GAMBLING
DEBT

ICELAND’S RISE AND FALL
IN THE GLOBAL ECONOMY

EDITED BY E. PAUL DURRENBERGER AND GISLI PALSSON

UNIVERSITY PRESS OF COLORADO

Boulder
The University Press of Colorado is a cooperative publishing enterprise supported, in part, by Adams State University, Colorado State University, Fort Lewis College, Metropolitan State University of Denver, Regis University, University of Colorado, University of Northern Colorado, Utah State University, and Western State Colorado University.

∞ This paper meets the requirements of the ANSI/NISO Z39.48-1992 (Permanence of Paper).

Publication supported in part by the US National Science Foundation.

Library of Congress Cataloging-in-Publication Data

Gambling debt : Iceland’s struggle with the new world order / ed. by E. Paul Durrenberger and Gísli Pálsson.

pages cm


HC360.5.G36 2014

336.3’4094912—dc23

2014012194
The Magic of
“Virtual” Fish
The Icelandic government’s decision to implement Individual Transferable Quotas (ITQs) in the country’s crucial fishing industry played a central part in the economic meltdown. But Iceland is not alone in being ravaged by such a system. Evelyn Pinkerton is a fisheries expert in the School of Resource and Environmental Management at Simon Fraser University in British Columbia, Canada. Here she offers a primer and a global perspective on ITQs and their effects.

WHAT IS AN ITQ?

Individual Transferable Quotas (ITQs) are permits allowing their holders to catch or transfer the privilege of catching a share of the total allowable catch (TAC) of a fish species. The TAC is usually set by government or independent scientists who study the productivity of the stock of fish in order to determine the annual flow from that stock that can be sustainably harvested (Loucks 2005). Stocks of fish along with the marine habitat and food web that support them are usually owned by a national or regional government. *Thus it is only the annual sustainable flow or yield from that stock that fishermen can have permits to catch or transfer.* This point is crucial, as it exemplifies the problem a nation creates if it decides to consider ITQs completely private rights. The nation still must concern itself with the health of the stock and its surrounding ecosystem, public uses of them, and competing uses of marine space. To adequately protect these public goods and diverse
uses, the nation cannot be under political pressure from powerful private groups that have much narrower interests. As discussed below, ITQs inevitably create more powerful and consolidated fishing interest groups.

ITQs are not fishing licenses. Fishermen normally buy annual fishing licenses, which are permits to try their luck at catching whatever quantity they can during the time a fishery is “open” or permitted by the state. The state stops fishing activity when it deems that the maximum sustainable yield or total allowable catch has been taken. After that, no one can fish that species until the next season. With an ITQ, three things change:

1. The quantity of fish a quota holder is permitted to catch is specified before the season starts. The fishery is managed by the state so that the quota holder has enough opportunity to catch his permitted amount, or quota. This condition reduces his costs because he does not have to invest in engines, gear, or boats to compete as much in time and space with other fishermen for fishing opportunity.
2. The permit becomes quite valuable, since it is practically a guarantee of catching a certain quantity of fish at less cost. Therefore the state is in a strong position to require the first generation of ITQ holders, who are given the permit gratis, to take on a substantial portion of the management costs.
3. The permit becomes a tradable commodity like stock on a stock market, with few or no limits on who can buy it. Like any other stock, it attracts investors who have access to capital and can buy up the permits and lease them out to fishermen who cannot afford to buy them.

Although ITQs can be sold, many countries (including the United States and Canada) have defined them as a privilege that can be revoked or diminished by the state, according to new policies or changes in stock condition (Bromley 2009). In Canada, for example, a percentage of the Pacific halibut TAC has been reallocated away from the commercial fishery to the sport fishery without compensation to the commercial fishery. In other countries, such as the Faroe Islands and the Netherlands, ITQs have been either revoked or their value reduced by changes in state fisheries policy, without compensation to ITQ holders or fishermen. These changes were caused by the need for greater state and local regulation, because the ITQ systems were not meeting management objectives. For example, in the Netherlands, which adopted ITQs in 1976, state regulations were later added requiring that fishermen lease parts of their quota only to other members of their regional group and sell quotas only at a registered auction. Accountability to their group provided
scrutiny of their accounts and direct controls on landings, plus peer pressure from other quota holders. Often greater state regulation was accompanied by greater local involvement in implementation of the regulations (Symes et al. 2003; van Hoof 2010).

Since their initial adoption by Iceland, New Zealand, and Canada in the mid-1980s to early 1990s, ITQs have received widespread positive evaluations from numerous resource economists and fisheries managers and have been widely adopted and accepted as a way of dealing with problems in fisheries management (National Research Council 1999; Costello et al. 2008). At the same time, problems with this approach have been identified by numerous researchers from various fields, including but not limited to economists (Armstrong and Sumaila 2001; Schott 2004; Bromley 2009), political scientists (Agrawal 2002), anthropologists (McCay et al. 1995; Pinkerton and Edwards 2009), and geographers (Bradshaw 2004; St. Martin 2007).

ESCALATING CLAIMS ABOUT THE BENEFITS OF ITQs

Alongside growing critiques and identification of problems with ITQs has been an extension of claims about their benefits, claims that began with economic efficiency but then expanded into quite different territory. These claims are summarized below.

ITQs are economically efficient

ITQ advocates held that these “efficient” ITQ permit holders yield the greatest public benefit because they have the lowest fishing costs and thus their operations result in the least dissipation of wealth for society in general (Munro 2001). According to this reasoning, fishing costs are low because with an almost guaranteed catch, permit holders do not have to invest in more competitive gear and boats to wastefully race for the fish. In addition, ITQ advocates posited that if ITQs are transferable via the market, they will automatically gravitate to the vessels and operators with the lowest fishing costs, by definition the most efficient (Scott 1989). Thus small operators will automatically sell out to larger operators, who enjoy economies of scale. But economies of scale are not a factor in all fisheries, and ITQ advocates did not consider that those able to fish with the lowest costs may not be able to outbid investors with access to significant capital. In other words, ITQs can gravitate toward those with the most capital, not necessarily those who are most efficient.
ITQs promote conservation

Ecologists (Costello et al. 2008) compared fisheries managed as ITQs and those that were not to claim that ITQs promote conservation. These authors failed to note that the choice of fisheries where an ITQ system had been introduced significantly skews their sample, since governments and managers attempt to introduce ITQs in the most profitable and well-managed fisheries first. Comparing ITQed and non-ITQed fisheries for conservation success is thus not a revealing comparison. In fact, the Organisation for Economic Co-operation and Development (OECD 1997: 82) found that twenty-four out of thirty-seven ITQed fisheries it examined had at least some temporary declines in stocks due largely to inadequate information and illegal fishing. Of these, twenty needed additional regulations such as closed areas, size restrictions, trip limits, and vessel restrictions, demonstrating what has become common practice: ITQs have to be supplemented by the extra regulations they were intended to replace.

Initially, ITQ advocates told the people of Iceland and New Zealand that ITQs would help with the declining abundance of fish stocks in their fisheries because they would promote conservation. This was also why the Faroe Islands briefly experimented with ITQs during a cod collapse in 1993. However, the way those governments addressed conservation had nothing to do with ITQs. They simply lowered the TAC and gave fishermen ITQs that were much lower than their previous annual catches, thus forcing many small fishermen out because their annual allowed catch was no longer sufficient to support their operation (Stewart et al. 2006).

Economists have adopted the claim that ITQs promote stewardship (Grafton et al. 2006), even though there are many examples of private acquisition of common pool resources such as forests leading to the liquidation of the good (Acheson 2006). Private actors unattached to particular landscapes, communities, or regions are more likely to respond to the current interest rate, or how much they could earn by liquidating the resource, than to issues of stewardship. They will liquidate the resource if interest rates make this a more attractive option than harvesting at a sustainable rate (Sumaila 2010). Globalization and the decoupling of active fishermen from ITQ owners make this outcome more and more likely (Gibbs 2009).

ITQs will lower monitoring and enforcement costs

An extension of the claim that ITQs promote stewardship was the claim that ITQs would lower monitoring and enforcement costs because individual
owners would have incentives to maintain their privileged access and therefore monitor themselves (Munro 2001). Yet the major processing companies’ drastic overfishing of the Newfoundland northern cod, closed since 1992, offers a striking example of the failure of ITQ holders to monitor, enforce, or fish sustainably (Bavington 2010). The companies there held the equivalent of ITQs (called “enterprise allocations”). In the British Columbia halibut fishery, self-monitoring under ITQs improved very little, and eventually all fishermen were required to pay for expensive on-board cameras and dockside monitors, which substantially raised monitoring costs (Pinkerton 2013).

Ecologists Gibbs (2009; 2010) and Ban and colleagues (2008) are skeptical about the extent of the claim that ITQs contribute to conservation and stewardship and emphasize the tendency of ITQ advocates to ignore the incompatibility between ITQs and ecosystem-based management (which requires attention and adjustment to ecosystem concerns). This is unsurprising, as ITQs are narrowly focused market instruments directed toward achieving the efficient allocation of catch shares within a biologically meaningful, prescribed harvest cap. More recently, ITQ advocates have begun to grapple with this issue, acknowledging that ITQs are not a panacea or appropriate for all fisheries. I argue, however, that ITQs benefit a very few at the expense of the overall public welfare and also provide questionable solutions to fisheries problems.

PROBLEMS NOW IDENTIFIED IN ITQ SYSTEMS WORLDWIDE

What the aforementioned economists, managers, biologists, and ecologists have insufficiently considered is the question that should override all others: is the nation that institutes ITQs better off as a whole than one that does not? What needs to be considered in a full-cost accounting of the impacts of ITQs?

We must consider, for example, the impact of the radical transformation of a large segment of the population that has lost access to fishing. Then we must consider the effect of abolishing the social contract between the state and fishing-dependent coastal communities, a social contract that has been in place for centuries in many European countries. Formerly, communities and regions in many countries had the power to control the conditions under which fishing licenses left the community or region as well as most individual fishermen’s right of access and the conditions under which their crews fished. According to Danish anthropologists Andresen and Hojrup (2008, 33), when ITQs were created in Denmark,

one of the biggest gifts in Danish history has been given away. A small majority
in the Danish Parliament gave away ownership of national fish resources valued at EUR 2,500,000,000 to 1,500 boat owners. Most of the owners have sold out, bringing in EUR 500,000–1,000,000 for their boat and the allotted quota. Thus, . . . [crew and fishermen lacking quotas] are left with nothing and have no official voice to defend their cause.

There are two major elements in this radical transformation: (1) the loss of traditional livelihoods and (2) the loss of the political power to defend traditional rights of access to this opportunity.

In her study of the privatization of large segments of the economies of Chile, Argentina, and Bolivia, Naomi Klein considered the enormous loss of assets by the majority of the population to be a form of theft (Klein 2007). In addition, she documents the dramatic rise in unemployment, poverty, and economic crisis suffered by those countries undergoing major privatization of national assets. Researchers in the Department of Management and International Business at the University of Auckland in New Zealand consider the large players who benefited from this transfer of assets in New Zealand to be “little more than an organized crime syndicate” (Stringer et al. 2014). In Scandinavian countries, known for the highest levels of economic equality in the developed world, the new inequality created by ITQs will undoubtedly have a substantial psychological impact at many levels (Wilkinson and Pickett 2007).

However one characterizes this transformation, the state is left bearing new costs, including increased unemployment by a previously self-supporting population, increased health and welfare costs, and reduced well-being of its citizens from the loss of power, livelihoods, and security. The analysis of these costs has not been done because the issue has been treated as a fisheries management problem or a gross domestic product issue involving only part of fish production, not a problem of how entire communities have been removed from their traditional livelihoods, usually with no alternatives. In the case of aboriginal communities in Canada, geographic mobility is often not possible, even if there were jobs for them elsewhere. Until this full-cost accounting occurs, the benefits allocated to the first generation of quota holders and investors who enjoy soaring profits will be the focus of analysis. The following list of problems with ITQs should be seen as dimensions of the costs imposed on the majority of the population (at least in cases where fishing was a major component of the national economy) and also on the state at large.

1. *Inequity of initial allocation raises the cost of entry for future generations.* The first generation of quota holders is usually given the quota on the grounds that it is “politically expedient to allocate a substantial part of the economic
rent to existing users as the price of securing their support for moving to ITQs” (Tietenberg 2002, 217). However, since the market is considered the most efficient method for transferring ITQs, all subsequent owners pay a very high price for what is now a valuable commodity. Concentration of more quotas is usually required of the second generation to achieve economies of scale, having paid for the now very expensive quota. All future generations who must buy the permit from the first generation incur substantial debt. The first generation may alternatively become permanent landlords who lease out their ITQs for substantial fees and will the ITQ to their children, who may have never fished, unless there is an explicit and enforceable “owner-operator” requirement that prevents leasing.

2. **Concentration of quota ownership or control creates market power.** There is a high level of agreement that ITQs inevitably lead to concentration of ownership, and a number of scholars have documented that processing companies thereby acquire market power, either through direct ownership of ITQs or through leasing arrangements. Processors do not need to own ITQs in order to control leasing and have market power. They merely have to lease substantial quotas early in the season and then sublease them to fishermen, usually with the understanding that they will receive all the fish, giving them some leverage over price (Eythorsson 1996; Copes and Charles 2004; Pinkerton and Edwards 2009, Stewart and Callagher 2011).

3. **Crew share is greatly reduced.** In most jurisdictions, crewmen were formerly allocated a share of the value of the catch as “co-venturers” who shared both the risks and the benefits of fishing. Crew and rental skippers have been radically downgraded to low-wage earners under ITQs. In Denmark “share fishermen [who do not own a boat or share of a boat], a system that has dominated in Scandinavia and in old west European sea powers as Great Britain, the Netherlands, France, Spain and Portugal for a very long period, are disappearing” (Andresen and Hojrup 2008, 32). In the British Columbia halibut fishery, crew members who formerly earned 10 to 20 percent of the catch value now earn 1 to 5 percent (Butler 2004; Pinkerton, and Edwards 2009).

4. **Leasing arrangements, where allowed, create inequity.** Those with the most access to capital can buy quotas and lease them out, so investors buying quotas as an investment with high returns quickly become new players. Leasing fees are increasingly becoming a larger and larger percentage of the value of the catch (Pinkerton and Edwards 2009, van Putten and Gardner 2010).

5. **Inequity of free transferability of quota out of communities, out of regions, even**
out of countries. The social contract concerning what the fishery is for, who should benefit from it, and what control they should have over it has been violated unless there are rules limiting transferability. When Denmark went to ITQs it took only two years for the biggest harbors to lose their fishermen (Andresen and Hojrup 2008). In New Zealand, crew wages have become so low that New Zealanders will no longer take them, so New Zealand quota holders now take over 60 percent of the offshore quota via Foreign Chartered Vessels (McCurdy 2012). In 2011, a scandal erupted when researchers at the University of Auckland learned that the largely Indonesian crews on these 27 Chinese or Korean vessels were being held in slave-like conditions on the boats and had not been paid. This finding led to a public outcry and a Ministerial Inquiry, which in 2013 declared that all fishing vessels must be reflagged as New Zealand vessels by 2016 and thus come under New Zealand jurisdiction. However, the fish on these boats is still processed in China, so processing jobs are not even retained in New Zealand (ibid.; Stringer et al. 2014). This is because the quota holders, now largely investors and large processing companies, are leasing quota where they can make the largest profits, which is where labor is cheapest. The original economists’ prediction that ITQs would enhance public welfare because it would “reduce the dissipation of rent” has shown itself to be far from the mark when transferability is not restricted. ITQs enhance the welfare of the quota owners at the expense of not only the rental skippers and crews but the national economy as well. The nation is left with the cost of protecting the health of the stock, while the quota holders benefit from the flow and send jobs offshore.

6. **Quotas are overcapitalized instead of boats.** The economists claimed that ITQs would reduce overcapitalization of vessels and thus avoid undesirable competition, which reduces fishermen’s profits. Instead the quotas themselves have become highly capitalized (Edwards et al. 2006), increasing in value by 600 percent over ten years in British Columbia’s halibut fishery (Pinkerton 2013). In Denmark the boat and quota value together increased by 500 percent in one year (Andresen and Hojrup 2008). This puts quotas out of the reach of most fishermen who did not receive the initial gift.

7. **Safety is not always improved.** Iceland and New Zealand have an unimpressive accident and fatality record under ITQs (Windle et al. 2008). ITQs were predicted to increase safety because they would end the race for fish. However, it is likely that these countries suffer the same situation as the British Columbia halibut fishery, where the portion of the fleet that
leases under exploitive prices goes out in worse weather and takes more risks because they are desperate (Pinkerton and Edwards 2009; Emery et al., forthcoming).

8. Small boats are forced out. Small boats have disproportionately left the fishery in New Zealand, Iceland, and British Columbia. In British Columbia small boats cannot afford the fixed costs of monitoring, which have become far more expensive under ITQs (Pinkerton 2013). Iceland at an early stage (Bogason 2007) and New Zealand later (Stewart and Callagher 2011) have made some efforts to protect some small fishermen but have still lost a substantial number of smaller operators (Pálsson and Helgason 1995). In many fisheries small boats are more efficient than large ones and contribute more to social welfare because they employ more people per fish sold, supporting numerous small-scale livelihoods (Nikoloyuk and Adler 2013; Sabau 2013), and they have a more beneficial ratio of input to output than larger boats (Pinkerton 1987). Ban and colleagues (2008) point out that ITQ “success stories” poorly represent the artisanal (small-scale) fleets that take 28–58 percent of the global catch and employ 99 percent of the world’s approximately 51 million fishermen.

9. Monitoring costs rise under ITQs. Contrary to claims that ITQs would be self-monitoring because the incentives would protect private property, greater monitoring became necessary because, as Copes (1986) predicted, in fisheries where larger fish fetch higher prices, a fisherman with a fixed quota has incentives to discard smaller fish, thereby “high-grading” to get the greatest possible value out of the same number of fish taken. The Faroe Islands passed a ban on discarding fish in 1994, but the state could not prevent it under the ITQ system (Gezelius 2008). Discarding and misreporting was 18 percent in 1995. The Faroe Islands dropped ITQs in 1996 due primarily to the advantages of regulating fishing effort directly.

10. ITQs are not compatible with the precautionary approach and not easily adjusted in response to problems. ITQs are more difficult to reverse than other systems. In the mid-1990s the Royal Society of Canada asked a team of ecologists, economists, and other social scientists to examine the performance of Canadian marine fisheries. They concluded that ITQs are not compatible with the precautionary approach needed to deal with the complexity and uncertainty of the marine environment today. Instead, management systems need flexibility and adaptability (de Young et al. 1999). Faith in ITQs was shaken throughout the North Atlantic by 1994, but since many countries have adjusted their entire administrative system to ITQs and share stocks with other EU countries, it is very difficult for
them to get out of the system (Andresen and Hojrup 2008).
11. **ITQs alone are not effective and need to be accompanied by input controls and adequate enforcement** (Symes et al. 2003; van Hoof 2010; Emery et al. 2012). Many countries have learned that, instead of being a substitute for input controls such as gear, area, and time regulations, ITQs (output controls) require input controls to work, and many countries have had to add them over time. The Netherlands adopted ITQs in 1976, but as they added more and more input controls over time, ITQs eventually became an obstacle rather than an asset (Symes et al. 2003).

**WHY DO SOME GOVERNMENTS SUPPORT ITQ SYSTEMS?**

So why do governments embrace ITQs and, in some cases, force them onto fishermen despite substantial opposition? There are both ideological and pragmatic reasons. Ideologically, neoliberal economists and politicians who believe that the market should be the major regulator and that state expenditures should be drastically reduced influence policy. Klein (2007) documented the major influence of neoliberal economists in nations that decided to privatize public goods.

However, government agencies that are forced to make budget cuts may move to ITQs as a mechanism to recover costs from fishermen, whether or not they embrace the neoliberal agenda. In considering the British Columbia halibut fishery, Pinkerton (2013) notes that ITQs provide cash-strapped government departments an opportunity to download onto fishermen the costs of monitoring and the costs of “co-managing,” which together were 102 times the fishermen’s costs paid to government before ITQs. Citing James Scott’s concepts of “cadastralization” and “legibility” (Scott 1998), she also notes that government regulators tend to prefer the simplicity of a few large actors to many small actors, who are assumed to be less predictable, overly diverse and contentious, and more difficult to manage.

In Europe a more specific version of this logic is apparent. Andresen and Hojrup (2008) hold that the Danish government believed that the Danish fishing fleet had to be able to compete more efficiently with other large European fishing fleets and to capture future “historical rights” to fish stocks still unregulated by quotas in deep EU fishing waters. According to them, economists at the Danish Institute of Fishing Economy and the Ministry of Food, Agriculture, and Fisheries operate according to an economic model that calculates that the largest fishing boats yield the most profits, so therefore the Danish fishing fleet is better off catching the total national quota of fish with a
few large trawlers. Their assumption is that Denmark is able to increase profit from the national quota by forcing out the large, “expensive” fleet of smaller, fisherman-owned and share-organized boats that employ “too many” people. From the conceptual world of these civil servants, ITQs will mean a diminishing need for the extensive administration of inspections and regulations. The government will no longer have to finance an “old-fashioned” and unprofitable fleet. In short, ITQs are seen as much more beneficial for the national GDP. The visionary plan of the civil servants at the Danish Ministry of Food, Agriculture, and Fisheries was to suspend and confiscate the old national fishing licenses and permits from the large population of share fishermen who did not have part ownership in a boat. Through this powerful move, all remaining boats were given “their own” part of the confiscated quota, enabling them “to plan their fishery. . . . Instead of artificial financial support, the industry was meant to henceforth attract venture capital from private investors” (Andresen and Hojrup 2008, 34). This bureaucratic logic is a good example of one department focusing narrowly on its own costs and not considering the costs imposed on other government departments that have to deal with the consequences of its actions.

It is worth noting that moving to ITQs was not the only way to get fishermen to pay some reasonable royalty to contribute to administrative costs. Less draconian ways of achieving this objective include scaling royalties to the ability of fleets to pay, as is the case in some jurisdictions (Edwards et al. 2006; Lam 2012).

WHAT ARE THE ALTERNATIVES TO ITQS FOR SOLVING “THE RACE FOR FISH”?  

There is reasonably widespread agreement that participating in the “race for fish” is undesirable because it encourages fishermen to spend money on faster engines and gear in order to be competitive, both of which would be unnecessary without the race. However, there are many well-documented ways to solve this problem other than ITQs. Maritime anthropologists, economists, political scientists, and others have documented local community-based fisheries that create, monitor, and enforce rules regulating space, time, and gear that reduce or eliminate the race for fish (Schlager and Ostrom 1993; Wilson et al. 1994; Pinkerton and Weinstein 1995; Wilson, Nielsen, and Degnbol 2003; Armitage, Berkes, and Doubleday 2007). Agrawal (2002, 43) notes that these management methods “help allocate resources equitably, over long time periods, with minimal efficiency losses.” Some of these fisheries are simple trap
fisheries for lobster or inshore cod, which operate locally, while other major offshore ground fisheries operate on a regional scale. For example, eighteen fishermen’s associations in the Pacific Northwest worked together to space out the timing of their halibut fishery to avoid the race and crowding on the grounds (Pinkerton 2013). In addition, there is a substantial ethnographic record of partnerships of varying scope and scale between regional fishermen’s organizations, industry, and governments and the conditions under which these arrangements are successful and effective (Pinkerton 2009a; 2009b). Many of these fisheries management systems are desirable because they cost governments nothing. Fishermen’s organizations have taken on the work of designing and enforcing the regulations themselves. Ironically, neoliberal ideology seeking to diminish the role of government often favors devolution of rule-making to more local organizations. ITQ advocates would probably consider many of the successful mechanisms used locally—such as community quotas, license banks, pooling cooperatives, and locally designed trip limits—to be desirable, so it is ironic that when local fishermen ask senior government officials to institute gear regulations for the protection of stocks (Brewer 2011), these same advocates reject them as undesirable because they can create “inefficiency.” Such a position loses sight of the fact that a fishery has to be effectively pursued before efficiency can be considered and that fishermen often have the most practical ideas for preventing undesirable outcomes.

**CONCLUSION**

ITQs are far from being the best and only solution to the race for fish and are far from predictably promoting a profitable fishery that contributes to overall social welfare. Problems with ITQs have been understated and their presumed solutions overstated. Policy makers have not fully considered alternatives. Currently, countries are adopting ITQs under the sway of a neoliberal economic paradigm without properly analyzing their costs and risks. This chapter has outlined eleven problems with ITQs identified in the literature, problems that impose costs and risks on the nations adopting ITQs. The overarching problem is that ITQs constitute the privatization of a public good that profoundly alters the social contract between fishing communities and the state, a contract that has been in place for centuries in many European countries. The subsequent societal transformation is very costly to the state and its citizens in the long term and remains largely unexamined in the literature.