

Risk Society, Precaution and Progress

Definitions

Risk Society; Incalculable risks to society as a result of complex technical advance

Precaution: Measures taken to avoid undesirable results of taking risks

Progress: Observable improvement in conditions relative to prior conditions.

When disaster strikes

Throughout human history there are examples of human activity causing severe impacts on either the natural environment, or humans themselves. Impacts such as Mass Extinctions of wildlife are well known, and documented from 'mega-fauna' of Australasia (e.g. Moa, Giant Kangaroo) that were hunted by the first settlers thousands of years ago, to the Dodo and Pyrenean Ibex of more recent times.

A notable example of an impact on humans as a direct result of human activity is the case of Asbestos industrialization. Humans have used asbestos for millennia, but increased industrialization of the manufacturing process caused increased dust to be created, which was later found to be carcinogenic. In many countries it was hailed as a cheap and effective thermal insulation and fire retardant. In Great Britain medical journals started to report harmful effects in the early 1900. These were ignored by business, and no regulations (or self-regulations) were introduced. Several hundreds of thousands of deaths can be attributed to asbestos exposure before the government stepped in to heavily regulate the use of asbestos.^{14,15}

The asbestosis case, and other similar cases made society aware of the risks that technological progress could cause to human health and the natural environment. It has become clear that businesses solely motivated by profit maximization could compel advanced

societies to become more risk averse and cautious towards technological innovation.

Better safe than sorry

Due to serious on-going global environmental damage, the UN made a declaration in Rio De Janeiro, Brazil, in 1992 stating that;

"Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as reason for postponing cost-effective measures to prevent environmental degradation"

This, in effect, states that it is better to be safe than sorry, and if there is a perceived threat then the burden of proof lies with the actor to prove that they will not cause any harm. This has become known as the Precautionary Principle.

A major concern of the precautionary principle is that it is a rather vague statement, and it can be interpreted differently in different industries and regions around the world.

Can we manage societal risk, while achieving progress?

Taking risk is necessary to achieve progress, but risk also needs to be managed in order to progress. This is where business finds itself at a crossroad; it has to navigate in a heavily regulated environment while still achieving technological progress and economic growth. The question we are looking to answer here is how business can best achieve this.

When analyzing the situation, it is important to keep in mind a few points. Firstly, even businesses that have altruistic motives may fail to see the adverse effects of their technological advances on humans or the natural environment. Also, businesses that are driven solely to maximize profits may downplay or neglect the risks associated with their actions. With this in mind; all companies are a potential threat in the eyes of the public.

Be pro-active

The case of Dow Chemicals Canada is a great example of where a company not only met, but also exceeded the regulatory standards with minimum sacrifice of profits. Faced with severe

¹⁴ Too little, too late? The Home Office and the Asbestos Industry Regulations, 1931, Peter Bartrip

¹⁵ Fibrosis of the lungs due to the inhalation of asbestos dust, British Medical Journal, 1924, W.E. Cooke

public opposition, Dow realized it basically had two alternatives;

1. Do nothing, and anticipate strict government regulations being imposed
2. Be pro-active, create suitable self-regulations, and self-impose them

Dow Chemicals Canada chose option 2 and it enacted its Responsible Care (RC) initiative. By taking this option Dow was able to steer public opinion and avoid severe or debilitating government regulation by regulating itself.¹⁶

One interesting aspect of self-regulation is that it is quicker to implement than Government regulation. Experts in the field who work on the topic on a daily basis typically create self-regulation. Such experts have all the details close at hand, and typically have a very deep understanding of all the factors of a specific situation. This is in contrast to government regulation that is typically written by bureaucrats, whom may never even have had any experience with the topic at hand.¹⁷

Dow derived substantial financial benefits from the Responsible Care Initiative that offset the time and effort expended in the program. Some of the financial benefits included:

- Reduction in workers' compensation, waste management, clean up and disposal costs
- Pollution prevention research spending resulted in an ROI of 150% for Dow Chemical in the mid 80's
- Avoidance of costly investments in environmentally inappropriate products
- Improved ability to respond to emergencies
- Renewed ability to obtain financing and insurance at reasonable rates
- According to Michael Porter: "many of the elements of Responsible Care are consistent with Total Quality Management."¹⁸

Large scale self-regulation

The ISO (International Standards Organization) is an example of an organization that was created as a self-regulating entity for industry.

¹⁶ responsiblecare.americanchemistry.com

¹⁷ http://anthonydwilliams.com/wp-content/uploads/2006/08/An_Economic_Theory_of_Self-Regulation.pdf

¹⁸ <http://www.carleton.ca/sppa/wp-content/uploads/ch6.pdf>

Largely driven by the catastrophes of World War 2, it seeks to be precautionous to such international risks while enabling progress. Its intent is to provide international alignment of business, industrial and engineering knowledge. These standards provide an international common standard so that cross-border trade can be facilitated – reducing costs to business. A clear example of this is the standard bolt sizes. Prior to ISO standards being adopted, many companies and/or regions would use their own standard. This meant that a component manufactured in the United Kingdom could be fitted to a product being made in Germany, as it would require significant reworks to fit correctly. With the introduction of metric measurements, bolts could now be made to a single size globally, removing costs of adoption, as well as increasing the potential sources of supply to companies.

Additionally the ISO standards provide a signal to potential customers of the level of quality and/or service that your company provides. It has been proven that companies that adopt ISO standards grow faster than those who do not.¹⁹ A major concern to self-regulating bodies is the fact that, generally, the public has distrust towards business. A study in Britain showed that 60% of the public believe "government does it (meaning regulation) best".²⁰

Don't wait for government regulation to be imposed

There have been many examples where industry did not impose self-regulation and was then severely regulated in a way that proved detrimental to business. The following case highlights our point that pro-active, self-regulation is the most beneficial action a company or industry can take to mitigate losses. The bee health case is a good example to demonstrate how government regulation can negatively impact revenues for several selected chemical companies. In this case, bee health was affected on a wide scale, but no single root cause could be identified as more important than another. In fact, many potential root

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http://faculty.tuck.dartmouth.edu/images/uploads/faculty/andrew-king/ISO_gK_Signaling.pdf

²⁰ <http://www.bsigroup.com/LocalFiles/en-GB/about-bsi/NSB/BSI-policy-report-standards-and-regulations-Ir-UK-EN.pdf>

causes for the impact were identified. In this case, regulators arguably took an overly cautious approach, invoked the precautionary principle to avoid future harm to the environment, and banned all pesticides somehow linked to bee health. The reaction by chemical companies will be interesting to see.

There are several positive and negative points to be made on the impact of government regulation. In general, it is thought that the negative points outweigh the positive.

Some of the positive points include:

- Government regulation fosters innovation (compared to no regulation);
- It reduces uncertainty (compared to no regulation); and
- It provides a level playing field for competition

Some of the negative points include:

- Government regulation raises costs, as compliance must be ensured to prevent fines;
- It creates barriers to entry by increasing entry costs, while also creating limits to market entry; and
- Inefficient regulations formed through a political process are a cost to consumers

Governments can also be pro-active

In order to drive progress, governments can use incentives to stimulate business activity in a particular direction. A clear example is the subsidies given to renewable energy sources, especially solar panel installations.

The implementation of subsidies needs to be carefully considered as they can severely damage the competitiveness of companies, industry and even an entire country. Subsidies can cause companies to become complacent because they benefit from a protected home market, and gradually lose sight of global competition. This can be particularly severe, since when subsidies are removed, companies face tougher competition – this has resulted in many failed businesses. This could be also viewed as a good outcome for the country. After all, an objective has been realized (e.g. solar panels are installed), and competition has chosen the most successful businesses to be successful.

What we have learnt

It has been shown that due to significant advances in industry and technology, risk is sometimes uncertain and can't always be understood by an individual. This risk may not only be applicable to an individual, but also to wider society.

In order to manage risk, precautions need to be taken. However, the impact of precautions when enforced by regulation needs to be understood by business. Inaction by business can result in strict and inefficient government regulations being imposed.

A better approach for business to achieve progress is to pro-actively apply self-regulation on topics it, or the public, perceive as a risk to society.

Yet two main questions remain: Is self-regulation truly the best way for companies to achieve progress? And, can society trust business to self-regulate?