

# [Aquaculture case study: marine fish farming](https://assignbuster.com/aquaculture-case-study-marine-fish-farming/)

Aquaculture is an established and growing industry that serves an ever increasing consumer demand for fish products that wild fisheries are already unable to meet. It’s comprised of three sectors, but for the purpose of this assessment the author will concentrate on only one of them, namely marine fish farming. Among marine fish farming producers on the continent Greece provides the largest production volumes in recent years.(FAO Fishstat, 2002)

## MACRO ENVIRONMENT

Political/Legal Factors: the industry’s importance is recognised by the EC legislative bodies. The European commission recently reformed the Common Fisheries Policy and adopted a strategy to support the sustainable development of the sector. (CEC, 2002). In the frame of these reforms local governments are also highly supportive, meaning substantial funding is being provided.

Economic factors: the large production of sea bream and sea bass in the recent years led to collapse in prices in the markets for these species. The main cause for this crisis was the imbalance between supply and demand, caused by rapid production growth.

Social factors: aquaculture is an expanding industry and provides many employment opportunities. This is especially important in rural areas or on islands where such opportunities lack or are seasonal. On the other hand, small family-owned companies are forces into bankruptcy and are being acquired by major players on the market.

Technological: marine fish farming is technically the most complex, and the technology now in use was conceived by European scientists. Also available in Europe is an outstanding research base. Nevertheless, the production rates tend to slow down lately, as a result from the facts stated in the economical factors.

Ecologic: there are issues concerning the ever increasing use of coastal space by aquaculture facilities and consumers’ lack of conviction for a diet consisting of organically fed farmed fish to be healthy.

## MICRO ENVIRONMENT (INDUSTRY)

Industry analysis

EU aquaculture is an established industry that serves an ever increasing consumer demand for fish products that wild fisheries are increasingly unable to meet. The entire sector has faced increased market competition, falling or stabilization of prices and rising of production costs, as well as market restructuring throughout Europe. Market forces are among the most important drivers shaping the development and trends in the European aquaculture sector. The EU is the world’s biggest net importer of fisheries products and continues to increase its dependency on imports for its fish supply. Globalisation and worldwide expansion of aquaculture might offer investment opportunities to the EU aquaculture industry abroad but it also puts it under increasing competitive pressure from aquaculture and fisheries products from outside the EU, both within European markets and beyond. This pressure can however vary depending on the sectors concerned. Some well established aquaculture products such as salmon, sea bass and sea bream have become mass produced products. Commercial success and profitability in respect of such sectors is largely dependent on lower production costs with regard to their sale price. Consolidation of production can be seen as a response by firms to growing downward pressure on prices by creating economies of scale in productions which help reducing production costs. Consolidation is very visible in some areas and for some products (such as salmon). But some EU aquaculture sectors are still characterised by the existence of many medium or small sized firms. Specialisation in niche markets, normally resulting in higher value products, is another possible answer to pressure on prices. Another possible form of specialisation is focusing on selling know-how, technology and services. It appears that the EU still has a clear competitive advantage in these areas. Vertical integration seems also to be an increasingly important phenomenon where supermarket chains play a crucial role with a marked concentration of purchasing power over time. In this context, although competing with fishery products, aquaculture products can also be seen as complementary (to fishery products) by adding variety and more stability in production (compared to landings of fish). This could contribute to more attractive fish counters and to increase consumer loyalty to fish products. Similarly, as far as the processing sector is concerned, aquaculture products can ensure stability of supply. However, supermarket chains and processors are often viewed as seeking to secure supplies as cheaply as possible, irrespective of geographical origin.

European consumer choice takes into account values such as health benefits or environmental protection considerations. Setting quality standards in aquaculture can create further market opportunities and add value to Community aquaculture products.

Highlighting them on packaging for example is therefore a good way for producers to differentiate their products in the market. However, after having shown real enthusiasm in the early 2000s, it seems that part of the fish farming industry may now consider that the proliferation of labels may render them basically useless in marketing terms because they can create confusion for consumers. Moreover, the aquaculture industry is still facing some image problems with regard to the quality of its products and the interaction of aquaculture with the environment, related to outdated production practices used at the time the industry began to develop. But in parallel it is also true that the big supermarket chains demand quality labels and traceability of products. Organic production, reduction of environmental impact and geographical labels are typical examples of actions already used by some producers or retailers (supermarket chains).

(Facts and figures on the CFP: Basic data on the Common Fisheries Policy – Edition 2006, European

Commission)

In this context

FIVE FORCES

Threat of entry (Barriers of entry)

Power of suppliers (s. strategic alliances)

Power of buyers

Substitute products

Jockeying for position

## INTERNAL ANALYSIS

OVERVIEW OF THREATS AND OPPORTUNITIES

As illustrated by the fact that each of the companies – major players on the industry market – has undertaken extensive merger and acquisition activity, the aquaculture industry is presently undergoing significant consolidation.

Marginal producers and those not capable of maintaining sufficiently rapid productivity advancement exit the industry. It appears those companies set up to access external capital markets are in the strongest position to fund the transition to more intensive forms of processing and production as well as the acquisition of other enterprises. Companies without this capability will find themselves going out of business as the productivity frontier advances at a rate beyond their capacity to match from organic growth.

## STRATEGY: LONG-TERM OBJECTIVES

Beyond the issues of scale and corporate financial leverage evident within this report, several themes can be identified as being fundamental to the success and growth of aquaculture enterprises. The most prominent of these are as follows:

First, the ability to be productive derives from sound genetics. Each of the operations we reviewed has undertaken significant investment in the development of their hatchery and bloodstock activities in an effort to align the health and growth performance of fish with production goals. Genetics is important in breeding into the stock the predisposition to resistance against damaging diseases. Genetics is also important in driving towards minimization of the variability in size and shape of the animal and, as for chickens, this is important to minimizing the variability of the fillets that automated processing equipment is ‘ tuned’ to slice away from the frame while leaving the minimum of valuable protein behind.

Second, enhanced control in feeding through automated feeders and by sensing when the fish are satisfied is critical to achieving optimal growth rates and minimizing environmental impact.

It is not surprising that feed and fingerlings are the highest cost components of the operating cost for an aquaculture business. Given that there is not a burgeoning finfish ocean aquaculture industry present in Western Australia, the opportunity to use acquisition as a cost effective path to growth, scale and productivity optimisation is unlikely to be available. This may require Western Australian companies to conduct activities designed to achieve these outcomes in other markets to approach the metrics discussed in this report.

Partnering is a theme throughout the industry as the latest trends show – whether in the form of corporate acquisition or by contractual relationship for mutual benefit.

The ability to strategise and generate value from such arrangements is clearly a key to growth that must be mastered.

Given the thinness of the local industry partnering ‘ at a distance’ is likely to be a critical skill.

The key drivers to be sensitive to at this point are those that relate to the FAO defined fish production gap. As a result of the present shortfall in fish production there is an exceptional opportunity to grow a substantial aquaculture business. However, this requires urgent action to take advantage of these positive market conditions. If this opportunity is not grasped and a local incremental growth approach is taken to establishing an aquaculture industry, then it is possible that in say two decades, the international production gap will have been filled by enterprising others. Under such circumstances, to achieve international market growth it will be necessary to win market share away from a competitor. Winning market share away from competitors is significantly more difficult than filling part of a market gap!

The present Open Ocean Aquaculture initiative with its links to best

practice world wide is a sound example of the type of catalytic

investments required to demonstrate potential and attract the attention of

suitably skilled business people.