
Fishing Nations in Crisis: The Response of the Icelandic and Norwegian Fisheries to the Great Depression

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Introduction

Like other primary producers, the fishermen of Iceland and Norway were hit especially hard during the Great Depression of the 1930s because of contracting demand and the remarkable fall in prices in international markets. This spelled disaster for the economies of two of the largest European fishing nations whose fish production was overwhelmingly geared towards exports. This article examines the responses of Iceland and Norway to the crisis and compares both public policy and actions within the fisheries upon encountering the economic problems associated with the Great Depression. Despite similarities in production, industrial structure and position in the world market, Norway favoured a more resolutely protectionist policy than did Iceland. This article analyzes the impact of the economic difficulties on the fisheries and how and why the responses in the two countries varied.

The Place of the Fisheries in the Economy

The Icelandic and Norwegian economies shared strikingly similar fates during the 1930s due to the prominence of their fisheries.¹ In Iceland, the fishing industry (including fish processing) was key to economic growth and modernization, while in Norway it was the mainstay of the many small communities scattered along one of Europe's longest coastlines. As a result of rapid expansion, Iceland and Norway were among Europe's leading fish producers in the inter-war period (see table 1). By 1930, Iceland accounted for ten percent and Norway no less than twenty-nine percent of the total European catch. The large contribution of the latter was due largely to its extensive herring fishery. The fishing industries in both countries were highly dependent on international markets, as between eighty and ninety percent of production was exported.

¹I would like to thank Camilla Brautaset, Árstein Svihus and Pål Thonstad Sandvik for commenting on an earlier draft of this article.

Table 1
Catch, Output and Exports of the Icelandic and Norwegian Fisheries, 1910-1939
(Percent)

	1910	1920	1930	1939
Share in the total European fish catch ¹				
Iceland		5	10	8
Norway		20	29	28
Share in Gross Domestic Product				
Iceland ²	24	24	28	21
Norway ³	8	-	6	-
Share in total exports ⁴				
Iceland	64	83	91	84
Norway	36	18	18	13

Notes: 1) 1939 figures refer to 1938. 2) Fishing, fish processing and marketing. 3) Fishing and fish processing. 4) Figures for Iceland include whale products. Figures for Norway refer to exports of food and drink. Fish products comprised by far the largest type of goods in this category. Norwegian figures for 1910 refer to 1911. Calculations of Norwegian Gross Domestic Product (GDP) were made by Ola Grytten of the Norwegian School of Economics and Business Administration.

Sources: Guðmundur Jónsson, *Hagvöxtur og iðnvæðing: Þróun Þjóðarframleiðslu á Íslandi 1870-1945* (Reykjavík, 1999), 350-353; *Hagskinna: Sögulegar hagtölur um Ísland [Icelandic Historical Statistics]* (Reykjavík, 1997), 539; Thorvald Tande, *Norsk fiskeripolitikk: En analyse av fiskerinæringens utvikling siden 1920* (Oslo, 1957), appendix tables 3-8; and Norway, Central Bureau of Statistics, *Official Statistics (NOS)* (Oslo, 1953), XI, 143, "National Accounts, 1900-1929," 108-111.

The table also gives some indication of the importance of the fisheries to the national economies. The Icelandic fishing sector, including processing and marketing, accounted on average for twenty-eight percent of GDP in the 1920s and provided no less than ninety percent of total export earnings. Such an extreme export concentration was almost unique in Europe. Icelandic waters were among the world's most fertile and productive fishing grounds; by far the most valuable species, Atlantic cod, was for the most part exported dried and salted to Southern Europe. The relative size of Norway's fishing sector (only fishing is included in the table) in the economy was smaller, but it nonetheless played a central role in large parts of Norway. The cod fishery dominated the northern regions of Lofoten and Finnmark, whereas herring (especially winter herring) was the most common species in the south from Møre and Romsdal to Rogaland. Herring fishing was the biggest industry in terms of volume while the cod fisheries were the most valuable activity. Norway differed from Iceland in that cod fishing was primarily confined to coastal waters, providing less incentive to invest in larger fishing boats and trawlers.

Table 2
Icelandic and Norwegian Exports of Salted Cod and Salted Herring by
Geographic Distribution, 1920-1939

	Salted Cod		Salted Herring	
	Iceland	Norway	Iceland	Norway
Average annual exports in thousand metric tons	50.1	42.2	20.9	83.6
Percent			Percent	
Total	100.0	100.0	100.0	100.0
Spain	39.5	23.9	Germany	8.1
Portugal	12.6	36.3	Soviet Union	1.8
Italy	28.5	4.5	Sweden	62.7
Greece	0.4	0.5	Poland	3.0
South America	0.4	9.2	Denmark	16.4
Caribbean	0.4	9.5	Other	8.0
US	0.2	10.2		14.1
Other ¹	18.0	5.9		

Notes: "Other" denotes exports to producing countries and domestic consumption.

Sources: Hreinn Ragnarsson, "Tölfræði," in *Silfur hafsins, gull Íslands: Sildarsaga Íslands* (Reykjavík, 2007), III, 338; Sigfús Jónsson, "International Saltfish Markets and the Icelandic Economy, ca. 1900-1940," *Scandinavian Economic History Review*, XXXIV, No. 3 (1986), 27; and Tande, *Norsk fiskeripolitikk*, appendix, table 63.

The structure of the two countries' fishing industries, reflecting their similar physical environments, had many common features: the small and dispersed units, prominence of small-scale operators, dominance of cod and herring and similar processing methods. This meant that both were competitors in Southern Europe for dried, salted fish (*klippfisk*) and wet salted fish and even in European herring markets. Table 2, which compares the relative size of the markets for two of the most valuable fish types among Icelandic and Norwegian exports in the interwar period, shows that Icelandic exports of salted fish exceeded those of Norway (50,000 compared to 42,000 tons). The principal markets for salted cod from both countries were in Southern Europe, especially Spain and Portugal, and in the case of Iceland in Italy as well. Norway, however, sold considerable quantities of *klippfisk* in the US, the Caribbean and South America, so its markets were not as concentrated as Iceland's were. In addition, Norway produced large amounts of dried fish (*stokfisk*) from cod and related species which were sold mainly to Italy and West Africa; Iceland had discontinued this production in the late nineteenth century.

Herring was the second most valuable export article after salted cod. Norway was a far larger producer of herring products, exporting on average nearly 84,000 tons of the salted product per year compared to just under 21,000 tons in Iceland. The most important markets for Norwegian herring in the 1920s were Germany and the USSR, replaced by Sweden in the 1930s, while for Iceland it was Sweden, taking about sixty-three percent of all exports in the interwar period, followed by Denmark with just over sixteen percent.

The Spectacular, Precarious 1920s

“When all is said and done, life is first and foremost salt fish.”

Halldór Kiljan Laxness, *Salka Valka* (1931)

The 1920s were boom years for both the Icelandic and Norwegian fisheries. As the fleets expanded and the gear and facilities improved, the two countries became among the leading fishing nations in Europe. Increased catching and processing capacity, together with good runs of cod, enabled the fishing sectors to increase production, especially of salted cod, by far the most valuable export from both countries. Between 1920 and 1930 Norway increased exports of salt fish from 37,000 to 49,000 tonnes, while Iceland, more spectacularly, increased its output from 28,000 to 80,000 tonnes. The quote from Halldór Kiljan Laxness above epitomizes the dominance of salt fish in the Icelandic economy. By 1930, Norway had become the largest European fish producer, with total catch exceeding 1.1 million tonnes, and Iceland was one of the fastest growing fishing economies in Europe, sharing third place with Germany in 1930 among Europe's main fishing nations.

The expansion of the Icelandic and Norwegian cod fisheries was possible primarily because of the rapid growth in Southern Europe, especially Spain, which served as the outlet for most of the increased salt fish production. It was therefore a serious blow to Iceland and Norway, both of which had introduced alcohol prohibition, when Spain decided to raise tariffs on their salt fish in 1922 unless they increased imports of Spanish wine. The Icelandic parliament (*Althingi*), quickly capitulated, establishing a state monopoly over alcohol imports, while Norway resisted a little longer. In subsequent years Iceland managed to outdo Norway to become the leading exporter to Spain. A main reason for the spectacular growth of Icelandic salt fish exports was the low-price strategy adopted by producers to boost their market share. Standardized, high-quality products, obtained through centralized quality inspection of exports, after 1910 also contributed significantly to this success.²

²Gerhard M. Gerhardsen, *Salted Cod and Related Species* (Washington, DC, 1949), 92; Thorvald Tande, *Norsk fiskeripolitikk: En analyse av fiskerinæringens utvikling siden 1920* (Oslo, 1957), 373-374; and Sigfús Jónsson, “Alþjóðlegir saltfisk-

The fishing industry was inherently unstable because of fluctuations in both supply and demand. Catches varied greatly due to changes in the natural environment. Moreover, supply was price-inelastic, as the 1920s so acutely demonstrated.³ The large increase in production tended to exceed effective demand in the second half of the 1920s, with serious consequences for both countries. At the same time that it became more difficult to find outlets for the record catches, there was downward pressure on prices. The cod fisheries had enjoyed favourable, although fluctuating, prices until they began to fall in the mid-1920s, plummeting to only half of the 1914 levels at their nadir in 1927.⁴

The marketing side of the industry was characterized by fragmentation and instability. Fishing firms were numerous and often quite small because little investment was required to enter fishing, processing or trading. Increased production led to intense competition in the often chaotic export trade. Little effort was made to stabilize supply to offset or reduce short-term catch fluctuations. The flow of fish was uneven, especially in the herring sector where large shipments sometimes glutted markets. On the other hand, small sales were often made directly to retailers, undermining relations with larger and more regular importers. There was therefore little uniformity in prices or terms of sale and delivery; the same vessel could bring to the market commodities of the same quality but sold on very different terms. This was due largely to the fragmentation of the export trade, which was comprised of both small and large firms, export agents, commission traders and producers' organizations. The entry of smaller firms was made easier when liners began to operate between producing and consuming countries.

The Impact of the Depression

The overoptimistic expansion of the 1920s weakened the economic base of the fishing industry, making it extremely vulnerable to shifts in overseas markets. This was particularly true for the booming Icelandic trade which relied heavily on salt cod. Export prices for both Iceland and Norway declined sharply with the onset of the Depression. Prices for Norwegian dry salted cod fell by thirty-six percent between 1929 and 1931, recovered slightly in subsequent years but

markaðir og saltfiskútflutningur Íslendinga 1920-1932," in Heimir Þorleifsson (ed.), *Landshagir: Þættir úr íslenskri atvinnusögu, gefnir út í tilefni af 100 ára afmæli Landsbanka Íslands* (Reykjavík, 1986), 233-271.

³Gerhardsen, *Salted Cod*, 55.

⁴Abraham Hallenstvedt and Bjørn Dynna, *Fra skårunge til hovedsmann: Med Norges Fiskarlag gjennom 50 år* (Oslo, 1976), 12.

remained at about seventy-five percent of pre-1930 levels in the late 1930s.⁵ Iceland experienced an even sharper blow: prices initially dropped by forty percent compared with 1929 and only partly recovering in the following years to reach about two-thirds of pre-1930 levels.⁶ World prices for salted cod, which have been computed from trade statistics, indicate that global levels on average were thirty-five percent lower for the quinquennium 1930-1934 and thirty-nine percent lower for 1935-1939 than in the 1925-1929 period.⁷

This decline was the result of both continued high levels of production and falling demand. Spain, the world's most important market for salted cod, slashed its fish imports by more than half in the 1930s. No country suffered as badly from this reduction as Iceland; its salt fish exports to Spain had accounted for about half of total fish exports, or 30,000-35,000 tonnes annually, until 1933, but they fell to less than three thousand tonnes in 1936. From 1935 to 1939, Iceland's salt fish exports plummeted by more than forty percent compared to 1925-1929. Norway fared much better, as its salt fish exports declined only by seventeen percent over the same period.⁸

The fall in the foreign demand for fish was caused by a number of factors, not least the reduced purchasing power of consumers during the Depression. Higher tariffs and quota restrictions were also detrimental. Following the Ottawa conference in 1932, in which a system of imperial preferences was negotiated within the British Commonwealth, the UK reduced its imports of wet salted and fresh fish from Iceland and salted fish from Norway; at the same time, the fish importers in Southern Europe rigorously pursued bilateral exchanges with their trading partners. Bilateralism posed a particularly tricky problem for countries like Norway and especially Iceland, which sold most of its exports to Spain, Portugal and Greece but imported little from these nations. From 1933 these countries reduced their fish imports from Iceland by imposing quotas and other import restrictions. Finally, the crucial Spanish market collapsed completely in the late 1930s, partly because of the expansion of the domestic fishing fleet but more importantly because of the Civil War.

The difficulties with exports had disastrous effects on the economies of Iceland and, to a lesser extent, Norway. Iceland's fish export earnings fell by a third between 1929 and 1931, and total export income declined even more, since agricultural exports experienced a larger contraction (see figure

⁵Tande, *Norsk fiskeripolitikk*, 428.

⁶Iceland, *Verslunarskýrslur Íslands* [Icelandic Trade Statistics], 1928-1939.

⁷Gerhardsen, *Salted Cod*, 85.

⁸Fritz Hodne, *The Norwegian Economy, 1920-1980* (London, 1983); and Norway, Statistics Norway, *Historisk Statistikk*, *Utførsel av tørrfisk, klippfisk og tran.*, 1840-1999 (<http://www.ssb.no>).

1). A similar pattern held in Norway, where fish export earnings in 1931 were only sixty-five percent of the 1929 figure, dropping even further to sixty-two percent in 1934. After a slight recovery in 1932-1933, Icelandic fish exports contracted again between 1934 and 1936, this time more as a result of declining catches than difficulties in foreign markets, only increasing during the last years of the decade. Norway's fish exports, on the other hand, reached their nadir in 1934, followed by a brisk recovery in the latter part of the decade.

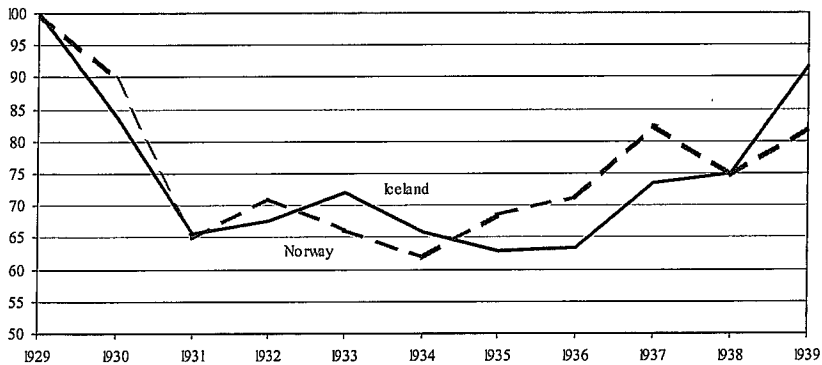


Figure 1: Value of Fish Exports from Iceland and Norway, 1929-1939 (current prices, 1929=100)

Note: Figures for Norway are for the export of animal foodstuffs, of which fish products accounted for more than ninety percent.

Sources: Iceland, *Verslunarskýrslur Íslands* [Icelandic Trade Statistics], 1928-1939; and Norway, Statistics Norway, *Historisk statistikk 1968* (Oslo, 1969), 260-262.

Norway also suffered from diminished demand but managed to maintain its exports to Southern Europe, suffering only a slight reduction in Portugal while increasing sales to Spain in the late 1930s. Annual average exports of salted cod to Spain were 10,600 tons between 1935 and 1938 compared to 7600 tons from 1930 to 1934.⁹ Why was Norway more successful than Iceland in retaining, and even increasing, fish exports to Southern Europe? The most probable answer is that the Norwegian government pursued a more successful trade policy. Trade negotiations with Spain secured the sale of 10,000 tons of *klipfish* per year, and in the subsequent year these exports were related to Norwegian purchases of Spanish wine and spirits. Icelandic trade policy lacked this flexibility, primarily because the small economy and the pattern of foreign

⁹Tande, *Norsk fiskeripolitikk*, 370.

trade left little room for any significant increase in imports from Spain and Portugal to secure a huge volume of fish exports to those countries.¹⁰

Other branches of the fishing industry enjoyed mixed fortunes. In Norway, exports of *stokfisk* remained buoyant, and prices were not as depressed as for *klipfisk*. A major shift also occurred in the herring industry when producers diverted their production from the salted variety to herring meal and even fresh fish aimed at the growing German market. The canning industry, concentrating on smoked herring and sprats (*brisling*), was also beset by a substantial drop in prices, but volume decreased only slightly during the 1930s.¹¹ In Iceland, herring fishing and processing, the second most important branch of the fishery, underwent a major renewal: production increased, and emphasis shifted, as in Norway, from salted fish to meal and oil production.

The crisis in the fisheries had a major impact on the domestic economies. The fall in Iceland's export earnings by a third between 1929 and 1931 led to serious balance-of-trade deficits during most of the 1930s. Output fell by five percent between 1930 and 1932; although the economy started to recover in 1933, its performance was poor compared to the other Nordic countries.¹² Data on unemployment are incomplete, but the available evidence suggests that employment in the fishing sector remained fairly stable throughout the 1930s. The largest fishing towns, Reykjavík and Hafnarfjörður, in the southwest of Iceland were the hardest hit and struggled with substantial unemployment right into the Second World War. Fishermen in many smaller fishing villages were able to compensate for their reduced incomes by small-scale farming. The official unemployment rate in Reykjavík hovered between eight and fifteen percent during the slack season (early winter) in the period 1931-1939.¹³

¹⁰*Ibid.*, 370, 372 and 381-382. The different positions of Iceland and Norway are aptly described in the fisheries journal *Ægir*, XLI (1938), 95: "The fish trade with Spain is bound to contract while Norwegians' sales are likely to increase because they can buy proportionally more goods and in larger volumes from Spain than Icelanders." (author's translation).

¹¹Tande, *Norsk fiskeripolitikk*, statistical appendix, tables 56-68.

¹²Guðmundur Jónsson, "The Transformation of the Icelandic Economy: Industrialisation and Economic Growth, 1870-1950," in Sakari Heikkinen and Jan Luiten van Zanden (eds.), *Exploring Economic Growth. Essays in Measurement and Analysis: A Festschrift for Riitta Hjerpe on Her 60th Birthday* (Amsterdam, 2004), 140.

¹³Guðmundur Jónsson, *Hagvöxtur og iðnvæðing: Þjóðarframleiðsla á Íslandi 1870-1945* (Reykjavík, 1999), 233; Magnús S. Magnússon, *Iceland in Transition: Labour and Socio-economic Changes before 1940* (Lund, 1985), 154; and *Hagskinna: Sögulegar hagtölur um Ísland [Icelandic Historical Statistics]* (Reykjavík, 1997), 245.

Norway fared somewhat better during the 1930s because the Depression did not last as long.¹⁴ There was a sharp downturn early on with GDP per capita falling by 8.3 percent in 1931, but by 1932 the economy already had begun to recover. Unemployment, however, was widespread, estimated at between twelve and fourteen percent in the bleakest years (1931-1934). Unemployment was considerably lower in the fisheries, conservatively estimated at three percent in 1935, but seasonal unemployment was much higher, and underemployment was widespread in both fishing and agriculture.¹⁵

Responses to the Crisis and Fisheries Policy during the 1930s

Fishermen have to wake up and realise that the order of the day is organisation. Stand shoulder to shoulder, as they say, in a strong formation...Times have changed, my good people. We must listen to their unavoidable message and keep up with it, otherwise we will be crushed by the huge wheel called competition.¹⁶

Gustav Puntervold

Despite severe economic problems, the fisheries of Iceland and Norway had considerable flexibility in two important ways to meet the challenge of the Depression. First, fishermen were as a rule paid a certain percentage of the value of the catch; thus, their incomes were directly adjusted to changing market prices. The problem of fixed wages was therefore not as pronounced as in many other sectors. Second, fishing was a seasonal activity which compelled fishermen to engage in different kinds of activities, especially small-scale farming, which meant that they were not totally reliant on a single source of income.¹⁷ Of just over 100,000 fishermen in Norway in 1930, only twenty-

¹⁴Angus Maddison, *Monitoring the World Economy, 1820-1992* (Paris, 1995), 196-197.

¹⁵Ola Honnigdal Grytten and Camilla Brautaset, "Family Household and Unemployment in Norway during Years of Crisis: New Estimates 1926-1939," *History of the Family*, V, No. 1 (2000), 36; and Grytten, *En empirisk analyse av det norske arbeidsmarked 1918-1939: Arbeidsledigheten i Norge i internasjonalt perspektiv* (Bergen, 1994), 101-103, 178-179 and 182.

¹⁶Head of Statens Kjøleanlegg in Ålesund, Norway, as quoted in Hallanstvedt and Dynna, *Fra skårune til hovedsmann*, 76 (author's translation).

¹⁷Pål Christensen and Abraham Hallenstvedt, *På første hånd: Norges Råfisklag gjennom femti år* (Tromsø, 1990), 19-21; and Jónsson, "State and the Icelandic Economy," especially 163-167.

eight percent were solely engaged in fishing, thirty-eight percent had fishing as their main occupation and thirty-four percent used it as a secondary source of income. As late as 1948, only twenty percent of Norwegian fishermen only engaged in fishing.¹⁸ Comparable figures for Iceland are not available, but conditions were similar since many fishermen in the smaller villages also engaged in small-scale farming. In addition to about 14,000 persons registered as having fishing and fish processing as their main occupation in the 1930 census, just over 1000 people were registered as having fishing as a secondary job.¹⁹ In times of high unemployment, the fishermen-farmers had more resources to fall back on than did wage earners in the towns who more commonly relied upon a single source of income.

Nonetheless, the severity of the crisis caused a major upheaval in the fisheries resulting in the contraction of exports, reduced incomes, the bankruptcy of many fishing firms and increasing unemployment in fishing communities. To counteract the crisis, the fishing industry undertook various radical measures, and governments also became more interventionist through various crisis measures and restructuring programs. The fishing communities in both countries comprised a fairly strong political base, perhaps more so in Norway than in Iceland, giving the industry power to influence public policy.

Here we will focus mainly on responses that were directly aimed at the fisheries, although macroeconomic tools, especially monetary policy, were also central to the overall response. Following the British lead, both Iceland and Norway suspended the gold standard in September 1931 and depreciated their currencies to levels similar to that of sterling against the dollar. To try to boost exports, Norway pursued a more inflationary monetary policy, depreciating the *krone* by about ten percent against the pound compared to the pre-devaluation rate of exchange. The exchange rate of the Icelandic *króna*, however, remained unchanged against sterling, the only currency in the Nordic region to do so. Strong pressure to devalue came from the fisheries sector and many in the farming community, but conservatives, backed by the trade unions and businessmen, prevailed.²⁰ Thus, monetary policy was more flexible and

¹⁸Norway, Statistics Norway, *Historisk statistikk 1978* (Oslo, 1978), 65.

¹⁹*Manntal á Íslandi, 2 desember 1930*: Hagstofa Íslands (Reykjavík, 1937), 156-157.

²⁰Magnús Sveinn Helgason, "'Hin heiðarlega króna: 'Gengisskráning krónunnar sem viðfangsefni stjórnmalabaráttunnar á kreppuárunum 1931-1939,'" in Jónas H. Haralz (ed.), *Frá kreppu til viðreisnar: Ættir um hagstjórn á Íslandi á árunum 1930-1960* (Reykjavík, 2002), 90-99.

accommodating towards the export sector in Norway than in Iceland which doubtless mitigated some of the effects of the Depression.²¹

Government policy and industry actions were primarily targeted at reducing or eliminating short-term fluctuations in fish prices, stabilizing incomes and retaining market shares abroad. Furthermore, Norway adopted policies specifically directed at reducing unemployment in fishing. From a policy perspective it may be useful to distinguish between private and public measures, but in practice they were often conceived and carried out in close collaboration between organized interest groups and the government.

Industry Restructuring

The immediate reaction of participants in the fisheries to the crisis was to search for ways to reduce costs and improve efficiency. There were basically two possible routes. The first was to rationalize existing activities by reducing operating costs. This could take the shape of reorganizing the production process, adopting new technology or cutting labour costs by eliminating workers or reducing wages in order to raise value-added per man. In neither country, however, was this strategy pursued successfully. On the contrary, Norway adopted an expansionary employment policy, while organized labour in Iceland succeeded in resisting any significant wage cuts. Wage levels therefore remained fairly high, while the level of employment did not change significantly. In the capital-intensive trawler fisheries, which suffered most from the crisis, many vessels lay idle, and some of the fishing firms went bankrupt. The biggest firm in Iceland, Kveldúlfur, owned by Ólafur Thors, the leader of the Independence Party, and his powerful family, was on the brink of bankruptcy for many years. How to solve the fishing industry's problems became one of the most controversial political issues of the late 1930s.

The other strategy was diversification to reallocate resources to new production in order to increase the export value of fish. Overall, the tendency was to encourage diversification rather than improve the efficiency of existing production. Technical improvements and innovation offered a promising way to increase efficiency and hence profitability. The economic constraints of the time, however, limited the possibility of developing new marketable products and techniques which required money, technical expertise and even changes in the social structure of the fishing communities.

The Norwegian Directorate of Fisheries (*Det Norske Fiskeridirektorat*) promoted knowledge of new methods and gear, even carrying out experiments on its own. But because innovations were introduced cautiously in order not to upset traditional forms of ownership and the character of fishing

²¹Ola Honningdahl Grytten, *Norwegian Policy Response to the International Economic Disintegration during the Inter-war Years* (Bergen, 2002), 21-24.

in northern communities, the Directorate's efforts were limited.²² The same was true for ambitious plans, promoted and financed almost exclusively by the state, to introduce fish freezing technology. By 1939, few such plants were in operation, and their capacity was confined mostly to the freezing of herring.²³

Many Icelandic firms responded to problems in the salt fish markets by diverting resources to catching redfish to produce fish meal. Even greater effort was put into herring fishing, and production was diversified. The government became actively involved in research and development with the establishment of the Fisheries Industry Board (*Fiskimálanefnd*) in 1934, a powerful body with representatives from government, the banks, interest groups and the Trade Union Congress. Backed by a new fund financed by levies on exports and direct state contributions, the Board looked to the more diversified Norwegian industry for new ideas, supporting and even initiating fishing for previously unexploited species, such as redfish and shrimp, and encouraging new processing methods, such as the production of dried fish, Norwegian-style stockfish and the canning of herring, fish roe and fish.²⁴ Most important in the long run was the promotion of fish freezing technology. This accelerated rapidly in the second half of the 1930s, although frozen fish products accounted for only four percent of exports by 1939. After the war this sector expanded rapidly to form the most important part of Icelandic exports.

Promotion of Small-Scale Fishing and "The Trawler Debate"

Paradoxical as it may seem, people flocked to the fishing areas on the Norwegian coast in search of work during the 1930s despite the depressed state of the fisheries. But unemployment and increased poverty pushed the poorer sectors of the population to seek any means to support themselves and their families. For many workers and smaller farmers the easy access, low investment requirements and the hope of a big catch made fishing more tempting than many jobs in manufacturing, mining, lumbering and agriculture. The result was that the number of fishermen soared by twenty-three percent from 101,000 to

²²Hodne, *Norwegian Economy*, 50; and Vera Schwach, *Havet, fisken og vitenskapen: Fra fiskeriundersøkelser til havforskningsinstitutt 1860-2000* (Bergen, 2000), 185-190.

²³Bjørn-Petter Finstad, "Freezing Technology in the Norwegian Fish Processing Industry, 1930-1960," in Poul Holm and David J. Starkey (eds.), *Technological Change in the North Atlantic Fisheries* (Esbjerg, 1999), 89-105.

²⁴*Stokfisk*, processed in a somewhat different way than the Norwegian variety, had been Iceland's chief export until the early nineteenth century when it was replaced by salted fish. By the end of the nineteenth century, stockfish production had virtually disappeared.

124,000 between 1929 and 1939.²⁵ Increasing employment in fishing and fish processing became one of the chief demands of the fishermen, and their political influence ensured that the creation of new jobs and the preservation of the traditional decentralized structure of the fisheries became a major policy objective. This meant in effect that the fisheries were used as a major unemployment relief measure, supporting far more people than the industry needed.

The poorer fishermen of northern Norway had little means of adopting new and more expensive technology; they tended to be conservative and to rely on traditional methods. Primitive long-line fishing (*juksafiske*) gained a new popularity, and limitations were introduced on the use of large seines. The Norwegian historian Edvard Bull has characterized this development in the fisheries during the 1930s as "primitivization" which went against the general trend towards a more efficient, large-scale technology.²⁶ The government encouraged small-scale fishing by providing loans on easy terms and grants to fishermen, restricting ownership of fishing boats to *bona fide* fishermen and, most interestingly, preventing the further development of trawler fishing.

No comparable opposition to large-scale fishing technology can be found in Iceland during the 1930s; although there was some resistance, trawlers were accepted as a modern way of fishing. The trawler fleet numbered around forty vessels and accounted for nearly forty percent of the demersal fish catch at the onset of the Depression. But the trawler sector encountered major problems because of the economic crisis, and its activities contracted (although the number of trawlers never fell below thirty-seven before the war); many firms found themselves in dire financial straits, and the trawler industry became a subject of bitter political controversy. At its heart this debate was not about the wisdom of large-scale fishing but rather how to solve the bleak financial situation of the industry and whether the state-run National Bank of Iceland should continue to keep the largest firms afloat.

The divergent paths followed by Iceland and Norway were only partly created by the economic difficulties; indeed, they emerged long before the Depression and were shaped by a set of deep-seated cultural and social values and economic and socio-political circumstances set in train by industrialization. In both nations the advent of the mechanization of the fisheries at the turn of the century created two distinct "socio-technical dynamics."²⁷ On the one hand, the small-boat fishery advanced rapidly as motorboats, most of them in

²⁵Tande, *Norsk fiskeripolitikk*, statistical appendix, table 22.

²⁶Edvard Bull, *Klassekamp og fellekskap, 1920-1945* (Oslo, 1978), 160-168.

²⁷Árni Sverrisson, "Small Boats and Large Ships: Social Continuity and Technical Change in the Icelandic Fisheries, 1800-1960," *Technology and Culture*, XLIII, No. 2 (2002), 245.

Iceland less than twelve tons, replaced rowing boats and even the smacks (decked sailing vessels used for line fishing). After 1918 the boats became larger, commonly twenty to forty tons depending on harbour facilities as well as the size and prosperity of individual fishing towns. The small-boat fishery in both countries was characterized by fisherman-ownership of boats and gear, share payments and a family household economy based upon merchant credit.

On the other hand, large-scale fishing emerged simultaneously with the introduction of steam trawlers in the bigger fishing towns with access to capital. In neither country was the superior technology of trawler fishing welcomed at first; it was often referred to as "the trawler plague" by the fishermen of northern Norway. In the 1890s, British and other foreign trawlers began to move onto the shallow fishing banks off the coast of Iceland, competing with the local fishermen in inshore waters, often spoiling their gear and ruthlessly exploiting the fish stock. In 1894, the *Althingi* responded to complaints from angry fishermen by tightening an 1889 ban on trawler fishing within the three-mile fishery zone.²⁸ In 1905, foreign trawlers started to fish in the Barents Sea, occasionally venturing into Norwegian waters and moving later to fishing grounds in the northern Norwegian Sea. The British trawler fishery was hugely unpopular in Norway and led to the enactment of the Trawler Act in 1908 which banned trawler fishing within the four-mile fishery limit.²⁹

At this juncture the "socio-technical" paths of Iceland and Norway diverged. The trawler industry grew rapidly in Iceland after 1905 and led to widespread economic, social and political changes, whereas it hardly took off in Norway before 1930. Trawler fishing was a large-scale, capital-intensive operation which was far beyond the means of ordinary fishermen. The first firms in Iceland were typically formed by merchants and smack skippers and financed to a large extent by the banks. As the firms became larger they were overwhelmingly run by wealthy fishing capitalists, while more fishermen became wage earners on the trawlers, receiving fixed wages instead of shares. Trawler owners became a powerful group as epitomized by the Thors family which owned the biggest trawler firm. Its members occupied key positions: Thor Jensen, the head of the family, was the first chairman of the Association of Trawler Owners, founded in 1916, a powerful interest group that played a

²⁸Jón Þ. Þór, *Uppgangsskeið og barningsár: Saga sjávarútvegs á Íslandi. Vol. II: 1902-1939, Vélaöld* (Akureyri, 2003), 30-31.

²⁹A ban on the landings of trawler fish had been enacted in Finnmark in 1897 to protect the local economy and prices. See Pål Christensen, "En havenes forpester – et kjempestinkdyr: Om trålspørsmålet i Norge før 2. verdenskrig," *Historisk tidsskrift*, No. 4 (1991), 622-624; Tande, *Norsk fiskeripolitikk*, 82-83; and Einar Richter-Hanssen, "The Meeting of Two Technologies: Conflict and Co-operation between British Trawlers and the Coastal Population of Northern Norway, 1905-1977," in Holm and Starkey (eds.), *Technological Change*, 67-68.

leading role in founding the Employers Federation of Iceland in 1934, headed by Thor Jensen's son, Kjartan Thors. Another of his sons, Ólafur Thors, became the leader of the Independence party in 1934.

The trawler fishery expanded rapidly during the 1920s. By 1929, the number of trawlers had risen to forty-five, and the trend was towards larger vessels, normally 300-350 tons, with much greater capacities than the smaller fishing boats. Comparing demersal catches by boat category in the Icelandic fishing fleet (excluding boats under twelve tons) during the 1920s shows that catch per trawler was on average ten times that of other vessels.³⁰ As the trawler firms expanded they were engaged not only in fishing and processing but also in marketing abroad.³¹ Until after the Second World War, trawler fishing was mostly confined to Reykjavík and the nearby town of Hafnarfjörður, but it nevertheless became an important part of the fisheries on a national level, accounting for about forty percent of the demersal catch.

Apart from the initial hostilities towards British trawler fishing in shallow waters around the turn of the century, there was no strong opposition to large-scale fishing in Iceland. Trawler fishing was seen as a logical extension of the deep-sea fisheries that began with the decked-vessel fishery during the previous century and as a superior technology which enhanced the capacity of the fleet and provided fishermen with year-round jobs that were more stable and higher paying than the small-boat fishery was able to provide. Trawler fishing was rarely perceived as a threat to the small-boat fishery, although there was competition for labour and resources. It was only on the national political level that criticism and even hostility were expressed. Industrial policy, especially regarding agriculture, during the first decades of the twentieth century was increasingly designed to promote independent small producers, whose economic activities cantered around the household rather than the capitalist firm. A *petit-bourgeois* vision that extolled the virtues of small-scale production was a dominant economic ideology and was promoted by the two biggest political parties, the right-wing Independence Party and even more by the rural-based Progressive Party. The latter often adopted a critical stance towards trawler fishing because it drained the countryside of scarce labour and was a risky and unstable activity which could easily bring down business and cause unemployment. A different kind of criticism came from social democrats and communists, who saw the trawling as the archetype of the exploitative, capitalist economy that should be eradicated by nationalization.

³⁰*Hagskinna*, 311 and 326. When comparing the economic efficiency between trawler and small-boat fishing the much greater capital requirements (in ship, gear and land facilities) and higher running costs of trawlers must be considered.

³¹*Pórr, Uppgangsskeið og barningsár*, 93-104.

Although such criticisms did not develop into full-fledged opposition to trawling, it reflected a preference among large sections of society for small-scale fishing. This was expressed most vividly in the midst of the Depression when plans for financial assistance to the fisheries were being formulated. Trawler firms were included in the original rescue plans in 1933, but in the parliamentary process they were rejected by the majority in the *Althingi*. The trawler owners were left to fend for themselves which, in effect, meant that they continued to be at the mercy of the commercial banks.

The fate of large-scale fishing was very different in Norway where only one trawler was in operation in 1930. Widespread opposition to trawlers among the fishermen has been advanced as an important reason for this, leading some writers to depict them as ignorant, undeveloped and risk-averse, a sort of "latter day Luddites."³² This is a simplified picture of a complex situation determined by a set of ecological, economic, social and political factors. Since the richest fishing grounds for cod were in the shallow waters off the coast, Norwegians did not have the same incentive to engage in deep-sea fishing as Icelandic fishermen. They fished in fairly small boats owned mainly by the fishermen themselves and sold the fish to the processors. This was a rational choice from the perspective of the small fisherman; operating a motor-boat was within his financial means and labour power. Although not as efficient as trawler fishing, it would be misleading to regard the small-boat fishery simply as an inferior technology that kept the fishing communities on a backward development track. On the contrary, it represented a big step forwards in comparison with the rowing boats and sailing smacks, increasing the capacity of the fleet and creating a longer fishing year. It suited the smaller fishing towns and the more sparsely populated regions with lower incomes.

But fishing technology hardly progressed beyond that point. The great majority of fishermen in northern Norway were not only indifferent but actually opposed to trawler fishing. It was seen as a threat to their way of life, their ownership of the boats and their freedom as independent producers. Fishermen feared that trawling would cause sharper social divisions with the concentration of ownership in the hands of a small group of capitalists and would reduce them to the status of mere wage earners.³³ Thus, the issue was much more than the selection of the type of technology but rather involved a way of life in the coastal communities. At the core of this social and political outlook, sometimes referred to as "fishermen socialism" (*fiskerbondesosialisme*), was ownership of the boats, self-reliance and anti-capitalist sentiments.

³²Richter-Hanssen, "Meeting of Two Technologies," 62. See also Christensen, "En havenes forpæster."

³³Richter-Hanssen, "Meeting of Two Technologies," 66-67.

Still, the question remains why enterprising men outside the small-boat fishery in the bigger towns of Western Norway where capital and expertise were readily available, did not take advantage of the far superior technology to a larger degree? One reason was that the sporadic experiments with trawler fishing prior to the early 1930s yielded disappointing results, as the historian Pål Christensen has noted, because production was primarily targeted at the domestic fresh fish market following the British and German model. The Norwegian market was simply too small for such operations to be profitable, and gaining a foothold in the British and German fresh fish markets was going to be difficult for newcomers. Only in 1933 did trawler fishing begin to make headway in the bigger towns of Western Norway, helped by a more secure market position for exporters provided by the Klipfish Act of 1932 and a change in business strategy by shifting production from fresh fish to *klipfish*.³⁴ This change made trawler fishing more similar to the Icelandic case where trawlers were operated as long as possible throughout the year, fishing mainly for cod and processing it at sea during the first half of the year, turning to herring fishing in the summer and then to fishing for the fresh fish market in Britain in the autumn. The Norwegians do not seem to have taken advantage of this fairly efficient use of the trawlers.

The progress of trawler fishing in Western Norway heightened tensions within the fisheries and fed the opposition among smaller fishermen who feared it would increase unemployment and expand to the detriment of the coastal fisheries. The impact of one trawler operating in the town of Vardø in Finnmark was immediately felt and produced outcry from the local fisheries association, which complained to the government that "Norwegian trawler fishing is really nothing but a war of exploitation against tens of thousands of fishermen who are tied to the old fishing methods."³⁵ A government report comparing the Norwegian and England/Scotland fisheries learned that total landings were about the same but the number of fishermen was twice as high in Norway.³⁶ Common arguments against the trawlers included overproduction and lower prices, damage to the seabed and marine life that would ruin the fishing grounds, damage to the fishing gear of the smaller boats, "proletarianization" of the fishermen and reductions in employment and income.³⁷

³⁴Christensen, "En havenes forpester," 627-629.

³⁵Bjørn K. Sagdahl, "Trålpolitikk og interessekamp: En studie over utformingen av norsk trålpolitikk 1930-51" (Unpublished MA thesis, University of Oslo, 1973), 39 (author's translation).

³⁶Christensen, "En havenes forpester," 632.

³⁷Sagdahl, "Trålpolitikk og interessekamp," 38.

In 1934 a fleet of 300 foreign trawlers started fishing near the island of Andøya in Northern Norway, which had until then been utilized by the local fishermen. This caused a great uproar, and fishermen attacked trawlers at berth in Vardø in 1936. Petitions were sent to the parliament (*Stortinget*), which under pressure from the northern regions and fishing organizations passed a law to limit the number of trawlers to the seven or eight currently in operation in Vestlandet.³⁸ The catch had to be used for salted fish or *klipfish*. This was a compromise between those who wanted an outright ban and the moderates who were concerned that it would undermine the competitiveness of the Norwegian fisheries *vis-à-vis* foreign competitors who had already moved into trawler fishing. Particular concern was expressed about Iceland which was gaining a competitive edge in international *klipfish* markets.³⁹ The law was only provisionary and was replaced in 1939 when the ban was reaffirmed and the limit on trawlers raised to eleven. The law remained in effect until 1951.

Financial Aid to Fishermen

The relatively large Icelandic trawler fleet suffered heavy losses and many operators faced liquidation, resulting in major losses for the two major banks. Having a more flexible expenditure structure, the operators of smaller boats fared better, but they too were in dire straits. As a result, in 1934 the government introduced a rescue package in which the debt of small-boat owners was restructured. Trawler operators were not included in this scheme and received only moderate tax reductions. Other direct public aid to the industry was not forthcoming. In retrospect, it is curious that little financial assistance was given to the stricken trawler industry considering that its economic problems became the focus of one of the largest political controversies of the late 1930s. Indeed, the Social Democratic Party even called for the nationalization of the industry, while the opposition wanted substantial government aid to rescue it from near bankruptcy. The financial reorganization of the trawler sector required resources which the government was unable to furnish. The matter was not resolved until World War II when the economic situation changed dramatically for the better.

The Norwegian government had established the State Fisheries Bank (*Norske Stats Fiskeribank*) in 1921 to cater for the financial needs of the fishing community. During the 1930s the bank extended its activities by granting loans on gear. Moreover, the government subsidized special bank financing (*Lånkassen for Fiskere*) for fishermen in 1932. The purpose was to provide

³⁸Tande, *Norsk fiskeripolitikk*, 82-88; Christensen and Hallenstvedt, *På første hånd*, 20-22; and Hodne, *Norwegian Economy*, 79-80.

³⁹Tande, *Norsk fiskeripolitikk*, 85.

loans on easy terms, which were granted primarily to enable bankrupt fishermen to re-establish themselves. The same year the Norwegian parliament granted 1.5 million *kroner* (US \$270,000) for interest-free loans to fishermen who wished to purchase new gear. Other public measures included favourable loans or grants to provide capital to buy gear and new boats.⁴⁰

Cartelization and the Regulation of the Cod Fisheries

Demands from fishermen and sales organizations for a more organized and regulated industry became louder in both countries towards the end of the 1920s. This was especially true in the herring sector, which was exposed to wild fluctuations in both catches and prices. The Norwegian industry was under great pressure as early as the second half of the 1920s to organize in order to better cope with the adverse economic environment. The situation was similar in Iceland. Fish prices fell faster than prices in general, while production costs changed little, resulting in lower incomes for fishermen.⁴¹ In these precarious circumstances, small fishermen had little influence on prices, and competition among individual fishermen intensified as production capacity increased.

Norwegian fishermen began to organize to try to gain more control over their livelihoods, to strengthen their market position and to promote stable, preferably higher, prices. Several regional organizations were established, followed by the founding in 1926 of a national organization, the Norwegian Fishermen's Association (*Norges Fiskarlag*), which aimed to promote fishermen's interests and to improve prices and marketing.⁴² The organization was to play a central role in regulating producers' prices in Norway. In subsequent years, organizations within the industry proliferated in various sectors and regions. The most important difference was between the cod sector, which sought to control exports through cartels and regulation, and the herring sector, which established organizations in production and processing and concentrated on regulating the domestic trade. The division was not clear-cut; minimum prices existed in the domestic cod trade, and export boards were established in the herring industry.

As the Depression deepened between 1931 and 1933, public policy focused on regulating export prices. As early as 1929, the Norwegian government had worked out a detailed plan for uniting salt fish exporters and processors in a national organization. Processors were required to sell their produce

⁴⁰Gerhardsen, *Salted Cod*, 73.

⁴¹Tande, *Norsk fiskeripolitikk*, 139.

⁴²*Ibid.*

to the members of this organization, and the export trade was to be conducted only by producers' organizations or firms, thus excluding commission traders. Minimum prices would be fixed by a council appointed by producers and processors. The agreement did not materialize, however, because of opposition from fishermen in Finnmark.⁴³ Instead, the Association of Norwegian Klipfish Exporters (*De Norske klipfiskeksportørers landsforening*) was founded in 1931 with membership on a voluntary basis and confined to exports. Since even voluntary agreement on the regulation of exports was not forthcoming, the *Storting* adopted the Klipfish Act in 1932 which made exports subject to membership in the Association of Klipfish Exporters or to approval by the Association. In effect, this was a state-protected cartel to limit competition and regulate supply and prices, although trade was still conducted through individual firms. Moreover, the Association was obliged to purchase dry salted fish through the Association of Fishermen and the Processor's Association. A price council was set up to establish minimum export prices in several markets, but this was widely evaded because of intense competition, prompting the Association of Klipfish Exporters to impose quotas as the only way to enforce it. Sales organizations (*Norklip* and *Hispana*) were set up for Portugal and Spain, respectively, each allocating quotas to their members with the approval of the Department of Trade. Exports of salt fish to other markets were unrestricted. This arrangement continued well into the Second World War.⁴⁴

Public measures were also aimed at fixing domestic prices. As the crisis deepened, fishermen's organizations called on government for more support either in the form of subsidies or minimum prices. In 1936, the *Storting* gave in and introduced a guaranteed minimum price for cod (called "crisis cod," *krisetorsk*). The government paid exporters a subsidy intended to cover reasonable costs, provided the minimum price established by the government had been paid for the fish.⁴⁵ Minimum prices were fixed for each stage in the production chain.

Similar, although not as radical, centralization occurred in stockfish exports. In 1931, the Association of Finnmark's Stockfish Producers was founded. It controlled most exports from northern Norway and sold to a single buyer, the United Africa Company. This arrangement lasted for only three years, and it was not until exports to the biggest market, Italy, were centralized in 1937 that the Norwegians responded by founding a nationwide Norwegian Stockfish Exporters' Association (*Norges Tørrfiskeksportøreres Lands-*

⁴³*Ibid.*, 211-212.

⁴⁴Gerhardsen, *Salted Cod*, 71; and Tande, *Norsk fiskeripolitikk*, 211-220.

⁴⁵*Ibid.*, 72. See also Christensen and Hallenstvedt, *På første hånd*, 54-55; and Tande, *Norsk fiskeripolitikk*, 168.

forening), which effectively controlled exports to Italy on the basis of quota allocations to members based upon their previous shipments.⁴⁶

The response in the Icelandic cod fishery was similar to that in Norway, although the cartelization of exports went further and the centralization was greater than in any salt fish-producing countries except perhaps the Faroe Islands.⁴⁷ The largest exporters were forced to form the Union of Icelandic Fish Producers (*Sölusamband íslenskra fiskframleiðenda*, or SÍF) in 1932 after the two principal, state-owned banks threatened that if they did not organize voluntarily, a state fish-export monopoly would be imposed.⁴⁸ At first, SÍF was comprised of only three of the largest exporters, but soon almost all processors joined, and the association soon controlled over ninety percent of salt fish exports. This was followed by a law in December 1932 which gave SÍF legal backing and set rules to regulate exports. In the following years, wrangling over the composition of the executive almost led to its demise.

The aforementioned 1934 act further centralized the industry by establishing the Fisheries Industry Board (*Fiskimálanefnd*). Although it had wide-ranging powers to control catching, processing and marketing, fierce opposition from producers led to a compromise the next year. As a result, the board had only a limited role, and the influence of the biggest firms was limited. Real control remained with SÍF which, unlike its Norwegian counterpart, was in charge of marketing and the export of salt fish.

Attempts were made to form an international salt fish cartel, partly as a response to the concentration of buyers' cartels in overseas markets. Icelandic and Norwegian producers met in Newcastle in 1935 to consider closer cooperation, and in subsequent years other countries and government officials also participated. The meetings did not lead to any firm action and were discontinued after the outbreak of the Second World War.⁴⁹

The Icelandic government did not go as far as the Norwegian government in setting minimum prices, nor did it offer regular subsidies during the 1930s. But the duty on coal used in the industry was refunded under legislation passed in 1938, and the collection of import duties on salt was suspended.

It is difficult to make firm generalizations about the effects of the cartelization of the fishing industry and government price controls on prices. No

⁴⁶Tande, *Norsk fiskeripolitikk*, 226-229.

⁴⁷Valdimar Unnar Valdimarsson and Halldór Bjarnason, *Saltfiskur í sögu þjóðar: Saga íslenskrar saltfiskframleiðslu og -verslunar frá 18. öld til okkar daga* (2 vols., Reykjavík, 1997), I, 145-150; and Gerhardsen, *Salted Cod*, 55-77.

⁴⁸Valdimarsson and Bjarnason, *Saltfiskur í sögu þjóðar*, I, 131-132.

⁴⁹*Ibid.*, I, 151-152 and 162-163.

doubt these measures led to more stable prices and incomes, but it is unlikely that they were able to raise prices in foreign markets in the long term, despite their claims to the contrary. In fact, the little research available indicates that it did not result in higher prices.⁵⁰

Cartelization and Regulation of the Herring Fisheries

The herring industry was also subject to comprehensive re-organization. Of all the branches of the fishing industry, the herring sector was the most volatile. It was subject to wild fluctuations in both catches and prices and marked by cut-throat competition. This was an important reason for the greater willingness of the herring fisheries in both countries to accept state intervention. It is important to keep in mind that state intervention was not imposed on the fisheries from above but was requested by the industry itself, paving the way for a more corporatist organization of production and marketing. Government involvement was limited to sanctioning organizations, regulating trade and stipulating rules rather than taking over activities in the fishing sector.

The Norwegian government was heavily involved in the organization of the industry, as demonstrated by the founding of the *Storsildlaget* and *Storog vårsildlaget* on the west coast in 1927-1928. These marked the first serious attempts to organize the fresh fish market and would not have lasted without government legislation in 1929 to limit exports only to those who had been accepted by officially licensed organizations.⁵¹ In the following years thirteen other national or regional organizations were founded, the most important of which was the Herring Trade Association (*Norges Sildesalgslag*) in 1936.⁵²

The main task of these organizations was to allocate the catch to different types of processing in order to control quantity and ultimately improve prices. The Herring Act of 1930 gave licensed fishermen's organizations the power to regulate the quantities of fresh herring available for salting or reduction. A number of sales organizations were founded for each market and region, and special export boards allocated quotas. The act was extended to salted herring in 1932, requiring all exporters to be members of the Associations of Salted Herring Exporters (*Saltsildegспортørernes Landsforening*).

The organization of the salt fish exporters in Norway paved the way for increased centralization of the herring industry. Under the pressure of a strike by fishermen in Finnmark, landmark legislation was passed in 1938. The Fresh Fish Act (*Råfiskloven*) gave government broad powers to regulate prices

⁵⁰Gerhardsen, *Salted Cod*, 60 and 83-87.

⁵¹Hallenstvedt and Dynna, *Fra skårunge til hovedsmann*, 76-83.

⁵²Tande, *Norsk fiskeripolitikk*, 155-193.

on first-hand sales in the domestic market. The idea was to subject all fish landed to prices and sales conditions negotiated among fishermen, processors and trade organisations under the administration of the Norwegian Fresh Fish Association (*Norges Råfisklag*).⁵³

The canning industry was the most extensively regulated branch of the fishing sector in the 1930s. As early as 1933 exports of canned sprat and herring were subject to regulation by licensed sales organizations. After a protracted struggle between fishermen and processors, and among processors themselves, limited companies were established for each of the three main branches – sprat (1933), herring (1937) and kippers (1938). These regulated supply and prices on the basis of quotas allocated to processors and assured fixed prices for all concerned.⁵⁴

The herring fisheries in Iceland were subjected to even greater state intervention. A state monopoly over herring exports (*Sildareinkasala ríkisins*) was established in 1928 to regulate exports and limit competition. This arrangement lasted for only three years before dissatisfaction by both government and producers led to its dismantling. In 1935 the Herring Fishing Board (*Sildarúttegsnefnd*) was established, a public body authorized to regulate processing and exports through a licensing system. The Board tried to control supply, especially of salted herring, according to market demand, and promoted other types of products, such as *matjesherring* and meal and oil production.

Conclusion

The analysis has focussed on similarities and differences between Norway and Iceland in their responses to the economic crisis in the fisheries sector during the 1930s. We have discovered that there were similarities in terms of physical environment, industrial structure, the importance of the fisheries to the overall economy and the positions of their respective fisheries in the world market. Both nations embarked on broadly similar development paths during the first decades of the twentieth century, rapidly expanding their fisheries by introducing modern technology, especially with the advent of the mechanization. Salt fish and herring production formed the two most important avenues of growth. The rapid expansion in fisheries created similar problems in both countries during the 1920s: overproduction, cut-throat competition and falling prices – in short, a volatile environment which weakened the economic basis of the fisheries after the onset of the Depression in 1929.

⁵³*Ibid.*, 142-155; and Christensen and Hallenstvedt, *På første hånd*, 77-115.

⁵⁴Tande, *Norsk fiskeripolitikk*, 246, 250 and 257-261.

Given these similarities, it is hardly surprising to find similar policy responses in the two countries. It is important to stress, however, that organized action and state intervention had already begun before 1929, especially in the herring industry, prompted by serious problems facing the sector during the 1920s. But as the Depression deepened, cartels with wide-ranging powers were established for all the major branches of the industry either with government control or state backing. These cartels were given powers to regulate supply, fix prices and, in the case of the herring industry, allocate raw material to different processors. Another common trend in both nations was a strong move to diversify production and to search for new products that could open up new markets and halt the fall in incomes. Rationalization of existing production was not pronounced, new technologies were not adopted and the industry was not successful in cutting the wage bill through layoffs or wage cuts. The opposite, in fact, was the case in Norway.

Yet responses in the two countries did differ in some fundamental respects, with Norway generally pursuing a much more interventionist policy than Iceland. In most instances, the Norwegian government went much further in regulating fishing through subsidies and price fixing. By 1938, most of the industry was subject to price fixing either in the form of agreements between different cartels or governmentally established minimum prices. The Norwegian government also introduced subsidies on cod prices. The Icelandic government did not set minimum prices nor introduce subsidies: the fishing industry had to survive without significant governmental support. Overall, government policy in Norway tended to shelter the fishing sector from the vagaries of the world market more than it did in Iceland.

Protectionist policies in Norway also went further in other spheres. The goal of protecting, and even promoting, employment in the fisheries led to measures such as direct aid in the form of loans and grants. This policy peaked with the ban on trawler fishing in 1936, effectively halting the advance of a superior technology and the infusion of venture capital into the fisheries sector.

How may these national differences best be explained? The most obvious answer is that fisheries were so dominant in the Icelandic economy that they had to stay competitive on prices, since there was little else to fall back on. The relative size of the fisheries in the overall economy meant that introducing significant subsidies would have imposed a huge burden on public finances. The Norwegian fisheries, on the other hand, were not as prominent in the economy, although they played a central role in the more sparsely populated regions of western and northern Norway. Having greater revenues, the Norwegian government could afford to provide more generous support.

The different organization of firms also explains the variance in national policies, especially with regard to official price fixing. Large fishing firms in Iceland were characterized by a high degree of vertical integration; for example, the three biggest exporting firms were also the largest operators in

fishing and fish processing, which enabled them to better control the entire production process. In Norway, on the other hand, the fisheries sector was marked by divisions between different parts of the production chain; production was to a greater extent organized and owned separately from processing and sales outlets. This type of organization was more susceptible to regulation because each branch of the industry strove to secure its position by pressing for the regulation of supply and prices, whereas the Icelandic fishing industry attached the greatest importance to the elimination of competition between firms in foreign markets. It was therefore no coincidence that the export sector became the most heavily regulated part of the fisheries in Iceland, dominated by cartels to a greater extent than in any of the other fish-producing nations.

On the whole, however, state intervention was more pronounced in Norway, not only through price regulation but even more so through the protection of employment and traditional fishing technology. In so doing, Norway adopted a more cautious approach than Iceland towards innovation, especially that which seriously affected social relations in the fisheries. This path was not created in the crisis-ridden 1930s, since the two countries had taken different "socio-technical" paths at the outset of mechanization. For ecological, economic and political reasons, the Norwegian fisheries were entirely confined to the small-boat fishery prior to 1930, while small- and large-scale fishing developed simultaneously in Iceland. It was the ill-fortune of trawler fishing that it did not start to advance until in the middle of the Depression when economic and political conditions were arrayed against it. Opposition from the smaller fishermen in northern Norway was so strong that the nascent trawler industry stood no chance of gaining support from the state during these difficult times.

Did the Depression have long-term effects on the fisheries of Iceland and Norway? On a political level, the fishermen in both became more integrated into national society as their problems and concerns became the subject of public debate. In both countries, the extraordinary measures led to changes in the organization and operation of the fishing sector that lasted for decades. Cartelization led to a much greater concentration of sales and marketing organizations. The extensive regulation of prices and production in Norway continued for a long time. The introduction of freezing technology and other technical innovations paved the way for more diversified production, particularly in Iceland. On the other hand, the promotion of small-scale fishing and the containment of trawler fishing set Norway apart at least until the early 1950s, creating a gap between its small-boat fishery and the more productive large-scale industrial fishing which was advancing in most fishing countries in Northern Europe.

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