inputs for the feed was increasingly expensive.

Plunged into a sea of uncertainty, but knowing the company's strengths and its capacity to deal with change, the team was sure they would find a solution; they could feel it very close. However, the horizon was still foggy, and doubts echoed in their minds, holding the directors hostage to the blindness that had taken hold of them at the beginning of the crisis. They had to clear their views to make decisions. There were two options: resume exporting, or focus on serving the domestic market, exploring new segments. What would be the best option? Did the company have the required capabilities to overcome another crisis? They were sure about one thing: they were no longer totally blind, they could see a way out. We are blind people who can now see, they said.

TEACHING NOTES

EDUCATIONAL OBJECTIVES

The case gives the student contact with business situations characterized by the unexpected and uncertainty. Thus, it provides an opportunity for reflective learning, establishing connections between theory and practice. After reading the case, and learning about the different periods in the history of the company Camarões Gesund, both before and during the Covid-19 pandemic, the participants are expected to develop reflective experiences in order to:

- a) Understand how past experiences, whether in coping with crises or in applying new strategies, have contributed to the development of an organization's dynamic capabilities;
- b) Apply concepts of dynamic capabilities when evaluating situations and making decisions in times of crisis; and,
- c) Consider the importance of dynamic capabilities in unstable and unpredictable contexts, especially in situations of crisis.

SUGGESTED AREAS FOR APPLICATION

The theoretical axis of the case discussion is supported by many dimensions of dynamic capabilities. It is suggested for use in undergraduate Business Administration courses, Advanced Topics in Strategic Administration, Special Topics in Administration, or similar subjects. The case may also be of interest to professionals in technical or managerial careers, enabling them to explore the opportunities brought by times of crisis, for developing dynamic capabilities.

THE PROTAGONISTS AND DATA COLLECTION

The case was written from the perspective of the directors of Camarões Gesund. Primary data were obtained through a semi-structured interview with the operational director, Joana (a fictitious name), via a videoconferencing platform, and through information gathered during a lecture delivered by Joana to a graduating class of the Administration Course at a public university, in September 2020, on the impacts of the pandemic for the company. The interview data were initially collected in June 2020 and updated, through new informal conversations between the researchers and the leadership of Camarões Gesund, in October 2020 and November 2021. In addition, information was sought from secondary sources on the company's website and documents made available by the company. The company, characters, and systems were given fictitious names to preserve the identity of the organization and its employees.

ANALOGY WITH BLINDNESS – A BRIEF SYNOPSIS

The decision to draw an analogy with the work *Blindness*, by José Saramago's *Blindness* is attributable to the similarity between the blindness presented in the work and that experienced by the managers of an organization, when faced with a crisis caused by the unexpected, a new virus that is sometimes lethal to humans. Just as in Saramago's work, the new virus (Covid-19) has forced society to adapt, changing its way of living and interacting. The same happened to companies, as they suffered the impacts of the pandemic, such as reduction of production and consumption, loss of customers, and a buildup of debts, among other problems.

It is hoped that the case and the analogy presented will contribute to the understanding of: a) how moments of crisis can blind managers of an organization, even temporarily, making them feel they have no way out; b) how the skills and strengths acquired in past crises can help it to recover from the blindness, enabling it to adapt to the new environment, and apply the knowledge and skills for the business survival.

The book "Blindness" portrays the story of a white blindness that spreads through a city, affecting a large number of people, causing a great collapse within society, and forcing everyone to live in way that is totally outside the norm. The main characters are taken to an insane asylum, where they are locked up with hundreds of other inmates, and suffer from blindness, experiencing huge conflicts. The author manages to explore, in more depth, people are

capable of doing to survive in a place where each one has to seek to adapt in order to keep up with and manage to keep alive the hope of seeing again (COSTA, 2017, single page).

SYLLABUS

To prepare the students, the case should be made available and read beforehand. It should be applied using a syllabus, according to Table 1. The class can be organized into group activities, followed by a session with the whole class together?.

In order to facilitate interaction during classes, especially for the online modality, some interaction tools are suggested during the case analysis. In face-to-face classes too, as the students usually have cell phones and some have notebooks, adopting the simultaneous participation supported by the mentioned tools should make the class more dynamic and attractive for the students.

Table 1

Proposed Teaching Plan

Stage	Teaching suggestions	Time	Suggested tools
Opening Session (Optional)	The teacher can start the discussion by asking the students to define, in one word, the company's behavior in face of crises. The idea is to assemble a word cloud that encourages the students to provide insights for the case discussion.	10 min.	Mentimeter. Offers interactive resources, including word cloud https://www.mentimeter.com/
Previous activity	The full-class discussion is held in this stage. Previous activity: reading of Appendix I - Information about marine shrimp farming in Brazil. The teacher should ask students to say what they understand about the shrimp production chain.	15 min.	Jamboard or Padlet. Jamboard offers the possibility of simultaneous participation, through the creation of post it https://jamboard.google.com Padlet allows creating murals and streams. https://pt-br.padlet.com/
Discussion of Questions	Question 1 - In this question, the teacher notes on the board the topics identified by students, and encourages debate about the company's behavior in face of past crises.	110 min.	GoConqr, Miro or Padlet. These allow you to create an interactive board to present summaries and diagrams about the subject under discussion. https://www.goconqr.com/pt-BR https://miro.com/app/dashboard/
	Question 2 - The teacher may promote brainstorming, retrieving the students' opinions, and performing a joint analysis, followed by a summary of the question.		The Jamboard tool will help in creating a framework for simultaneous interaction with the students.
	Question 3 - In this question we suggest that the teacher select interactive boards, where students can point out the behaviors observed.		Miro or Jamboard. These help questions 3 and 4 with the creation of a note board with simultaneous participation of students
	Question 4 - The teacher should encourage students to extract from the narrative behaviors and moments of the company with senses of reconfiguration.		Miro. Interactive board.

	<p>Question 5 - In this question, we suggest a debate in which the teacher encourages the students to create topics about the company's behavior that, even in face of a stormy reality, can see related moments.</p>		Miro for interactive boards. Padlet, for building murals.
	<p>Question 6 - The discussion of the question should be preceded by a summarizing the situation, based on the summary presented, right after the question. The plan should be designed in groups through discussion forums, observing the suggestions presented. As the plan is being discussed by the groups, the teacher should encourage the students to exchange ideas for reflection.</p>		<p>WordPress, for plan discussion. Google Docs, for interactive text writing</p> <p>https://www.wordpress.com/ https://docs.google.com/document/u/0/?hl=pt-BR</p>
Case Outcome	<p>Next, the teacher may encourage students to establish a relationship between the work Blindness and the case, pointing out some moments of blindness experienced by the company in face of unexpected and unpredictable situations. This task should be supported by the synopsis of the work presented in the teaching notes. Finally, we recommend that the teacher summarizes the case discussion, and the concepts of dynamic capabilities, and relating them to the experience of Camarões Gesund in coping with the crisis caused by the Covid-19 pandemic. For this, we suggest referring to the section "Case Outcome" in the teaching notes.</p>	15 min.	<p>Interactive boards adopting Miro or Padlet for building murals and streams.</p> <p>Board 1 - two columns: Case vs. Blindness</p> <p>Board 2 - two columns: Dynamic capacities x Camarões Gesund's experience in coping with the Covid-19 pandemic crisis.</p>

Source: Prepared by the authors.

6. The teachers are recommended to assess the students based on the action plan drawn up following to question 6.

SUGGESTED QUESTIONS FOR THE CASE DISCUSSION

1. Throughout its history, Camarões Gesund has experienced several dilemmas, and found ways to overcome them. In this sense, what are the main challenges faced by Camarões Gesund before Covid-19, and how did the company react to cope with these crises?
2. After so much turbulence, Joana and the other directors were full of plans and finally envisaged moments of calmness. At least that is what they thought, if not for the arrival of a new virus. Even in the face of the threats experienced by Camarões Gesund during the Covid 19 pandemic, the company saw some opportunities, and knew how to evaluate them. In this context, please mention some of the company's behaviors that evidence their adaptive capacity in face of the situations imposed by Covid-19, and how they were assessed.
3. For the company to survive in the midst of the crisis, the directors sought to mobilize resources, and seize the opportunities that emerged. Describe the process the company used to mobilize resources to seize the new opportunities and capture value during the pandemic period.
4. To cope with the threats from the Covid-19 crisis, the company had to take attitudes aimed at reconfiguration and realignment. How did Camarões Gesund reconfigure and realign their organizational resources to face the Covid-19 crisis?

5. Reflect on how the historical path of facing challenges taken by Camarões Gesund helped the company to develop the necessary capacities to face the crisis brought about by Covid-19.
6. If you had to make decisions as the director of Camarões Gesund, which path would you follow: continue to focus on serving the domestic market or resume exports? Develop a plan (defining objectives and actions) for your preferred path.

PREVIOUS ACTIVITY

Prior to the analysis, in order to place the case discussion in a broader context, it is recommended that the teacher give an overview of the shrimp production chain in Brazil, bringing elements from Appendix I: Information about marine shrimp farming in Brazil. To enable interaction, it is suggested to use the Jamboard or Padlet tool. The teacher may ask students to build charts indicating: 1) Main elements of the institutional environment; 2) Main stages of the aquaculture production process; and 3) Main inputs in the shrimp production process.

LITERATURE-SUPPORTED ANALYSIS OF THE CASE QUESTIONS

Question 1

This initial question aims at enabling contact with information about moments in the case context, and has potential for the teacher to encourage students to understand the notion of dynamic capabilities. The teacher should foster the search for moments of challenges to the company present in the narrative. Students may list the elements to the left of Table 2. The teacher is then recommended to prompt students to think about how the company reacted, on the right side of Table 2.

To prepared the board during online class, we recommend the use of the tools shown in Table 1 as they allow the simultaneous participation of students, adding or updating the information contained in the narrative. The tools for creating murals can also be used, as shown in Table 1.

Table 2

Summary of the company's behavior

Challenges	Reaction
Regularization and adequacy of the shrimp farming areas	Planning of actions and an investment plan
Obtaining quality post-larvae	Verticalization of the activity by creating a maturation and larviculture laboratory, in 1989
Need to add value and quality control to the final product	Integration of the processing stage in 1997
Access to foreign markets	Strategic alliance with big international retail chains
New exchange rate situation (devaluation of the Real against the Dollar)	Business focused on the domestic market to the detriment of the external market
White spot virus	Exploring new technological alternatives, generating innovation, i.e., creation of the production system called Clean Wasser.

Source: Prepared by the authors.

When students understand the challenges and strategies adopted by the company, the teacher can focus the debate, seeking to encourage an analysis of the topics identified, and their potential for the development of capabilities

gained by the company, to be further explored in the next question. An important point for reflection with the students is the development of capabilities as a gradual, evolutionary, incremental and historical process.

Dynamic capabilities

Capabilities relate to the ways in which resources are coordinated and managed, and are developed in part by learning, combining resources, and using complementary assets (Teece, 2019). In the hierarchy of organizational capabilities, high-level dynamic capabilities are activities and assessments that direct other capabilities and resources to maintain the company's adaptability to the external environment (Teece, 2018). Dynamic capabilities can be broken down into three main dimensions (Teece, 2019): sensing, seizing, and transforming.

To enable students to perceive these dimensions, the teacher may prompt reflections and discussions about the company's dynamics before unexpected and threatening obscure situations at times prior to Covid-19, and the ability to identify and evaluate opportunities, mobilize and reconfigure resources demonstrated by Camarões Gesund.

At this point, the teacher asks the students to mention some situations from the narrative that are associated with the three dimensions of dynamic capabilities. Interacting with the students, and based on their statements, the teacher should proceed to analyze the case, looking for dimensions-related complementary information in the narrative, in order to direct students to understand how the various challenges faced by Camarões Gesund helped in the development of dynamic capabilities.

Questions two, three, and four will show how the dimensions of dynamic capabilities discussed by Teece (2019) could be applied to Camarões Gesund throughout its history.

Question 2

Camarões Gesund has historically presented behaviors that demonstrate its adaptive capacity, even in the face of crises. For example, realizing the strategic role of growing *Litopenaeus vannamei* post-larvae proved to be fundamental for the feasibility of the business. This strategy is related to the first dimension of dynamic capability: sensing, which is ability of identify and assess opportunities, threats, and customer's needs. This capability is related to the processes that drive internal R&D activities, the selection of new technologies, identification of suppliers and innovation developers, identification of target market segments, and changes in consumers' needs and desires (Teece, 2007).

In this stage, the teacher may brainstorm retrieving the students' concepts about the analytical systems to perceive, filter, and outline threats and opportunities adopting the tool suggested in Table 1.

The history of Camarões Gesund presents several periods related to sensing, i.e., analytical systems and individual capabilities to perceive, filter, format, and calibrate opportunities and threats. The company came into being from the perception of the founder, Klaus Fischer, to take advantage of the deactivated areas of salt flats for farming shrimp. In addition, Klaus was already concerned with environmental and social sustainability, understanding beforehand the importance of this theme for his business. The company then created its own production technology, Clean Wasser, based on the analysis of the white spot problem from countries that had already faced this problem. Setting up a strategic partnership with a French retail chain and with Thai Xāhār was another example of its ability to sense opportunities as they arise.

Question 3

Understanding the environment in terms of opportunities and threats is a core activity in dynamic contexts. However, it is also important to have the ability to direct organizational resources to change business models, generate solutions for customers, and capture value for the company in face of new environmental features. This challenge faced by Camarões Gesund is the theme of this question.

Camarões Gesund has been building its seizing capacity by developing a business model based on verticalization (post-larvae production and shrimp processing), research and development (Clean Wasser), reputation

(Quality Assurance Seal), and strategic alliances (European retailer and Thai Xāhār). Seizing is the second dimension of dynamic capability, and concerns the ability to mobilize resources to seize new opportunities and capture value.

According to Teece (2007), seizing capability is related to outlining business models and customer solutions, selecting protocols for decision-making, and control mechanisms in the case of strategic alliances or establishment of platforms and business ecosystems. This capability is also seen in the generation of customers-oriented solutions. For example, the business model of Camarões Gesund could reach a level of quality, attested by certifications, that allow it to serve both the domestic and foreign markets.

The teacher is recommended to adopt interactive boards for the development of this activity, especially in the online modality. Students can use these boards to indicate the behaviors observed. The activity may be facilitated through the tools suggested in Table 1, encouraging students to dynamically communicate through sticky notes.

Recently, with the Covid-19 crisis, the company's leadership relied on its reputation with customers, on the quality of its products, and on its knowledge of the market, in the search to mobilize resources to redirect its focus on the best solution: either serve the domestic market (final consumer), or resume exports.

The teacher is recommended to refer to the case outcome in the teaching notes in order to share, after discussing the other questions with the students, how Camarões Gesund managed to mobilize its resources to seize new opportunities, and capture value in the midst of the Covid-19 pandemic.

Question 4

Dynamic contexts require, in addition to sensing and seizing capacities, the ability to exploit new resources. To avoid the trap of the performance paradox (when great efforts yield only small results), in many cases, companies need to deal with more radical innovations by transforming their organizational resources. Camarões Gesund had to transform itself to cope with the Covid-19 crisis. This is the focus of discussion of this question.

The last dimension of dynamic capability, transforming, is the ability to transform, renew, and realign organizational resources. This capability is related to organizational structuring and decentralization decisions, governance, asset co-specialization (complementary product development), and knowledge management (Teece, 2007).

In order to assist students in developing this activity, the teacher is recommended to foster a debate to bring them closer to the transforming, renewal, and realignment dimensions by asking students to bring in from the narrative behaviors related to this dimension. This activity may be aided using interactive boards, through the tools indicated in Table 1. The teacher may close the analysis of the question based on the information in the following paragraph.

The case information analysis indicates that transforming capability was observed through innovation-driven learning (research and development), resource realignment (verticalizations and divestment on a shrimp farming unit), and co-specialization (strategic alliance with Thai Xāhār). Camarões Gesund transformed several aspects of its operation to address the threats arising from the Covid-19 pandemic: renting cold storage warehouses to stock its products; reducing staff; adjusting logistics activities to serve smaller retailers; and adjusting operational processes to meet safety protocols.

Question 5

At this point of leading students to think over the knowledge obtained through experience, it is suggest that the teacher hold a discussion, according to Table 1, encouraging students to bring situations about the company's behavior that, even in face of a stormy reality, goes through moments related to:

- Exploitation of existing capabilities;
- Improvements on operational efficiency;
- Process adjustments; and,
- Refinement of organizational practices.

Next, the students' search should be directed to listing the company's situations during crises in order to enable the future of the business, related to:

- Research initiatives;
- Experimentation;
- Risk-taking; and,
- discoveries.

The teacher is recommended to take up again the company's dilemma between staying focused on the domestic market or resuming exports as a way to discuss the issue. The teacher should take up the students' statements, relating them to the company's history, characterized by a behavior of confronting obscure situations, including that caused by Covid-19. During the discussion, the students should be referred to some situations of the case: here, the teacher is recommended to list topics about the company's behavior on an interactive board, adopting Miro and asking the students to make notes associated with behavior, extracted from the narrative. Following up on the students' statements, the teacher should add that:

- In order to overcome the moment generated by the Covid-19 crisis, the company acted toward exploiting the knowledge capital accumulated from other crises, such as the verticalization of activities, integration of the processing stages, strategic alliance with European companies, and the development of the Clean Wasser production system;
- The changes caused by the pandemic led the company to experience uncertainties, which naturally lead to the development of new knowledge, from the creation of health protocols to prevent the contamination of employees and family members, to innovation in products, processes, distribution and exploiting new market segments; and that,
- According to Teece (2019), research activities for potential disruptive innovations generally require a long-term horizon and greater uncertainty than activities that rely on knowledge existing in the organization. This moment in class is a good time for the teacher to deepen the discussion of the case, trying to develop with students the notion of tradeoff between short-term and long-term solutions, and seeking to encourage debate on how companies should deal with this issue, especially in times of crisis.

Question 6

By this point of the discussion of the teaching case. The students should have developed an understanding of the different dimensions (sensing, seizing, and transforming) of dynamic capabilities in the path of Camarões Gesund, this question aims to encourage them to perform a practical action, developing an action plan to solve the dilemma.

In order to help teachers to guide the plan design by the students, even assuming the knowledge acquired by them so far in the discussion of the case, a summary of the information should be presented. For the discussions of the plan, and the interactive writing, some tools are suggested, as shown in Table 1. When guiding the students in executing the plan, the teacher should encourage them to reflect on the previous discussions of the questions, and, supported by the synthesis presented in the text sequence, point out elements that can stimulate the students' decision-making.

Summary of learning to reflect about the future

The accumulated knowledge and capabilities developed by Camarões Gesund throughout its history have allowed the company to adapt, both in past situations and in the present one caused by the Covid-19 pandemic. Now is the time for the company to look into the future and see the ways forward. In the past, exporting was important for the company's earnings, and for the development of suitable levels of technology and quality to meet the most demanding markets. This know-how is a differential of the company. On the other hand, the focus on the external market proved risky, due to the external and uncontrollable factors that can hinder this type of operation, e.g., exchange rate variations. Serving the domestic market proved to be interesting and less risky possibility, as the proximity to customers and performance within the geographical limits of Brazil minimized the risks of environmental threats. It minimized the risks,

but did not prevent them altogether, as was seen with the Covid-19 crisis and the consequent impact on the operations of the company's product main customers, i.e., restaurants. When compared to foreign market, the domestic market may limit the company's growth possibilities, especially for products with differentiated quality and high added value. The dilemma here is whether to focus on exports or on the domestic market?

Suggestions for the development of the action plan

In order to develop the plan, the teacher should ask the students to make a group decision about the path to be followed: domestic market or export. Ideally, groups should be formed for both the first and the second paths, to allow for a wider discussion.

For the group(s) opting for the domestic market, the teacher should recommend that the plan include objectives and initiatives involving sensing, seizing, and transforming capabilities in an approach that prioritizes the company's existing resources. For example, Camarões Gesund may use its experience in the domestic market to reevaluate its target markets (sensing), readjust its production capacity and prioritize the most profitable products (seizing), and adapt its products and distribution channels to shrimp consumption "at home" (transforming).

For the group(s) choosing to prioritize export, the teacher should advise so that the action plan also include strategic objectives and initiatives that involve the sensing, seizing, and transforming capabilities, but in a new approach of resource development. For example, Camarões Gesund could find the international markets with potential to receive the company's products, and identify the legal and technical specificities to serve these markets (sensing). The company will need to adapt its production, obtain the required certifications, and structure the logistics and international distribution (seizing). The export option entails some additional risks for the organization, and at the same time, makes room for new discoveries in terms of business model, technologies, research and development (transforming).

Once the task has been completed, the teacher should ask each group to present their plan. While the groups are doing this, the teacher should point out some elements to discuss with students the advantages and disadvantages of both paths: internal or external market. Thus, by giving a summary of the company's potential, this may provoke an interesting discussion with the class based on the following question: Why not prepare the company for both possibilities simultaneously?

The activity of discussing the advantages and disadvantages of the paths explored by the students may be carried out using an interactive board. The tools listed in Table 1 are recommended should the teacher wish to use interactive boards highlighting these advantages and disadvantages.

Overview of the Potential for Multiple Alternatives

Camarões Gesund accumulated experience in the internal and external market; obtained international certification; has the capacity for research and development; has relationships with agents in the internal and external market; has strategic alliance with a large international company in the sector; and, has a business model based on sustainability (a global trend). In brief, the company may draw prospective scenarios and prioritize one or another of the alternatives, depending on the course of action of the events, however constantly maintaining activities in both alternatives. This strategy could protect the company from unexpected situations, such as the emergence of the Covid-19 pandemic. The company has learned and developed capabilities over time.

Outcome of the Case

After adopting the safety protocols and initial measures to ensure the company's operations (renting warehouses, reducing production, and shutdowns), in order not to totally stop sales, Camarões Gesund adapted its structure and launched a product at a reduced price, and a 400g package, smaller than the traditional ones and shifting its focus to supermarkets, wholesalers and emporiums, i.e., sale to the end consumer.

Still in 2020, it started serving a new market segment, and kept its main focus on the domestic market, expanding its presence among consumers. It made the new products available in customized freezers at the customers' establishments and, with the gradual reopening of the restaurants, installed the appliances on units of partner chains. In 2021, with the reopening of the restaurants, the company expects to divide its efforts on both segments: food, represented by restaurants, and wholesale. Opportunities have arisen to participate in events, such as the National Shrimp Fair, when the directors aim to show consumers the high quality of their products, in the quest to maintain a competitive edge over competitors.

Although in 2020 negotiations have been resumed to start exporting again, albeit with a smaller volume than in the past (50 ton/month was the forecast for the second half of 2020), the scenario was not favorable in 2021. Given the logistical barriers imposed by the Covid-19 pandemic, the cost of exports from Brazil became very high, compared to the countries of Camarões Gesund's main international competitors. Thus, exports were ceased, and the strategic focus turned exclusively to the domestic consumer market, which is very promising and, according to the directors, presents better competitive advantages for the company.

The rehiring of employees gradually began in October 2020. In that year, eighty employees were rehired. With the improvement of the financial situation, rehiring continued in 2021 for the production and industrial sectors. The company's feed mill was built in 2021, minimizing the company's dependence on imported inputs, and guaranteeing quality feed. It also built the first molecular lab to certify the shrimp quality and avoid the risk of losing production due to some disease. It has also made improvements to its larviculture processes.

The directors were devoted to organizing the company in 2021, based on the capabilities developed and aimed at reversing the financial picture in 2022, increasing revenues. To this end, they also restructured the staff, opening four new strategic managerial units: Processing Management, Quality Management, Asset Maintenance Management, and Construction and Infrastructure Management.

References and Recommended Materials

In order to support the in-class case discussion, the following bibliography and materials are recommended for the teacher and students.

References and Recommended Materials for Teachers

Farzaneh, M., Ghasemzadeh, P., Nazari, J. A., & Mehralian, G. (2020). Contributory role of dynamic capabilities in the relationship between organizational learning and innovation performance. *European Journal of Innovation Management*, ahead-of-print. <https://doi.org/10.1108/EJIM-12-2019-0355>

Saramago, J. *Ensaio sobre a Cegueira*. (1995). São Paulo: Companhia das Letras.

Tahim, E. F., Damasceno, M. N., & Araujo, I. F. de. (2019). Trajetória Tecnológica e Sustentabilidade Ambiental na Cadeia de Produção da Carcinicultura no Brasil. *Revista de Economia e Sociologia Rural*, 57(1), 93-108. https://doi.org/10.1590/123456781806-947_90570106

Recomenda-se também consultar o site da ABCC por ser referência no Brasil sobre a carcinicultura: <https://abccam.com.br/>

References and Recommended Materials for Students

Saramago, J. (1995). *Ensaio sobre a Cegueira*. São Paulo: Companhia das Letras.

Takahashi, A. R. W.; & Bulgacov, S. (2019). *Capacidades Dinâmicas e Renovação Estratégica - Como Organizações se Reinventam ao Longo do Tempo*. Curitiba: Juruá.

Para auxiliar nas discussões das questões, recomenda-se aos alunos o seguinte vídeo do professor Márcio Moutinho Abdalla, disponível na plataforma YouTube, que discute os conceitos de recursos e capacidades dinâmicas: Administração Estratégica – Visão Baseada em Recursos (disciplina de graduação). Disponível em: <https://youtu.be/sER6k9PKTEw>

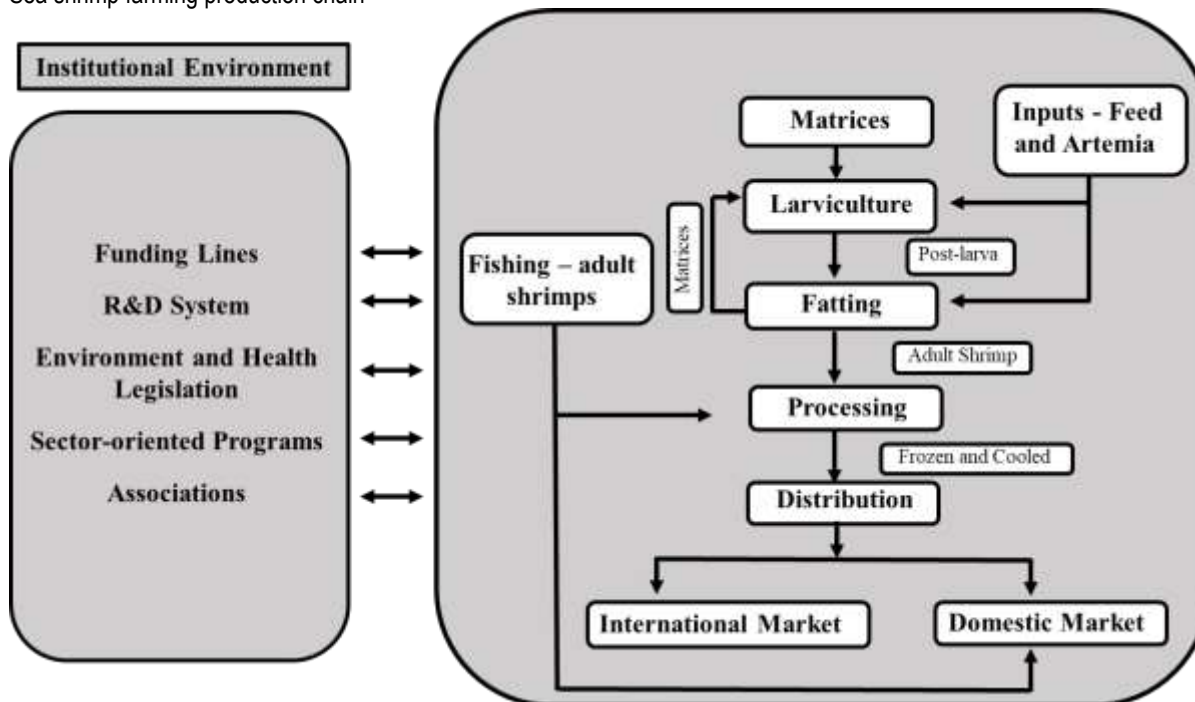
ANNEX I

Information on sea shrimp farming in Brazil

In 2018, Brazilian sea shrimp farming production was approximately seventy-seven thousand tons, generating a total revenue of R\$3 billion for the national industry (ABCC, 2020). Figure 4 shows a diagram of the sea shrimp farming production chain in Brazil.

Figure 4.

Sea shrimp farming production chain



Source: Lucchese (2003, translated).

In 2018, the Northeast region accounted for most of the Brazilian production (99.4%) with the states of Rio Grande do Norte (43.2%) and Ceará (28.5%) standing out (IBGE, 2018). The high concentration of farmers in the Northeast is related to the advantages offered by the region to develop the activity, such as: extensive coastal areas for shrimp farming; better environmental and sanitary conditions; and mastery of breeding, larviculture and fattening technologies for the *Litopenaeus vannamei* species, through technological processes developed in-house (Tahim, Damaceno, Araújo, 2019).

From 2011 to 2019, almost all the sea shrimp farmed in Brazil was sold to the domestic market. But although, in that period, Brazil did not have significant participation in shrimp exports, the international trade of this product remained relevant.

ANNEX REFERENCES

- ABCC. (2020). Associação Brasileira de Criadores de Camarão. *Análise da Produção Aquícola Mundial e das Oportunidades para o Brasil*. Retrieved from: <<https://abccam.com.br/>>.
- IBGE. Instituto Brasileiro de Geografia e Estatística. (2018). *Produção da Pecuária Municipal*. 46. Rio de Janeiro. 1-8. Retrieved from: <https://biblioteca.ibge.gov.br/visualizacao/periodicos/84/ppm_2018_v46_br_informativo.pdf>.
- Lucchese, T. (2003). *Avaliação da viabilidade da carcinicultura marinha no estado de São Paulo: uma análise a partir de indicadores de competitividade de cadeia produtiva*. 158 f. Dissertation (Master's Degree in Production Engineering) - Universidade Federal de São Carlos, São Carlos.

Tahim, E. F., Damaceno, M. N., & Araujo, I. F. de. (2019). Trajetória Tecnológica e Sustentabilidade Ambiental na Cadeia de Produção da Carcinicultura no Brasil. *Revista de Economia e Sociologia Rural*, 57(1), 93-108. https://doi.org/10.1590/123456781806-947_90570106