

Evaluating the viability of shrimp farming at São Paulo – Brazil by utilizing competitiveness and efficiency drivers

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1. Introduction

The Brazilians agribusiness systems has passed during past decade increased and continuing pressure for the restructuring of agriculture from traditional, low export value crops to capital-intensive, modernizations, high production, high-value crops, among other things, that enable this agribusiness systems sustain or amplify their competitive positions.

In such case, the searches to coordination of productive steps as well as the integration process of them are the primordial importance.

Batalha and Silva (2001) reinforced that the most effective means of implementing the superior competitiveness condition would be to get the efficiency of productive system related with the agribusiness. When the authors refer to efficiency they talk not only about internal agent's efficiency (that compose all the productive system), but also their coordination capacity. From this way studies that deal about competitiveness in agro industrial chains they must consider that this competitiveness is conditioned through the competitiveness of each agent, economics and social, that contribute for the raw products to process products transformation - systemic vision (Staats, 1999).

We may evidence by a literature review that the greater number of academic's works toward investigation of potentially and efficiency of agricultural industries study cattle breeding and agricultural sectors using their agrifood chain.

On the other hand fewer papers have investigated the aquaculture sector and its chains. The purpose of this paper is contribute to the development of aquaculture sector evaluating the viability of shrimp farming of São Paulo – Brazil. For this purpose, we used a methodological approach which realizes analysis from competitiveness indicators of productive chains. These analyses have not been still applied on studies of viability.

2. Considerations about shrimp farming in the world end in the Brazil

The activity of cultivating shrimp was started by Asian producers at XV century. However, methods of hatching, producing, harvesting, transporting, processing, marketing and exporting cultured Asian shrimp have progressively improved during the past decade. By

1994 almost 30% of the global shrimp supply came from aquaculture operations of which 82% was provided by Asian producers (Ling, Leung, Shang).

At the occidental region the principal shrimp producers is concentrated in the south American coast. The most important producers is the Ecuador (55.000 ton at 2000) followed by Venezuela, Panama, Peru and Colombia. The Brazil and Mexico are the other two countries that this activity has showed a potential development. Some developed countries like USA and Spain also realize this production, but their productive scale is fewer than the Asian and Latin-American producers.

In Brazil the shrimp farms have been started at the 70th decade. However this production only commenced to acquire professional characteristics and technological innovations at the end of the 80th decade.

The stabilization of Brazil's money since 1994 improved a lot of private investments at many agribusiness sectors, like shrimp farms. Among other things, an important advance that had been acquired to this chain was the shrimp's feed production. This national feed was done to semi-intensive and intensive shrimp farms in Brazil.

Nowadays, the Brazilian shrimp production is the 8^o producer in the world but this condition could be better because of the comparative advantages that exist in this tropical country. Brazil's favorable agro-climatic and economic conditions consisting of a 8000 Km long and largely undeveloped coastline, a climate suitable to year-round cultivation and available brood stocks.

On the contrary of the other productive chains the competitiveness between shrimp producers is realized by countries producers with similar social and economic conditions. The world's largest producer are underdeveloped countries, that provide to Brazil same advantages because of the investments and incentives from the Brazilian's government and the universities to this activity.

The rapid expansion, however, has generated widespread concern over the contribution of shrimp culture to the degradation of coastal ecosystems, and the social and economic costs that are being passed on to the rural poor. The Brazilian's government has made lowlands to reinforce the population that the environmental problems generated by shrimp farming can be resolved through better management practices.

The problems with shrimp culture is the removal of mangrove forests, the discharge of particulate and dissolved nutrient-laden effluent from shrimp ponds has adversely affect coastal water supplies have been contaminated by salt water intrusion.

At this moment the Brazilian's shrimp productive chain (at the states north and south) is in a good condition in all this levels: production, industry and distribution (marketing channels). But at the south-west region, specifically at São Paulo, this production don't exist.

We then examine the viability and capacity of São Paulo state to became a shrimp farming producer.

3. Methodology

The method consists of the identification, for each segment of the chain and its institutional environment, of the major competitiveness and efficiency drivers (Van Duren, Martin and Westgren, 1991). Further decomposition of the drivers into sub factors allows the qualitative evaluation of their impacts on system performance. This is achieved by attributing evaluations in a scale in numeric values, and by weighting the sub factor, its is possible to derive an aggregated evaluation for each driver. Results showed that the method can be utilized as a workable analytic tool for the viability analysis, greatly simplifying both the understanding of factors which affect agro industrial system performance and the design of corrective measures.

4. Briefly Results

- Production
 - The negative condition to this level was related to absent shrimp production on this area;
 - The highest cost of the coast area and the strong government's responsible action are disadvantageous to the competitiveness

- Industry
 - The goods results for the industry level are related to the good conditions of the infrastructure that exist in São Paulo;

- The problem is the instability of shrimp supply, that became the others productive Brazilian states;
 - Distribution
 - It was the best level to this chain at São Paulo;
 - São Paulo is the major shrimp consumer in Brazil;
 - There are franchising that commercializes their own shrimp, because they have farms at the other states.

5. Conclusion

The greater number of scientific works toward investigation of potentially and efficiency of agricultural industries study cattle breeding and agricultural sectors using their agrifood chains. This work hope to contribute to the development of aquaculture sector, evaluating the viability of shrimp farming of São Paulo (Brazil).

For this purpose, we used a methodological approach which realizes analyses from competitiveness indicators of productive chains. This method consists of the identification, form its chain segment and its institutional environment, of the major competitiveness and efficiency drivers.

The option for this methodology is justified because many viability studies have considered benefit-costs analysis. These analyze show low efficient when it is applied though on the productive chain level. The environment evaluations enables the identification of factor's which affect competitiveness performance shrimp farming of São Paulo. The results demonstrated that both methodology can be used for the viability studies and shrimp farming of São Paulo should be improved its marketing channel and its processing industry.

6. References

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