

Australia is the Australian Longitudinal Study of Ageing, which does not represent the national population and has a baseline sample of about 2,000 cases only. In addition, to my knowledge, Australia does not have a series of nationally representative cross-sectional samples that are linked with mortality data. Given the limited information collected at death registration, this is a major handicap for health and mortality research in Australia.

Causal language figures prominently throughout the book. The priority given to causal analysis in the search for the causes of the US health disadvantage is somewhat misdirected if, as prescribed by its typical definition in the social, medical and experimental sciences, a causal relationship sustains a counterfactual conditional statement. Take the work on social networks and obesity for example. Causal relations are involved, but a description of the social clustering of obesity is of primary import. In life course research, it is often of interest to examine how a health outcome is shaped by conditions at various life stages. It has been well recognized that in a standard regression analysis it is inappropriate to treat the coefficients for early life factors as effects independent of later life factors, if the latter are affected by the former or the latter as effects if not all early factors are included in the model. Although it is certainly worthwhile to consider alternative research designs such as fixed effects models and instrumental variables to make causal inferences, a descriptive analysis of the process under which individuals are sorted into the various statuses in adulthood would be useful for understanding adult health.

The book is accessible to specialists and non-specialists alike. In fact, the book makes it a priority to alert the general public and start a national discussion about the US health disadvantage. The data sources and literatures it has compiled are rich resources. The research and policy agenda it proposes will be influential in the field of health and mortality in the years to come.

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*Insurance and Behavioral Economics: Improving Decisions in the Most Misunderstood Industry.* Howard C. Kunreuther, Mark V. Pauly and Stacey McMorro. Cambridge University Press, 2013, ISBN 978-0-521-60826-8, 329 pages. doi:10.1017/S1474747213000267

Individuals face a multitude of risks for which some form of insurance protection may be desirable. However, because the benefits of insurance can be contingent and distant, consumers may have a hard time deciding whether to purchase insurance, and if so, what insurance to purchase. To make these decisions, consumers would have to form beliefs regarding the distribution of the involved risks, and then evaluate the utility gains that can be achieved if risk-mitigating insurance is purchased. These utility gains would have to be compared with the required premium for the insurance product in order to determine whether purchasing such insurance is a good idea. On top of that, when facing a rich menu of possible insurance products, the consumer has to pick the best product from the menu. In every step in the above chain of the insurance purchase decision process, a typical consumer is apt to succumb to what may be considered as 'mistakes' and/or 'biases' relative to a perfectly rational expected utility maximizing consumer.

On the supply side, insurers need to decide what coverage to offer and how to price their product while at the same time interact with the capital markets and rating agencies as well as conforming capital reserve requirements and minimum insurance standards by government regulatory agencies. These are not easy tasks.

The book by Kunreuther, Pauly and McMorro provides an excellent overview of the behavioral anomalies, both on the demand side and the supply side, that make insurance the most misunderstood industry today. The style of the book is non-technical yet it is academic and

rigorous; and its content is based on careful and thorough readings of the growing literature, to which the authors are important contributors, on behavioral economics and insurance market.

The authors use the classical economic theory for risk averse consumers based on expected utility maximization as the benchmark for the demand side behavior, and use the theory of competitive insurance market as the benchmark for the supply side. Recognizing that both the demand and the supply side benchmarks are likely too idealistic relative to the messier real world that is rife with adverse selection and moral hazard issues, the authors define two conditions that characterize what they consider to be a well-functioning insurance market. The first condition is on the prevailing insurance premium: the premium should reflect the expected loss plus an appropriate loading (between 30% and 40%) to cover administrative expenses and normal profits. The second condition is about market penetration: a large majority (benchmarked to be about 70%) of eligible consumers voluntarily purchase reasonable amounts of coverage at those premiums. Any market that does not conform to one or both of these two conditions is considered anomalous.

Though the book focuses the role of behavioral economics in explaining anomalous behavior in the insurance markets, the authors have to be commended for actually giving the classic expected utility theory as much due as possible to explain any observed departures from well-functioning insurance market. They describe in Chapter 4 many examples, such as automobile collision coverage, renter's insurance and term-life insurance, for which the benchmark theory seems to provide adequate explanation, and then list in Chapter 5 many real world complications, such as search cost, asymmetric information (both adverse selection and moral hazard), incomplete information for risk assessment, correlated risks, agency costs, etc. However, it is sometimes unclear whether the authors consider these complications as part of the 'mistakes' and/or 'biases' either by the consumers or by the insurers. I would have preferred that the authors make it clearer that these complications should be properly incorporated into extensions of the benchmark model. Otherwise, the straw man of the standard model is somewhat too weak.

A potential downside of this comprehensive approach is many of the so-called anomalies could potentially be explained by the benchmark model of expected utility theory and competitive insurance market, properly extended to account for some of the aforementioned market imperfections. Thus, sometimes it is not clear whether a particular observation on the functioning of the insurance market is anomalous. A perfect example is the case of annuities, which is discussed in detail in Chapter 7. Standard economic theory shows the large welfare gains from annuitizing part of their retirement wealth whereby the individual pays a lump sum amount for an insurance policy that promises to make pre-determined annual payments from that point onward for as long as the annuitant lives, thus providing protection against outliving ones' assets. However, a very large proportion of retirees with sizeable assets choose not to annuitize even a portion of their portfolio. This under-annuitization phenomenon poses a significant puzzle, and many of the behavioral aspects such as loss aversion, non-standard probability weighting, status quo bias, availability bias, etc. that the authors detailed in Chapter 6 may well contribute to the puzzle. However, there is also a large amount of literature that attempts to explain the puzzle based on extensions of the standard consumer model by incorporating bequest motives for example. In my view, one of the most important open questions in the whole literature is to disentangle the contributions of various factors, both behavioral and standard, to the under-annuitization puzzle.

On the supply side, the authors also thoroughly analyze many interesting and more clear-cut, at least relative to the demand side, examples of supply-side anomalies, for example, the insurers' tendencies to stop offering coverage or to upwardly revise premiums following a catastrophe or to offer products that apparently do not provide a high value to customers. The authors also consider it anomalous that most insurers do not invest in consumer education. The book also provides interesting discussions about how actions of policymakers and regulators influence the anomalous behavior of consumers and insurers.

The best part of the book, in my view, is the careful discussions regarding principles and prescriptions for insurers, regulators and policymakers that can address some of the behavioral anomalies (Part III), though perhaps these prescriptions could have been more precise. But nevertheless they do provide many meaningful insights. The role that can be played by the public sector in addressing the anomalies is also laid down well. Importantly these principles and prescriptions respect the constraints of democratic governance and free market economic policies. Though the book is written in the context of mainstream US insurance market, the insights can definitely be applied to other geographic and demographic market segments. Importantly, the many insights in the book should be of essential value to consumers, insurers, regulators and policymakers. The book is an excellent read for anybody engaged in the insurance industry.

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