# Conservation, Competition and Industrial Organisation in the South African Fishing Industry

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## Introduction

***In a recent paper delivered to the Competition Commission, Mnisi and Lekezwa (2014) argued that, despite the economies of scale that characterize fishing and fish processing, the Department of Agriculture, Forestry and Fisheries ("DAFF") should use the forthcoming renewal of long-term fishing rights (due in 2020) to fragment access to fishing resources. More particularly, they suggested that DAFF should actively oppose the industry's natural tendency to consolidation:***

> During the 2020 review of fishing rights, DAFF has the opportunity to restructure the industry by breaking (the) path dependency of reconsolidation that the industry has been locked in. In the short run such an approach may cause job losses, however the long run ownership and economic participation would be diverse.

This is not the first such call, and is unlikely to be the last. Unfortunately, the meaning and implications of such ownership diversity are not made explicit; all one has is a presumption that it would be "a good thing" and would involve small- and medium-scale black-owned and managed enterprises. Even less clear is the cost that would have to be paid, and who would pay it. The authors certainly recognise that such an intervention would have short-term costs, but seem to imply that these would translate into long-term benefits. Unfortunately no information is offered as to how such a transition could emerge. Indeed, should the process fail to deliver the benefits they postulate, the international and domestic viability of the industry, and the financial competitiveness of its products, could be severely compromised. This paper explores the evolving structure of the industry, the forces underpinning it, and the likely consequences of destabilizing the long-term rights reallocation, as advocated by Mnisi and Lekezwa.

## On Monopolies

It is important to recognise that natural monopoly characterizes each of the three segments that dominate the South African commercial fishing sector. In other words, within the hake, small pelagic (pilchard and fishmeal), rock lobster and squid fisheries, big firms can produce more cheaply, less riskily and more profitably than small ones. Left to themselves, these sectors would soon be dominated by a few large firms.

"Monopoly" is a strong and value-laden term. In the realm of resource economics, the monopolist is often described as the environment's best friend; however the term smacks of consumer exploitation, rent seeking and vested interests. A more nuanced analysis is needed, one that allows for economies of scale and scope. This would recognise that market leaders often introduce new products, promote new technologies, and offer a broader range of goods which they sell at lower rather than higher prices. Roughly 65% of this country's hake is exported, and in foreign markets local producers need all the advantages that their size can provide. In the home market our 'monopoly' producers are actually operating in a globally contestable arena - similar products can be introduced easily and cheaply from abroad. If further fragmentation of the industry becomes a serious policy objective, the economic consequences could be profound.

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The Competition Commission is certainly aware of some aspects of the problem. In their abstract Mnisi & Lekezwa state,

> Authorities have found that being vertically integrated (harvesting, processing and marketing) is critical to effectively compete in the fishing industry.

They suggest, however, that,

> The .... advancement of transformation and competition in the fishing industry requires innovative thinking on the part of regulators. The objective of policy formulation should be aimed at easing barriers to entry along the fishing industry value chain.

The focus here is on the processing of fish rather than on catching them. Again, however, much is left unclear: in particular how will the reallocation of permit by DAFF enhance the viability of small-scale fish processors along value chains whose farthest ends lie in foreign markets?

## The Nature of the Problem

In order to demonstrate the dimensions of the problem posed by such vague proposals, it is sensible to describe fully the stock externalities and the economies of scale and scope present in South Africa's commercial fisheries.

First an important point should be stressed: the major commercial fisheries of South Africa are mature. In other words there are no longer economic rents to be had from mining down the stock. Indeed all had been depleted well below their maximum sustainable yields when, in the early 1990s, the State began management through operational management procedures, i.e. rule based systems that tailor fishing efforts to sustainable levels (focusing on the so-called Maximum Sustainable Yield (MSY) and allowing stock recovery if recruitment declines.

Secondly, it should be pointed out that South Africa's coastline differs from those of Europe and North America in being comparatively unindented. Whereas the Northern Hemisphere experienced relatively recent ice ages marked by glaciation which left deep coastal inlets and consequently an abundance of deep and secure anchorages in many countries, South Africa, did not and therefore has few safe anchorages. Our few large ports have to cater for small and large fishing vessels, and only a few small fishing ports serve our shores. In effect there are three commercial fishing zones:

- an inshore zone, heavily fished by recreational anglers from beach and rocks, and from beach-launched ski-boats;
- a deeper inshore zone fished by small commercial vessels operating out of the few small ports that exist along the coast and targeting line-fish and West Coast Rock Lobster;
- and a deep-water offshore fishery that typically involves capital-intensive fishing for species such as the Hakes, Pilchard & Anchovy, Squid and South Coast Rock Lobster. These operations typically also involve scale economies.

The situation is most clearly seen in the harvesting and processing of hake. South Africa's offshore hake trawl is the most valuable component of the country's fishing industry. Its annual landed catch is typically worth roughly R4 billion in 2015 prices, much of which is exported, and it directly provides 6500 people with employment, with at least another 25 000 finding jobs in associated industries such as vessel repairs and chandlering (supplies). It is stable, has a good safety record and was an early mover towards BEE.

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The offshore hake trawl is 'mature' fishery, in the sense that profits have long been based on sustainable harvesting rather than mining down the resource stock; all 'get rich quick' opportunities are long gone. In the colloquial sense, the industry's members have demonstrated a mature willingness to sacrifice short-term yields for long-term stability – this has manifested itself in a number of ways, from the industry's determination to achieve recognition by the Marine Stewardship Council (achieved in 2004[1]) to industry-funded research into the implications of activities like 'high grading' (meeting a given quota by only bringing in the very best fish, having thrown back inferior ones; the returned fish are dead, so the quota under-represents the impact on the resource). Quota holders also agreed that the resource should be further protected by setting aside substantial selected areas in which large mature hake and other by-catch species such as monk and kingklip could safely breed and spawn. It is, in other words, an industry which recognises that its long-term survival rests on the health of the resource it harvests. Indeed, the industry's focus on 'corporate responsibility' is increasingly translating into an assumption of responsibility for the well-being of the ecosystem. Historical trawl grounds are now ring-fenced to confine the impact of trawling; a benthic impacts study is being part-funded by industry, as are the costs of the observer programme now being used to better understand the dynamics of the resource.

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The rationale for the use of long-term access rights to a fishery is to provide a secure platform for investment and to incentivize responsible management of the resource. It has been remarkably successful in both regards, and any threat to long-term rights clearly warrants scrutiny. Since the problem seems to lie in the path-dependant oligopoly structure mentioned by Mnisi and Lekezwa, the sector's industrial structure requires analysis.

Unlike most northern hemisphere fisheries, South Africa's hake trawl has always been industrial. A small longline and a tiny handline sector do exist which together provide roughly 10% of the total catch. The fishery has been a modern mechanized one since *Irving and Johnson* began operations in the 1890s. For much of that period it has been a de facto oligopoly. Indeed I&J had a local monopoly till 1964 when Sea Harvest began operations, though foreign vessels often fished in what is now the South African EEZ until 1977.

2005 saw the allocation of long-term (fifteen year) rights to the offshore hake trawl sector, the rights being shared across forty-nine (later raised to fifty-one) permit holders. In short order, however, these formed themselves into first nine, and then eight, de facto groupings. The level of concentration is consequently high: the three largest rights-holder clusters hold 75.7% of the *offshore* quota and operate 70% of the fifty vessels in regular use, and only one cluster has under 5% of available quota.

The reasons for this clustering are not hard to find. It has three fundamental drivers. The simplest is the need to spread risk. With a single vessel a firm carries all of its risk itself; in a quota-sharing cluster with two other firms, each with one vessel, if one boat is unable to leave harbour, the week's catch does not fall by 100% but by 33%.

## Scale and Scope

Economies of scale are also clear to see; bigger is often more efficient. A simple physical example demonstrates the issue: one can double the size of a vessel without doubling the steel that goes into it, the crew needed to run it, or the size of its engine room. Hence one more than doubles its storage capacity and less than doubles it mass (and possibly its cost). The resulting longer vessel moves more easily through the water and runs at a lower cost per ton of landed fish. At company level the same is seen: the management need not double if production is doubled. The upshot again is that increases in size tend to decrease average costs.

Economies of scope are a trickier, but equally important, concept. The wider the range of products one can produce, the more market niches one can fill and the longer and steeper the value chains at one's disposal. If one looks at the two largest firms operating in the sector, the effect of size on the value chain becomes clear. A glance at their website showed one firm providing twenty-four processed hake products in addition to the conventional offerings of chilled or frozen gutted fish, while the range offered by the other was similar. Smaller operations cannot match such product diversity. The size and broad range of target markets to which these value chains allow access helps inoculate larger firms against market and exchange rate risks. Not only is their return per ton of quota typically greater, it is also less risky, and because shore-based processing is involved, it is also more labour intensive, increasing job opportunities for the local population.

Maintaining their competitiveness in a global market makes demands on local producers; high amongst these is security of supply. Vertical integration along the value chain is an obvious method of achieving such security. Another demand that global buyers make of local exporters is food safety in the form of HACCP compliance. Again, achieving this involves high overheads that are best spread over a large output.

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## Rights and their Meaning

Complete and secure property rights breed efficiency. Elsewhere in the world most fisheries access rights (quotas) are tradable, such as the individually tradable quotas (ITQs) so often discussed in textbooks. These allow more efficient fishers to purchase permit from the less efficient. In theory the rights finish in the hands of those best equipped to use them. When value chains are steep the quota is often purchased by processors who operate their own vessels in order to achieve vertical integration and increase economic efficiency.

However, Government has insisted that fishing permits in South Africa should not be tradable despite the efficiency gains such tradability promises. The rationale is that tradability of permits allocated as part of a BEE process would risk being a tool to enrich politically connected black rent-seekers. The problem is clear. The reality, however, is that, though permits were supposedly only allocated to those with a vested interest in the industry and a demonstrated ability to catch fish, many of those receiving permits quickly became holders of 'paper quota' as they traded it for shares in larger companies in which they became sleeping partners. It seems likely that this is one of the Competition Commission's concerns, but it is not clear how their proposals will address it.

It has been argued that even a monopolistic harvester of hake would have little power over consumers: there are too many competing products. However, there is strong cause for concern at the prospect of fragmentation of fishing rights. In the local market most fresh and frozen/processed fish is traded through a small group of supermarket chains possessed of well-demonstrated monopsony buying power. While a bilateral monopoly might achieve an outcome similar to that of a competitive market, having a multitude of small fishers selling into such a monopsony would be to condemn them to a lifetime of low prices and low incomes.

This concern is not unique to the hake fishery; in the past rock lobster was marketed through a cooperative system which spread the costs of purging and marketing lobsters on a pro-rata basis across members. Membership was voluntary and it was noticeable that small operators were amongst the first to abandon the system, despite the clear advantages it offered. It required a pre-commitment to fixed costs in a world of uncertain revenues. In a world of asymmetric power the resulting risks were simply too great.

## Conclusion

Why has this apparently irrational desire to fragment the fishing industry arisen, and why is it so commonly expressed? Three reasons seem to lie at the heart of the problem. One is easily disposed of: there is a common perception that the fishing industry is untransformed. In reality the three biggest firms in the industry are either public companies themselves, or components in public conglomerates. The biggest shareholders in South Africa are pension funds holding assets on behalf of a racially mixed workforce, and the management and senior staff of the fishing companies have long been similarly mixed. The second reason is the innate fear of monopoly power and unjust pricing, a fear rooted in the works of Thomas Aquinas and Adam Smith, but not relevant to an industry that exports most of its catch, and whose products have numerous close substitutes. It is the third reason that is most difficult to overcome, for it is based on the old lie that giving a man a fish feeds him for a day, but teaching him to fish feeds him for a lifetime.

The reality is cruelly different: letting more and more people fish merely condemns them to poverty. To increase fishermen's incomes one has to increase their catch per unit effort, and that means enlarging the stock of fish. More small firms will mean a race to deplete the stock, typically breaking the rules that regulate fish mortality along the way. To have firms whose individual incentives are compatible with maximizing industry level profits, one needs a collusive oligopoly with long-term rights. It is not surprising that the competition commission shudders at the notion. But it is imperative that they think seriously about the situation.

DAFF would like to see a stable resource that yields the maximum possible sustainable profit. They cannot manage the fish in the sea, but they can manage the fishermen. That task is eased when the incentives facing fishermen are aligned with the imperatives of fisheries managers. As experience has shown, this is achieved by the allocation of stable long-term rights to a few large groups; clustering provides economies. Any attempt to fragment the industry will encourage irresponsible short-term rent seeking. The current condition of such formerly high-value inshore sectors as abalone and West Coast rock lobster shows what happens when access is fragmented and rights are insecure. The warning should be clear to all.

FOOTNOTES

1 MSC certification has yielded substantial rewards – a recent study showed that revenue had risen by 30%. This could only have been achieved with the buy-in of large role-players who could afford the initial costs incurred to achieve the whole industry's certification

REFERENCES

Kholiswa Mnisi and Bongisa Lekezwa. Competition Policy Perspective: The mis-regulation of the South African Fishing Industry. 8th Annual Competition Law, Economics & Policy Conference, 4 & 5 September 2014