

Introduction

by Paul Fenn* and Göran Skogh**

This volume is the result of an ongoing collaboration between the Geneva Association and the European Association of Law and Economics (EALE). This relationship has become a forum for the dissemination of important research on issues where insurance, law and economics come together. The following articles are a collection of papers drawn partly from the 6th joint conference of the Geneva Association and EALE, held in Yvoire on the 10-11 April 1995, and partly from a workshop sponsored by the Geneva Association, held in Nottingham on 19 October 1994.

The theme of the conference was the *Law and Economics of Industrial Risks, Waste Treatment and Industrial Accidents*. The liability of polluters for damage to the environment is and has been of considerable concern to the insurance industry, given the potential for large, open-ended claims, which are difficult to predict. The ways in which environmental liabilities should optimally be shared between parties, and the provisions made for compensating the victims, are clearly relevant to the future of liability insurance. Consequently, the papers in this volume represent an important contribution to improved understanding of both the issues and the practices involved. The theme of the workshop was the *Boundary Between Private and Social Insurance*. This issue is becoming increasingly more important as social welfare budgets in many countries grow in line with demographic and socio-economic trends. Papers were presented at the workshop by economists working in this area, with particular reference to pensions, disability insurance and long term care insurance. Two of the papers from the workshop are included in this volume.

The Law and Economics of Industrial Risks, Waste Treatment and Industrial Accidents

The first article is by Herman Cousy and is titled "The Precaution Principle: A Status Questionis". The legal principle (Vorsorgeprinzip) was first used in German environmental law in 1971. Precaution requires that environmental aspects should be taken into account in every decision-making process. This principle has become fundamental to environmental

* School of Management and Finance, University of Nottingham, UK.

** Associate Professor, International Institute of Industrial Environmental Economics and the Department of Economics, Lund University.

law and policy and is of considerable conceptual and practical importance. It is also argued that precaution is a prudent attitude to be adopted in a situation of uncertainty where the risk cannot be calculated.

The second article, "Extended Producer Responsibility: Recycling, Liability and Guarantee Funds", is by Karl Lidgren and Göran Skogh. Their analysis gives an economic rationale for making dealers liable for collection of goods, and producers liable for dismantling and final recycling. To make liability enforceable, it may be efficient to prevent a liable producer/importer from transferring liability to others. When a good is worn out, the liable producer may have disappeared from the market or become insolvent. To ensure recycling, the liability must be accounted for in the books, and resources ought to be reserved to this end. The requirements of a funding system are analysed. The writers expect various funds and insurance plans to arise, depending on the industry and products. Consequently, the creation of recycling reserves for "a proper ending of the good's life" will generate large savings similar to those associated with life insurance and pensions. This article is followed by a comment by Walter Stahel, who argues in favour of different system, that is, a service economy in which services rather than goods are traded.

The third article, "The Polluter Pays Principle: Should Liability be 'Extended' When the Polluter Cannot Pay?" by James Boyd and Daniel Ingberman, examines the desirability of extending liability from "polluters" – whose safety expenditures affect the probability of social loss – to "contractors" who do not directly influence risk, but who engage in transactions with polluters. Polluter-only liability is contrasted with two forms of extended liability: proportional, and joint and several liability. The study shows that when prices can be made conditional on contractors' wealth, proportional liability is at least as efficient as polluter-only liability. When liability is joint and several, however, or when transaction prices cannot be made conditional on contractors' wealth, the superiority of extended liability is not assured.

The fourth article, "Long-term and the Choice of Liquidation" by Robin Mason and Timothy Swanson, argues that the combination of limited liability of corporations and the long-term nature of certain environmental damages presents shareholders of limited liability corporations with an incentive to liquidate their firms before large future liabilities are realised. A formal model is developed to indicate the types of firms that will engage in this (and other) behaviour. The policy implications are explored, concentrating on the need of *ex ante* regulation to address the distinct problem of strategic liquidation. In particular, the authors discuss the introduction of regulated minimum reserve and auditing requirements as a means of reducing the problem, and this suggestion is clearly related both to the possibility of mandatory liability insurance and to the proposals reviewed in the paper in this volume by Lidgren and Skogh.

The fifth article, "The Ban of a single Pesticide" by Arndt Rölike, examines the risk of using chemical pesticides in agriculture. Besides being highly beneficial in agricultural production, pesticides also cause damage to the environment. One widely used instrument to protect the environment from contamination by pesticides is the ban on single, highly toxic pesticides. A simple model is developed to analyse the economic effects of such a ban. A major result of the analysis is that the availability of substitutes is not necessarily an argument in favour of a product ban. Furthermore, it is shown that banning single pesticides might lead to an increase instead of a decrease in environmental damage if the regulator is poorly informed about the relative toxicity of pesticides. An alternative to a ban on a single pesticide may be a uniform tax on all pesticides.

In a final article, “Optimal Liability: The Effects of Risk Aversion, Loaded Insurance Premiums, and the Number of Victims”, Martin Nell and Andreas Richter deal with the determination of optimal liability rules under the assumption of risk aversion and loaded insurance premiums. It is shown that optimal liability rules stipulate a strict division of accident losses between injurer and victim and that the shares in liability depend on the loading. Furthermore, it is shown that the number of potential victims has to be considered for the determination of optimal liability.

The Boundary Between Private and Social Insurance

The first article by Richard Disney is titled “Pension as Insurance”. As the title suggests, the paper examines the insurance properties of pensions, focussing on the possibility of private market failures and some rationales for state intervention. It is suggested that state pension policy in most countries bears little evidence that insurance motives are a dominant factor. The paper then considers the more recent debate concerning the insurance properties of different types of private provision, notably the difference between ‘defined benefit’ (DB) and ‘defined contribution’ (DC) plans. The author suggests that there are a variety of risks in the labour market against which the two forms of provision offer differing degrees of insurance.

The second paper from the workshop is by David Whyne and is titled “The Provision and Finance of Long-Term Care in the United Kingdom”. The author argues that demographic factors in the UK and elsewhere suggest an inevitable and significant increase in the prevalence of disability over the next few decades. Accordingly, there is likely to be an increased demand for long-term care provision, and, assuming that this demand is to be met, it will also have to be financed. In the UK at present, long-term care is provided and financed through a variety of mechanisms, both private and public. The role of private long-term care insurance to date has been minor, but the market is beginning to emerge in a trend that is likely to increase, given recent tax concessions by the UK government.

The third paper is by Peter Zweifel and is titled “Providing for Long-Term Care: Insurance Vs. Trust Savings”. The author argues that the provision of long-term care (LTC) by a child may be modeled using a principal agent framework, with the parent acting as the principal and the child as the agent. No other than the usual egoistic motives on the part of either generation are introduced. Moreover, providing LTC may be a good or a bad from the child’s point of view. It is shown that the purchase of LTC insurance by the parent is likely to cause moral hazard, i.e. a reduction of LTC provided by the child. Moral hazard effects, while not entirely absent, are found to be less severe in trust saving for LTC, e.g. in the guise of a so-called reversed mortgage.