



AMERICAN ACADEMY *of* ACTUARIES

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My name is Steven Lehmann. I am a Principal with Pinnacle Actuarial Resources, Inc., an actuarial consulting firm and a past President of the American Academy of Actuaries¹ and the Casualty Actuarial Society. I am here representing the Casualty Practice Council of the American Academy of Actuaries to address actuarial practice applicable to risk classification and specifically the issue of the use of occupation and education for rating and underwriting purposes. As you may know, the Academy typically does not advocate pro or con positioning to public policy makers, but on issues of risk classification, the profession has principles and standards which may prove helpful in discussing the public policy implications of the use of certain factors.

In the interest of full disclosure, I want to inform the Committee that I have recently been retained by the Property Casualty Insurance Association of America to also do a study on this subject. Unfortunately, we have just begun our work on the study and do not have any results to share with you at this time.

So my presentation today is focused on the actuarial implications of the use of occupation and education.

First of all, what are the applicable regulatory standards that apply to this issue? And what are the actuarial principles and standards of practice that apply?

Let me start with the language found in most state insurance laws regarding the regulation of property/casualty insurance rates.

¹ The American Academy of Actuaries is a 16,000-member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

Most state insurance laws prohibit the use of insurance rates that are excessive, inadequate or unfairly discriminatory. Insurance rating plans, by their nature, group risks with similar characteristics and charge different rates for other risks. What is prohibited is “unfair” discrimination.

The acceptability of the use of occupation and education in rating and underwriting by regulators has been based on the meaning of the words “unfairly discriminatory” in the rating statutes.

Most rating statutes have an absolute prohibition against the use of such factors as race, color, religion, or national origin. Beyond these, the determination of the words “unfairly discriminatory” is generally based on whether the premiums charged for the proposed grouping are commensurate with the expected losses or expenses. For example: under the Illinois statute for workers’ compensation insurance, “unfair discrimination exists if, after allowing for practical limitations, price differentials fail to reflect equitably the differences in expected losses and expenses. A rate is not unfairly discriminatory because different premiums result for policyholders with like exposures but different expenses, or like expenses but different losses exposures, so long as the rate reflects the differences with reasonable accuracy.”

The words “not excessive, inadequate, or unfairly discriminatory” have a defined meaning for actuaries.

Principle 4 of the Casualty Actuarial Society’s Statement of Principles regarding property and casualty insurance ratemaking states that:

A rate is reasonable and not excessive, inadequate or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.²

Thus, to an actuary, a rate that reflects cost or expense differences on the basis of relevant risk characteristics is not unfairly discriminatory. Of course, rates are subject to the laws of the state in which the rate is set.

All costs associated with an individual risk transfer are reflected in the rating structure through the risk classification system. This system assigns risks to groups based upon the expected cost of the insurance

² Statement of Principles Regarding Property and Casualty Ratemaking, Casualty Actuarial Society, May 1988.

coverage provided. The actuary's role in the design or review of a risk classification system is guided by the Actuarial Standard of Practice (ASOP) No. 12, Risk Classification.³

According to the definitions section of ASOP No. 12, a risk characteristic is a measurable or observable factor or characteristic that is used to assign each risk to one of the risk classes in a risk classification system. For example, in automobile insurance, risk characteristics include such things as the driver's prior accident and traffic violation history. Auto insurance rating plans also generally include more general factors such as the age, gender, and marital status of the drivers. For homeowners' insurance, the location and type of construction of the dwelling are examples of two common risk characteristics upon which distinctions in rate have historically been made. In any particular risk classification system, there may be numerous risk factors containing several levels of classification assignment.

ASOP No. 12 further instructs the actuary to select risk characteristics that are related to expected outcomes and states the following:

A relationship between a risk characteristic and an expected outcome, such as cost, is demonstrated if it can be shown that the variation in actual or reasonably anticipated experience correlates to the risk characteristic. In demonstrating a relationship, the actuary may use relevant information from any reliable source, including statistical or other mathematical analysis of the available data. The actuary may also use clinical experience and expert opinion. (emphasis added)

One criticism that is sometimes leveled at certain rating factors is that they are not "causal" in nature; that is, there is not a proven cause and effect relationship between the rating factor and the risk being insured against. Actuarial principles and standards make it clear that causality is not required for risk classification factors. The Committee on Risk Classification (American Academy of Actuaries), in its Risk Classification Statement of Principles,⁴ stated that:

³ Actuarial Standard of Practice No. 12, Risk Classification, Adopted by the Actuarial Standards Board, December 2005.

⁴ Risk Classification Statement of Principles (1980), American Academy of Actuaries, Committee on Risk Classification.

However in insurance it is often impossible to prove statistically any postulated cause and effect relationship. Causality cannot, therefore, be made a requirement for risk classification systems.

Similarly, ASOP No. 12 states:

Causality—While the actuary should select risk characteristics that are related to expected outcomes, it is not necessary for the actuary to establish a cause and effect relationship between the risk characteristic and expected outcome in order to use a specific risk characteristic.

How can these rating laws and actuarial principles and standards be applied to education and occupation?

Occupation and education level are used in rating and underwriting by many insurance companies throughout the country for many lines of insurance. For example, in professional liability insurance, the rates are different for surgeons than for general practitioners, nurses, and anesthesiologists. Similarly, doctors' professional liability rates differ from those of lawyers and accountants. Workers' compensation rates differ based on the type of work performed at various businesses. Of course, for these lines of business, there is a clear causal relationship between occupation type and risk of loss under the insurance coverage.

For auto insurance, many companies also offer discounts or special rates for certain occupation groups, affinity groups, and education levels. While there is not as clear a causal relationship in the case of auto insurance, there is actuarial support demonstrating that these rating criteria represent "fair" discrimination. For example, in 2006, the Maryland Insurance Administration undertook a review of GEICO's use of occupation and education in auto insurance and concluded that GEICO had demonstrated that education and occupation are predictors of auto insurance loss, and that use of them as risk characteristics in auto insurance meets actuarial standards of practice and principles related to risk characteristics.⁵

⁵ <http://www.mdinsurance.state.md.us/sa/documents/GEICO-whitepaper-6-8-06FINAL.pdf> (last visited on February 26, 2009).

Conclusion

Rating statutes require that rates not be excessive, inadequate, or unfairly discriminatory. Insurance laws, actuarial principles, and actuarial standards of practice generally require that insurers using occupation, education, or any other rating factor be able to demonstrate that such factors are predictive in terms of being related to expected outcomes and demonstrating differences in losses or expenses for such classifications. Rates within a risk classification are generally deemed not to be unfairly discriminatory if differences in rates reflect material differences in expected costs for risk characteristics.