

The Icelandic meltdown and the entrepreneurial function

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Abstract

At the beginning of the 21st century the Icelandic economy was characterized by openness, highly educated workforce, diverse international connections, and abundant access to foreign capital. Less than ten years later its banking system had collapsed and many of the country's largest firms were facing bankruptcy. In this paper we use theories of entrepreneurship put forward by Schumpeter, Kirzner and Baumol to analyze how improved innovation capacity, opening of foreign markets, and privatization connects a prosperous micro-state to the international economy with unforeseen consequences. We ask if the favourable conditions at the beginning of the century can be restored and the evolution of the economy directed to a path that is more prosperous for the country. We argue that this is possible by attending to the specialized innovation companies that have survived the crisis and creating a favourable environment for their development.

Keywords: Entrepreneurship, Innovation, Icelandic crisis.

Introduction

The paper is organized in the following manner: First, theories of three scholars on the role of the entrepreneur in economic development are briefly reviewed. Next, the development of the Icelandic innovation system is described and how entrepreneurial

activity changes as a result of the privatization and globalization of the banking system and easy access to international capital. Finally, the changes that have occurred following the collapse of the banking system are briefly discussed and an attempt will be made to answer the research question.

Theoretical Discussion

Joseph A. Schumpeter, Israel M. Kirzner and William J. Baumol have all made a significant contribution to our understanding of the role of entrepreneur in socioeconomic development. In their theories the concept of the entrepreneur refers to an economic actor that performs a certain function in the economy, i.e. entrepreneurship, rather than to specific individuals and their part in the actual course of events.¹

According to Schumpeter (1934, 1942) the entrepreneur's role is to be a driver of innovation in the economy. Schumpeter defines innovation as the introduction of new combinations in the market, e.g. the use of new technology, opening up of new markets or changes in industrial organization. Innovations disrupt the equilibrium in the economy and are the precondition for in new value creation and profit. Through innovation entrepreneurs compete in a manner that is difficult for reigning firms to match as it directed at the very nature of their products and cannot be retaliated simply by reducing price. In the footsteps of entrepreneurs the market is flooded by imitators, moving the economy again towards equilibrium where companies enjoy no profits. In the process, controlling companies and even industries that more often than not had secured their position in a cartel-like manner become unable to respond and as a result industries rise and fall; a process that Schumpeter termed creative destruction

¹ Here, there is no distinction made between entrepreneurship involving the creation of new businesses, entrepreneurship as in existing businesses or entrepreneurship as in individuals and groups.

(1942). Even though the short-term effects can be problematic for incumbent firms, the overall results are positive for the economy and a necessary precondition for renewal and long-term economic development and growth.²

Although entrepreneurs are driving innovation they do not so in isolation or in a straightforward way, e.g. by the application of new scientific knowledge. Innovation is a chain-linked and path-dependent process involving a large number of actors and shaped by the institutional context and historical circumstances (Kline and Rosenberg 1986, Nelson 1992). Furthermore, innovation varies in its novelty. In some cases innovations are local (new under the roof), i.e. they have already been introduced in another context and are being diffused and adapted to a new context. In other cases innovation is truly global (new under the sun), i.e. being introduced for the first time (Freeman 1982).

Entrepreneurs aiming for innovations of high novelty, experience more difficulties in financing their activities due to high uncertainty of outcomes. However, in the wake of innovations, e.g. major technological change, uncertainty is reduced and profit expectations may be heightened, making it easier for imitators to fund their activities. Numerous imitators take the advantage of these opportunities, increasing capital in circulation and the expectations of future profits, resulting in overinvestment and inflation. The result is a bubble economy that is based on expectations that cannot be met in the real economy and must be corrected sooner or later (Perez 2002).

Kirzner (1973, 1997) gives the entrepreneur a different role although his actions are similarly important for the development of

² Schumpeter's ideas about creative destruction were about great technological change, such as the steam engine, railroads and electricity. It can be argued that the term is often misused for events that do not have as extensive impact on society. Nevertheless Schumpeter's basic idea is that the competition between companies is not only based on price and costs for similar products but also on innovation that cannot be addressed with changes in prices and costs of existing products. If companies or industries are unable to meet such competition it can be said that they will be victims of creative destruction.

the economy and economic prosperity of society. According to Kirzner, the entrepreneur is an alert person who is willing to exploit opportunities that arise due to disequilibrium in the economy. For a variety of reasons, such as different knowledge of participants and access to different information, the economy is constantly moved out of its equilibrium state predicted by economic theory. Because of the imbalance, production factors are not priced according to their value, creating an opportunity for profit. However, through his activities, the entrepreneur sends out information about the value of production factors and as a result the economy moves towards equilibrium, leading to better utilization of resources and increased welfare. Kirzner's analysis is to some extent consistent with Schumpeter's ideas about the entrepreneur as a change agent, but ignores the importance Schumpeter assigns to radical change brought by innovation and the role of investors. Instead of Schumpeter's emphasis on the role of entrepreneurs in creating imbalance in the economy Kirzner's emphasis is on their role in establishing a balance.

According Baumol (1993), the entrepreneur performs both the role of the innovative agent who promotes change and disequilibrium in the economy and the one who is alert to changes and through entrepreneurial action drives the economy towards equilibrium. Thus, Baumol combines, to some extent, the views of both Schumpeter and Kirzner. However unlike Schumpeter and Kirzner, Baumol does not regard the impact of the entrepreneur on economic development as always positive. Baumol (1993) argues that entrepreneurship at any point in time depends on the structure of payoffs in the economy. In general, profit motives lead to innovation and prosperity, but in some cases, entrepreneurial activity can become destructive. As an example he mentions rent seeking, where the entrepreneur benefits without a corresponding benefit being returned to the society. This is not necessarily through illegal activities, such as sale of drugs or blackmail, but rather through activities that fit within the laws and rules of

society, such as when a shareholder who threatens takeover is bought out at a premium or when strong investment funds move the markets. The government both directly and indirectly influences the structure of economic payoffs, e.g. with legislation, policies and actions, but they are also dependent on the culture prevailing in society at any given time.

Baumol's ideas can be interpreted in such a way that the institutional setup affects whether an overinvestment following a radical innovation has a positive or negative impact on the overall national wealth. Although an over-investment in the wake of radical technological innovation does not return a profit to the entrepreneur and the investors involved, the community still benefits from the opportunities it creates, through increased technical knowledge and sectoral networks. It is unlikely that the same applies to innovative rent seeking, both because additional rent seeking does not lead to prosperity and also because it is likely that rent seeking is prevented, e.g. by changes in law.

Development of the Icelandic Economy

In the 20th century, Iceland evolved from being one of the poorest countries in Europe to becoming one of the richest, based on national income per capita (Jónsson 2002). As discussed by Örn D. Jónsson and Rögnvaldur J. Sæmundsson (2006) the development occurred over several periods of initiative and development where the government was either an active participant or their policies unleashed acquisitions within the community, more often than not with unpredictable consequences.

For the most part of the 20th century, there was a worldwide conviction that a gradual move towards modern society could be navigated through socioeconomic planning. Despite recurring fluctuations and economic downturns all the major players in Icelandic politics more or less anonymously adhered to this view. The Icelandic version of the above reasoning was that

Icelanders were latecomers and could therefore learn from the mistakes of those that had progressed further elsewhere. However, early on the small size of the nation as well as its poverty severely limited the nation's ability to utilize its abundant resources. The country could be described as a 'substance economy' (Polanyi (1944).

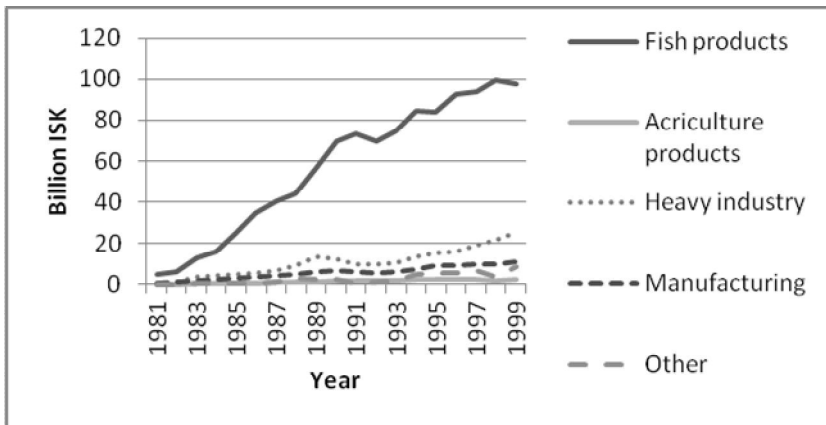
The Second World War changed this situation in a fundamental and lasting way. During Allied occupation basic infrastructure facilities were built and a consequent influx of money led to a long awaited monetization of the economy. After the war, in the early fifties, the government emphasized the creation of a mixed economy built on the Nordic model and the promotion of primary institutes and the organizations that were considered necessary prerequisites for a successful welfare system. Innovation in the modern sense was almost non-existent; it was defined as a political initiative where the emphasis was on adopting foreign technology and practices. Private funding for entrepreneurs was almost non-existent. The need for change and nation building was obvious and visible; the challenge was to prioritize. The government took on the role of innovative entrepreneurs by way of investments in infrastructure and efficient production processes in the fisheries; investments made possible through savings accumulated during the war and development aid from friendly Allies. In the early seventies came the pioneers, tied to the fisheries sector, who saw the opportunity to exploit the rapid technological development like the introduction of the microprocessors and the increased expertise in materials technology. In Schumpeter's (1934) sense, they were innovative in that they developed innovative solutions to remove the obstacles that had slowed down productivity within the sector (Dahmén 2004). Along with other changes, including the introduction of a new fisheries management system, they created the foundation to revolutionize the industry by changing work methods and making associated changes in the power structure within the industry.

It soon became apparent that the solutions that were developed as innovation in fish processing also applied to other food and markets outside Iceland. Efficient fish processing methods and equipment were utilized for chicken production, insulated containers to preserve the freshness of fish were useful in hot countries, and product development initially aimed at fresh seafood became useful in the market for high quality convenience food. At the same time internationally competitive innovation appeared in other industries, such as prosthetics and generic pharmaceuticals.

Despite the emergence of internationally competitive innovation and the existence of free trade agreements, such as the EFTA agreement, activities of Icelandic entrepreneurs were still very much limited to the seafood industry. First, seafood exports, which were about 90% of total exports, were more or less controlled by two business cartels that limited the number of people involved in exports. Second, expertise, skills and networks were difficult to transfer between individual sectors. It became difficult to transfer relationships and expertise from the fishing industry to other industries, even in related fields.³ Third, the economy was relatively closed and there was limited access to funding. For example, there were severe limitations on currencies exchange; no stock market and the major banks were run by the government. Attempts had been made to create a public market for shares in Iceland, but such a market did not stabilize until 1990 when the first shares were listed on the Stock Exchange. The Icelandic stock market grew slowly at first. In the beginning one-third of the companies belonged to the fishing industry and in 1997 their relative value reached its peak at 40% (Erla Kristinsdóttir 2009). These companies, which previously raised

³ The market for frozen fish was based on raw-material, the freeze containers in the supermarkets were monopolized by a few big companies like Unilever. In the United States, the main focus was on large institutional purchases and restaurant chains. In both cases, there was no identification of the origin of the product or other distinction.

funds with the help of political relationships within the state owned banking system, were able to take advantage of market mechanisms in order to grow. Innovative companies related to fisheries were also able to finance their growth with expansion into foreign markets and other industries, such as meat processing. Despite the emergence of capital markets, reduction of tariffs and further opening of foreign markets through membership of the European Economic Area (EEA) (1993) and GATT (1995), these factors as a whole did not have much impact on the diversification of exports, at least initially (Figure 1). Exports of products, as opposed to exports of raw material being processed abroad, increased steadily in the eighties as a result of advances in fisheries management and fish processing equipment.



When the figures are examined more closely, it is clear that the exports of high-technology products suddenly increased greatly in the 1990-1995 period (Research Council 1996) For example, export of fish processing machinery and electronic scales nearly doubled, from 700 millions ISK in 1990 to 1.3 millions in 1995. Also, sales of software rose from virtually nothing to 800 millions, sales of generic drugs rose from less than 50 millions to 600

millions, and sales of prosthetics rose from less than 25 millions to over 250 millions. New opportunities were created with the increased ability to innovate, the development of the stock market and the liberalization of international trade. Alert entrepreneurs in Kirzner's sense had come forward to take advantage of these opportunities for expansion.⁴ Innovation had become international, and despite wealth and competitiveness still being driven by advances in fisheries, they created progress not only in new products, but also in sales of new production equipment that had much greater growth opportunities than consumer products. fish processing.

With the privatization of the banking system, even more opportunities were created for Icelandic entrepreneurs. Access to domestic and, later, foreign capital investment improved and the investment capability of the economy multiplied. Following the privatization, three banks emerged, all of which grew very rapidly with increased activity abroad.

Expansion and the size of the banks had a major impact on the Icelandic economy. When the companies listed on the Stock Exchange in 2006 (Figure 2) are examined, it is clear that their market value multiplied and banks and financial institutions had become the dominant companies in the market. More and more companies had become investment firms, or even hedge funds, even though they held the names of the old companies. Most manufacturing companies in the fishing industry had been taken off the stock exchange along with those companies that were mainly operating on the domestic market. The inflated hedge fund-like firms but still retaining their linkages to their initial sectoral foundations. Neither the fisheries firms nor firms primarily

⁴ What matters here is the development of the education system and the promotion of international knowledge and international ties as a result of more students seeking further education abroad and working there after graduation (see further in Örn D. Jónsson and Rögnvaldur J. Sæmundsson 2006).

operating on the domestic market failed to attract capital from the stock exchange.

Instead of strengthening the economy, the privatization and expansion of the banks had the opposite effect. Increased opportunities for investment were only utilized to a limited extent to strengthen the economic sectors. Instead, conditions and strong incentives were created for rent seeking and asset price inflation (Páll Hreinsson, Sigríður Benediksdóttir and Tryggvi Gunnarsson 2010). The size and type of business agreements were not in accordance with Icelandic realities, which formed the basis of the credit ratings of the Icelandic banks. Despite a radical innovation, the innovative pioneers became the destructive force that Baumol warns against, at an almost unique scale.⁵

Inside the bubble

In the 1980's, Icelanders were in a very favourable position; built up a welfare state in the Scandinavian mould, and extended exclusive fisheries rights to 200 miles around the island. A handful of knowledge-intensive innovative companies start-ups gained substantial weight.

Development in the more affluent countries of the West moves were taken to marketize the society, reducing import taxes allowing a free flow of capital.

The technical skills increased both productivity and product quality in fisheries but the turning point came when it was possible to transform knowledge of fish processing into knowledge to develop and produce fish processing equipment.

⁵ Although the concept of Icelandic businessmen has introduced a new methodology for investment and business operation (see, for example Helga Harðardóttir and Snjólfur Ólafsson 2007), it is questionable to speak of international innovation in this field. The expansion led by Icelandic businessmen took place at the same time as there was a great increase in the supply of credit worldwide and decisions on levels of debt acquisitions are based on expectations of higher asset prices and unrestricted access to credit on favorable terms. However, it is indisputable that drastic changes took place in Iceland.

When it was later found that the solutions developed within fishing, processing and handling of seafood in general were applicable in many other industries, new possibilities, previously unavailable, opened up. In other words, it was not the increase in the value of the catch that was decisive, but the more extensive usage of manufacturing technology and the organization that had been developed for the fishing industry.

Innovative entrepreneurs had created new opportunities for expansion into foreign markets and one can say that this was a natural extension of knowledge, skills and international networks that had been built up for some time. Improved access to foreign markets, both for products and capital, and privatization further increased these opportunities, but also created opportunities for rent seeking of unknown proportions; the City in London had become the frame of reference rather than the Icelandic GDP. In tune with the *Zeitgeist* in the more affluent nations around the world; liberation of several moves towards marketization were taken; reduction of import taxes; erection of a national stock exchange; free flow of capital and privatization of some of the key institutions of the society of which the banks were by far the most important.

The changes in the political along with economic policy, which was expected, to unleash the dynamic market forces.. As it turned out, these measures led to a turn of events which were not only unexpected but led to a situation which young inexperienced entrepreneurs made use of. The inherent characteristic of the information technology along with the overall marketization resulted in a short-lived enlargement of the national economy. When the bubble burst, Icelandic society was severely hit, and this was characterized as a meltdown. The fact was that the Icelandic collapse was one of the first manifestations of a long lasting worldwide crisis. The daring young entrepreneurs, nicknamed “Vikings”, functioned in fact as the risk takers in the syndicated loans bundled by the hedge funds. The long-term consequences of

the creative destruction in Schumpeter's terms opened up a window for risk takers operating globally and opening up for constructive innovative moves. When the bubble burst, it became apparent that the activities on the stock markets world wide had been altered into a space for opportunistic rent seeking, or bad capitalism, as Baumol terms it.

Following the crash, the 'real economy' has reappeared. Firms, whose profitability during the boom could not match the available rent seeking opportunities, again become the foundation for the economic well being of the country. In addition, a new generation of knowledge-intensive firms has been created; firms that were invisible during the boom years. These firms provide a potential backbone for future development, given the opportunity to prosper. Unlike before, when innovation was localized and focused on adopting technology and practices from abroad, knowledge-intensive firms are likely to create work for the primary sector and not vice versa. Therefore, it is appropriate that policy makers reduce the weight of support for basic sectors and focus on strengthening the innovation capacity of the nation. It is important that the future backbone is not sacrificed for short-term solutions that are based on the further utilization of almost fully utilized resources, no matter how tempting it may be.

It turned out that the logics of the exponential growth of accessibility of cheap money worldwide had little to do with the Icelandic real economy which had been growing simultaneously. The question here is how much impact this exponential growth had on the Icelandic economy and the innovation-driven economy that had developed around the turn of the century. A quick look shows that over the last two decades, a number of knowledge-intensive companies had developed and grown within international market niches. These companies became imperceptible when all attention was focused on financial booms and major investments in the global market. Their income stems from abroad and they are

therefore likely to have extensive potential for growth despite the changed working conditions.

The return of the real economy – conclusive remarks

In some sense the ‘real economy’ based on the four main sectors, fisheries, energy-intensive production, tourism and high-tech innovative firms, has re-emerged following the collapse of the banking system and the associated meltdown of the economy. These sectors have regained its significance, characterized by stable fisheries and growing utilization of hydro- and geothermal power. Production of aluminium increased from 30 000 tons in 1969 to nearly 900 000 tons in 2011. The number of tourists grew from around 90 000 in 1998 to 650 000 in 2011.

Fisheries, energy production and, to some extent, tourism are all examples of industries that utilize limited resources for value creation. While the return on the investments themselves is limited in the long term, due to the fact they all depend on limited natural resources, it is necessary to build future innovation capabilities. As stated in the theoretical part of the article, innovation is an incremental process where historical circumstances affect the structure, skills and conditions for value creation. In addition, history has shown that a small economy like Iceland focuses on individual industries often at the expense of others. This time around, singular focus on fisheries, energy production and tourism is likely to be at the expense of working conditions of knowledge-based businesses.

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