Explaining Cross-Line Variation in Insurance Anti-Discrimination Laws

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Introduction

State autonomy and discrimination have a long history in the United States, but during the last fifty years most, if not all, of the de jure discrimination in America has been eliminated. In the case of insurance, however, discrimination is not always prohibited. Sometimes it is even expressly permitted by states. When it comes to insurance regulations that govern what underwriters can take into account, almost all of the decisions are made on the state level. With fifty states (plus the District of Columbia) all regulating insurance companies, a sizable amount of variation occurs. This Article first empirically demonstrates variations—both generally between lines of insurance and specifically as to the regulation of a given characteristic—and then attempts to explain why this cross-line variation occurs.

Why are the automobile and property lines of insurance more heavily regulated than health, life, or disability insurance? Why are insurance companies allowed to use gender in health insurance underwriting decisions but not in automobile insurance? Why is the use of genetic information prohibited in health insurance by almost every state but hardly regulated for other lines of insurance? In regulating insurance, state legislatures tend to prohibit discrimination based on a characteristic (like age) if it is used by insurers, unless there is a compelling reason to allow its use. This Article hypothesizes that in most cases that compelling reason is adverse selection. Indeed, adverse selection provides the single best explanation for most, if not all, of the cross-line variations in insurance regulation.

Part I provides an overview of the various ways to evaluate and justify risk classification. This analytical framework is helpful for later parts of the Article where the framework is applied to explain the results of our empirical study. Part II describes briefly the empirical approach that provides that backbone and evidence for this paper. Part III presents the results of the empirical study with respect to cross-line variation. It contains a summary of every insurance law in the country for nine characteristics across five lines of insurance. This summary includes all fifty states and the District of Columbia, and is the first study of its kind ever undertaken. Part IV evaluates these empirical results, applying the factors from Part I and concluding that most of the cross-line variation shown in Part III are probably best explained by adverse selection concerns. Part V concludes.

Part I: Overview

A. The Analytical Framework: Fairness v. Efficiency

1 The nine characteristics are race, ethnicity, religion, gender, age, genetics, sexual orientation, credit score, and zip code.
2 The five lines of insurance are auto, disability, health, life, and property/casualty insurance.
According to conventional wisdom, laws limiting risk classification in insurance implicate a tradeoff between “efficiency” and “fairness” concerns. The efficiency costs of these laws stem principally from the fact that they attempt to force insurers to charge the same premiums to individuals who pose different predicted risks. This can generate the twin insurance harms of moral hazard and adverse selection.

First, regulatory restrictions on insurers’ risk classifications can produce moral hazard by undermining feature rating and experience rating. Feature rating refers to insurer efforts to link premiums to policyholder characteristics that correlate with risk. Experience rating, by contrast, refers to the linking of premiums with policyholders’ actual loss experiences. Both mechanisms attempt improve the accuracy of the premium calculation and to incentivize policyholder care (notwithstanding insurance coverage) by increasing the likelihood that a failure to take care will result in a future increase in premiums. These tools are undermined when risk classification restrictions limit the capacity of insurers to adjust their premiums.

Second, regulatory restrictions on insurers’ risk classifications can generate adverse selection. Adverse selection can occur when policyholders have private information about their own riskiness that insurers do not observe. If policyholders know they cannot be charged more for insurance coverage even if their riskiness is higher than average, they may be more likely to buy insurance coverage because they will not pay its full price. If this occurs, then insurers may respond by charging low-risk individuals premiums that are too high for their risk. Anticipating this sort of inaccuracy in pricing, low-risk individuals may exit the risk pool and opt not to purchase insurance coverage at all, leaving only higher risk (and more expensive) insureds.

By contrast, defenders of laws limiting insurers’ ability to classify risks typically rely on “fairness” based arguments. Frequently these arguments embrace a vision of insurance as solidarity—spreading risk within communities strengthens the fabric that connects individuals by having them cross-subsidize each other’s risk. While “fairness” is generally associated with opposition to risk classification, and “efficiency” is associated with defenses of the practice, neither side has a monopoly on fairness-or-efficiency-based arguments. Still, it is helpful to

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3 See, e.g., Kenneth S. Abraham, Efficiency and Fairness in Insurance Risk Classification, 71 VA. L. REV. 403 (1985); Michael Hoy & Michael Ruse, Regulating Genetic Information in Insurance Markets, 8 RISK MGMT. & INS. REV. 211 (2005) (“Economists can contribute to the debate [about regulating genetic information in insurance markets] by casting the problem as a classic efficiency-equity trade-off.”).

4 For an overview of insurance law, including a detailed discussion of moral hazard and adverse selection, see Ronen Avraham, The Economics of Insurance Law, (forthcoming Conn. J. Ins. Law 2012)

5 KENNETH ABRAHAM, DISTRIBUTING RISK 71-72 (1986).

6 See discussion infra Part I.B.4

7 To be sure, insurers will classify risks even without the threat of adverse selection, because competition from other carriers will otherwise skim away the good risks. This does not represent a social cost, however, unless it causes at least some policyholders to purchase less insurance than they would like to purchase at actuarially fair rates.

8 Thus, for example, critics of risk-classification restrictions often frame their arguments in terms of actuarial fairness, which suggests that insurers have a moral “responsibility to treat all [their] policyholders fairly by establishing premiums at a level consistent with the risk represented by each policyholder.” See, e.g., Karen A. Clifford & Russel P. Inculano, AIDS and Insurance: The Rationale for AIDS-Related Testing, 100 HARV. L. REV.
summarize the extant literature through the “efficiency vs. fairness” lens. Doing so reveals two dominant organizing principles. First, laws limiting risk classification by insurers are more desirable to the extent that the costs of such laws, in the sense of lost efficiency in combating adverse selection and moral hazard, are low. Second, such laws are more desirable to the extent that the fairness concerns of risk classification are high. The two core literatures developing these themes are in the risk management and economics domain, on the one hand, and the legal domain, on the other. However, because of the historical disconnect between these literatures, their collective insights have not previously been integrated or even gathered together in a single place. Whereas this section has laid out the general efficiency and fairness considerations that bear on the risk-classification question, the next two sections focus in more closely on particular efficiency and fairness concerns while hypothesizing on explanations for the observed cross-line variations in insurance.

B. Efficiency-Based Considerations

1. Adverse Selection

As noted above, adverse selection is one potential efficiency cost of legal restrictions on insurers’ risk-classification practices. Increasingly substantial empirical research demonstrates that this threat is more contingent on the characteristics of particular insurance markets than has traditionally been assumed. Some insurance markets are quite susceptible to adverse selection, while others are resistant to adverse selection even if regulations substantially limit the capacity of insurers to classify risks. For these reasons, a central consideration in determining the desirability of risk-classification restrictions is the extent to which such rules are likely to generate adverse selection “on the ground.” At least six factors are relevant to determining if risk-classification regulation creates a real danger of adverse selection.

First, rules limiting insurers’ ability to classify risks are less likely to generate adverse selection when the percentage of high-risk individuals is small relative to the population of potential

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1806 (1987) (arguing that failing to screen insureds for AIDS would be unfair “because it results in the subsidization of high risk individuals by those at low risk”).

9 See LAW AND ECONOMICS OF INSURANCE (Daniel Schwarcz, ed., 2012).

10 The paper that comes closest to collecting all of these considerations is Seth J. Chandler, Visualizing Adverse Selection: An Economic Approach to the Law of Insurance Underwriting, 8 CONN. INS. L.J. 435 (2002). Much of Chandler’s paper, though, builds off of his own computer model, and it therefore misses some of the points that have been raised in other papers.

11 Indeed, one of the primary writers on the topic refers to such rules as “regulatory adverse selection.” See Hoy, supra note Error! Bookmark not defined., at 245.

12 Siegelman, supra note Error! Bookmark not defined., at 1224 (showing that such death spirals are quite rare and that, in many cases, adverse selection is itself uncommon). In a recent update and extension of this article, Siegelman and Cohen find more mixed evidence of adverse selection in insurance markets, concluding that the phenomenon varies substantially across different lines of insurance and even within particular insurance lines. Alma Cohen & Peter Siegelman, Testing for Adverse Selection in Insurance Markets, 77 J. RISK & INS. 39 (2010).

13 Chandler, supra note 10 (using computer modeling to show the extent to which adverse selection depends on numerous factors in the underlying insurance market).
insureds. In such cases, compelling insurers not to discriminate against high-risk individuals will result in only a small increase in pooled premiums, as the characteristics of all policyholders will, on the aggregate, be quite similar to the characteristics of the low-risk policyholders. As such, low-risk individuals will be unlikely to opt out of the insurance pool altogether, because the value they derive from complete coverage is likely to be larger than this minimally increased cost.

Second, adverse selection is less likely to result from restrictions on the use of a characteristic that only minimally impacts policyholders’ expected costs. The explanation for this effect is the same as above: the impact of such laws on the premiums charged to “low-risks” will be limited. Consequently, relatively few low-risks will drop coverage and the impact of those that do will have minimal feedback effects.

Third, adverse selection is unlikely to result from legal restrictions imposed on insurers’ risk-classification practices when policyholder demand for insurance is relatively inelastic. In such cases, policyholders will tend not to drop out of the insurance market notwithstanding increases in the price of coverage. Inelastic demand is a general phenomenon that can be attributable to a variety of factors. For instance, when the purchase of minimal insurance policies is legally mandated low-risk individuals are legally compelled to remain in an insurance pool and cross-subsidize high-risk individuals. Similarly, inelastic demand is more likely in settings where minimal levels of insurance are practically required, as in the case of homeowners insurance, which mortgagees generally require as a condition of a loan. Alternatively, demand may be more inelastic where the cost of insurance can be largely passed on to others. Thus, doctor demand for medical malpractice insurance may be inelastic if premium costs are principally borne by patients and their health insurers. And, of course, inelastic demand may simply reflect the fact that individuals are very risk averse.

Fourth, risk-classification restrictions are less likely to generate adverse selection when high-risk policyholders cannot over-insure. In some settings, most notably life insurance, insurance

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14 See Hoy, supra note Error! Bookmark not defined., at 249-69; see also Chandler, supra note 10, at 498 (making similar point by noting that homogeneity of risks in the underlying pool decreases the prospect of adverse selection, whereas heterogeneity increases this risk).
15 Does Hoy make this point? If not, is this point in the literature at all? [Find cites]
16 When the use of the characteristic has only minimal effects, of course, the insurers are less likely to use the characteristic in the first place, which means that the benefits of risk-classification restrictions are likely to be low.
17 Significantly, this strategy represents the core explanation for the “individual mandate” in the Affordable Care Act, which compels most individuals to purchase “minimum essential coverage.” Patient Protection and Affordable Care Act, § 1501(a), 42 U.S.C.A. § 18091 (West 2010); Id. 26 U.S.C.A. § 5000A.
19 See Baker, supra note Error! Bookmark not defined., at 381; Mark Geistfeld, Legal Ambiguity, Liability Insurance, and Tort Reform, 60 DEPAUL L. REV. 539 (2011).
21 Hoy & Ruse, supra note 3; Chapter 6. [Find cites]
coverage is non-exclusive, meaning that individuals can own multiple policies.\textsuperscript{22} For this reason, policyholders can effectively multiply the impact of their high-risk status on the pool, resulting in low-risk individuals being forced to shoulder a larger burden as a result of risk-classification restrictions.

Fifth, the risk of adverse selection is exacerbated by the existence of a secondary market for insurance policies. In life insurance and annuity markets, policyholders can, and frequently do, sell their policies to investors.\textsuperscript{23} These secondary markets increase the risk of adverse selection by allowing high-risk individuals not merely to purchase a policy with an \textit{expected} net benefit—the fourth advantage mentioned above—they allow such individuals to purchase a policy with an immediate \textit{guaranteed} profit.\textsuperscript{24}

Sixth, adverse selection is unlikely to result from risk-classification regulation when insurers can counteract this risk through product design features rather than underwriting. One setting where this is possible is when policyholders typically learn whether they are high-risk at some point after they have the opportunity to purchase coverage, as may occur with health status or unobservable genetic predispositions (as opposed to race or gender). In these cases, policyholders who discover they are low risk can drop coverage, leaving behind a disproportionately high-risk pool. Insurers can counteract this threat through effective policy design, such as by requiring policyholders to pre-pay for future coverage, so that they forfeit these payments if they leave the insurance pool once they discover they are low risk. This is the strategy that level-premium life and disability insurance policies take, as they effectively require pre-payment of premiums in the early stages of life before many policyholders learn their risk status based on health developments.\textsuperscript{25}

2. Moral Hazard

Legal restrictions on insurers’ ability to classify risks can result in moral hazard, causing policyholders to take less then socially-optimal levels of care. For instance, some commentators have argued that rules prohibiting insurers from classifying policyholders on the basis of their health status may encourage individuals to eat less healthy foods or exercise less.\textsuperscript{26} Others have

\textsuperscript{22} In most insurance contexts, policies contain coordination of benefits or “other insurance” provisions, which prevent a policyholder from recovering under multiple policies in a way that would improve the policyholder’s financial condition as a result of the loss.
\textsuperscript{23} \textit{See generally} [Find cites]
\textsuperscript{24} This concept has largely been ignored in the literature, but is discussed in more detail in Avraham et al, \textit{supra} note \__, at \__.
\textsuperscript{25} Baker [Find cites]
\textsuperscript{26} \textsc{Richard Epstein, Mortal Peril} 125-126 (1997) (“Cross-subsidies necessarily allow everyone to pass off some part of the costs of their own risky behavior onto other persons.”); Jonathan Klick & Thomas Stratmann, \textit{Diabetes Treatments and Moral Hazard}, 50 J.L. & Econ. 519 (2007) (finding that mandates for medical treatment for diabetes generate a moral hazard problem with diabetics exhibiting higher BMIs after the adoption of these mandates).
claimed that rules prohibiting underwriting on the basis of geographic area can result in the over-development of homes in risk-prone regions, such as along the coast of a hurricane-prone state. In order for moral hazard to result from legal restrictions on risk classification, two conditions must be met. First, the regulated characteristic must be at least partially within policyholders’ control. A good example is a legal prohibition on insurers using health-related information of individuals in underwriting, as individuals clearly have some control over their likelihood of getting sick. By contrast, rules prohibiting classification on the basis of age or gender cannot produce moral hazard for the simple reason that individuals cannot change their age or gender in response to such rules. Second, there must be some “but for” causal link between the regulated characteristic and risk. Prohibitions on medical underwriting again provide a suitable example: an individual is more likely to incur substantial health expenses if he or she has a history of health-related expenses, and less likely to incur future expenses if she has no preexisting conditions or medical risks. By contrast, while individuals have some degree of control over their credit score (thus satisfying the first condition), it is unclear whether credit score enjoys a “but for” causal connection to risk of loss. Thus, while prohibitions on insurers’ use of credit scores in underwriting might conceivably cause people to safeguard their credit scores less effectively, it is not clear that this would actually lead to greater losses.

3. Socially Wasteful Expenditures

Another relevant consideration in analyzing the efficiency implications of risk-classification regulation is the extent to which insurers’ classification efforts are socially wasteful. One of the primary ways that insurers compete in unregulated insurance markets is by attempting to classify risks more accurately in order to skim good risks from other companies and dump bad risks on competitors. These efforts may be socially beneficial to the extent that they increase the number of low-risk individuals who choose to purchase full insurance. At the same time, though, these efforts produce no social benefit to the extent that they merely shift the composition of policyholders among different carriers, at least in those cases where moral hazard is not a

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28 Has anyone ever made this point before? I can’t recall seeing it. [Find cites]
29 Despite the theoretical possibility that risk-classification restrictions may produce moral hazard when they are within individuals’ control and causally connected to risk, the actual danger of moral hazard in these settings may be limited. Such restrictions will only generate moral hazard to the extent that individuals appreciate the potential links between their behavior and future premiums in both the regulation and non-regulation states of the world. Tom Baker, On the Genealogy of Moral Hazard, 75 TEX. L. REV. 237 (1996). Thus, individuals are unlikely to change their eating habits in response to legal restrictions on health insurers’ underwriting practices if they are unaware of the potential link, or lack thereof, between those habits and future premiums. On the difficulties of empirically estimating moral hazard and adverse selection see Ronen Avraham, The Economics of Insurance Law—A Primer, 18 CONN. INS. L.J. (forthcoming 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1822330.
30 Whether they are in fact socially beneficial requires weighing the social benefit of increased coverage for low-risk individuals against the cost of less insurance coverage for high-risk individuals.
possible outgrowth of risk classification. In these settings, risk-classification regulations can be justified as a means for preventing socially wasteful investments in risk classification.  

4. Private Acquisition of Information

Another relevant consideration in evaluating the efficiency of laws restricting risk classification by insurers is the extent to which insurers’ classification efforts impact individuals’ ex ante incentives to learn of their own risk characteristics. Individuals may be deterred from learning about their own risk profiles when insurers can use that information in underwriting. This is a particular problem when the relevant information is expensive for carriers to uncover on a case-by-case basis. Such insurers will only be able to classify individuals through underwriting applications that ask applicants to represent their subjective knowledge of their risk levels, backed by the threat of rescission in the event a misrepresentation is subsequently discovered. In order to avoid this risk, individuals may simply refrain from learning about their risk status. This argument has gained particular salience in the context of genetic risk classification, with many commentators arguing that individuals are deterred from acquiring valuable information about their genetic makeup because of the potential insurance consequences of doing so. The social costs associated with individuals not learning their own risk characteristics include denial of access to preventive medical care and decreased financial and family planning for a shorter expected life span.  

5. Positive Externalities of Risky Behavior

In some cases, individuals become high risk as a result of behavior that is socially productive in the aggregate. For instance, individuals who decide to have children obviously generate substantial social benefits that may not be fully captured by the personal benefits of raising children. But they also expose themselves to large new risks. One can argue that insurers should be prohibited from charging individuals more for their socially beneficial choices because this will drive the underlying activity below socially optimal levels. On the other hand, it is not clear that the most efficient way to subsidize high risk socially productive behavior is via the insurance markets, and not, say, via the tax and transfer systems.  

6. Efficient Redistribution

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31 Of course, risk-classification regulation may not be the optimal way to respond to this problem. For instance, one recent article argues that it is preferable for governments to adopt partial social insurance that induces firms to invest in classification only to the extent that doing so is socially efficient. Casey Rothschild, *The Efficiency of Categorical Discrimination in Insurance Markets*, 78 CONN. INS. L.J. 267 (2011). Of course, social insurance schemes raise their own set of efficiency problems and are often, as a practical matter, not politically feasible.


33 Ronen Avraham, *supra* note 32, at 22.


Efficiency-oriented legal scholarship typically assumes that income redistribution should be ignored in analyzing legal rules, because such redistribution is most efficiently accomplished through the tax-and-transfer system.36 However, laws restricting insurers’ use of certain characteristics may provide a type of redistribution from the better off to the less well off.37 This is because such laws produce a transfer that naturally approximates the difference in well-being associated with the characteristic. That is, assuming the characteristic in fact correlates with differences in expected losses, forbidding the use of that characteristic results in a transfer to each insured who has the trait in amount equal to the average expected losses associated with the trait. And this transfer is funded by slightly higher premiums charged to the insureds in the pool who do not have the trait. Moreover, assuming the risk-classification restrictions target only traits that are beyond the insured’s control (such as race or gender or genes), they have an advantage over a redistributive income tax regime, which has the notorious effect of distorting individuals’ work/leisure decisions.38

7. Collective Action Problems

Rules limiting insurers’ ability to classify risks may theoretically encourage insurers to develop more efficient risk-classification schemes.39 This argument is largely premised on the notion that certain risk-classification schemes have public good attributes.40 In effect, regulation represents one theoretical solution to the inadequate incentives of insurers to modernize their risk-classification schemes.41 By prohibiting antiquated risk-classification schemes, insurers may be prodded to develop alternative, and more accurate, approaches to risk classification.

8. Insurer Usage of Underlying Characteristic

Laws forbidding the use of a characteristic in underwriting may be hard to justify if insurers are not actually discriminating among policyholders on the basis of that characteristic.42 To some extent, though, this depends on why insurers are not using the relevant characteristic.

First, if insurers do not use a rating characteristic because it has no apparent predictive value, then the case for restricting the use of this characteristic is extremely weak. At the same time,

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37 See Logue & Avraham, supra note 35.
38 The disadvantage of risk-classification restrictions as a form of redistribution is that, if the insurance pools are relatively small, it might be considered unfair that the additional costs associated with the particular trait are being subsidized by only a small portion of the population; whereas, a tax-and-transfer approach would spread these costs over the entire tax base. Logue & Avraham, supra note 35.
39 See Abraham, supra note 3, at 423.
40 Unlike most public goods, risk-classification schemes are produced and consumed by the same parties.
41 To be sure, there are other, potentially preferable, ways to overcome any public good problems of risk classification. For instance, government can directly develop the relevant risk-classification information. Similarly, it can sanction and promote collective action among insurers to accomplish this.
42 Evidence suggests that states often do pass coverage mandates that have no practical effect because all known insurance plans are consistent with those mandates. See Amy Monahan, Fairness Versus Welfare in Health Insurance Content Regulation, 2012 U. Ill. L. Rev. 139 (2012).
such a law could produce potentially meaningful social costs; the public cost of legislating and the private cost of policing compliance.\(^{43}\) Second, the case for regulation may be slightly stronger when the reason that carriers do not use a policyholder characteristic is because the cost of determining and verifying the characteristic outweighs the benefits of a more refined classification scheme.\(^{44}\) Legal prohibitions on risk classification can therefore be justified as a mechanism for preventing potentially problematic insurer behavior in the future.

Finally, the case for regulation is relatively strong in cases where insurers refrain from using problematic policyholder characteristics because they fear that doing so could produce reputational or regulatory consequences.\(^{45}\) In these cases, laws explicitly limiting insurers’ ability to employ the suspect characteristics will often be sensible. Of course, a coherent argument can also be made that regulation in these settings in neither necessary or wise: when norms and reputation are sufficient to constrain private behavior, it may be best for law to avoid intervention because of the risk that it may “crowd out” those norms.\(^{46}\)

C. Fairness-Related Considerations\(^{47}\)

I. Control and Social Solidarity

Perhaps the most frequently invoked argument in favor of risk-classification regulation is that it is unfair to allow insurers to charge different rates based on characteristics that are beyond individuals’ control.\(^{48}\) When insurers classify policyholders based on individual characteristics, they undermine a feature of insurance that shares risks across society by “fragmenting communities into ever-smaller, more homogenous groups.”\(^{49}\)

Although social solidarity defaults to prohibiting all forms of risk classification, many proponents of this view still permit classification when policyholders have control over the relevant characteristic. The idea being it is that it is fair to charge higher premiums to people who choose to lead their life in a risky way. However, defining what “control” means in this context is not always easy—or objective. In many cases, though, it is hard to assess whether policyholders control their risk status. For instance, while individuals clearly exert some level of

\(^{43}\) Compliance costs may exist even if insurers are not using the underlying risk characteristic, because the carrier must expend funds confirming that this is not the case.


\(^{45}\) See Finkelstein & Porterba, supra note 44.


\(^{47}\) This Section draws heavily from Ken Abraham’s path-breaking article, Efficiency and Fairness in Risk Classification. See Abraham, supra note 3.

\(^{48}\) See, e.g., Larry Gostin, Genetic Discrimination: The Use of Genetically Based Diagnostic and Prognostic Tests by Employers and Insurers, 17 AM J.L. & MED. 109, 112-13 (1991) (“Discrimination based on actual or perceived genetic characteristics denies an individual equal opportunity because of a status over which she has no control.”).

\(^{49}\) Stone, supra note Error! Bookmark not defined., at 290.
control over their health status, this control is limited: fit people still get sick, and many obese individuals live until old age. Of course, it is possible to hold people responsible only for health features that involve choice, such as smoking, eating, and working out. But even in these domains, it is incredibly difficult to determine what choice means. Much behavior that seems voluntary may actually be the result of habit adopted in young age or addiction and, in any event, is highly correlated with numerous social factors, such as growing up in poverty or in a particular cultural setting.\(^{50}\)

2. Socially Suspect Characteristics: Reflecting or Perpetuating Social Inequalities

A second fairness-based explanation for regulatory classification restrictions is that insurers should be prohibited from using characteristics that are socially suspect. Unlike social solidarity arguments, which promote an affirmative argument that insurance should spread risks for which individuals should not be held responsible, this argument focuses on preventing insurance schemes from exacerbating or trading on inequalities that exist outside of the insurance system. Policyholder characteristics are generally deemed socially suspect for two related reasons. First, insurers’ use of certain risk characteristics may reinforce or perpetuate broader social inequalities.\(^{51}\) For instance, insurers who charged more to low-income drivers would thereby perpetuate income inequalities. Second, risk-classification schemes may be socially suspect because they reflect, or arise out of, preexisting social inequalities and thus cause some sort of expressive harm, even though they do not penalize with higher rates members of groups who are traditionally disadvantaged. For instance, we might object to an insurer who announced that it was willing to sell annuities at better rates to African-Americans because they tend to have a shorter life span.

3. Differential Inaccuracy

A third fairness-based objection to risk classification arises out of the fact that all classification regimes are imperfect. Efficient insurance regimes will only invest in improving classification to the extent that the resulting benefits are larger than this cost. Inaccuracy in classification can raise fairness concerns when the burden of inaccuracy is differentially allocated among policyholders, so that some groups bear a larger share of the cost of such inaccuracy than other groups.\(^{52}\) For instance, differential inaccuracy was a central concern in the substantial literature on the use of HIV/AIDS status in insurance underwriting. During the AIDS panic in the late 1980s, various life and health insurers began to exclude AIDS-based coverage in their policies.\(^{53}\)

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\(^{51}\) Although often framed in terms of fairness, this argument can also be understood in economic terms as an externality argument: insurers impose harms on society at large by relying on certain suspect classifications.

\(^{52}\) See *Abraham*, supra note 5; *Abraham*, supra note 3, at 431-34.

\(^{53}\) Karen A. Clifford & Russel P. Inculano, *Aids and Insurance: The Rationale for Aids-Related Testing*, 100 HARV. L. REV. 1806 (1987). Even after the AIDS panic had subsided, some suspected that insurers were continuing to discriminate against homosexuals as an at-risk group, by secretly targeting men in stereotypically gay occupations.
Various commentators excorticated this practice, arguing that the HIV antibody test was too unreliable to support such testing because it created an unacceptably heterogeneous population of AIDS sufferers and false positives, forcing the latter to bear the financial burden of the former.54

4. Correlation and Causation

Insurance classification schemes are based on correlations between observed policyholder characteristics and ultimate losses.55 Of course, a correlation between two data points does not necessarily imply a causal relationship. According to the American Academy of Actuaries, insurer classification may “be more acceptable to the public if there is a demonstrable cause and effect relationship between the risk characteristics and expected costs.”56

To the extent that causal links between policyholder characteristics and risk can be meaningfully identified, they tend to play one of two roles in fairness-based critiques of risk-classification schemes and their regulation. First, any classification system where the link between characteristic and risk is perceived to be non-casual can be challenged on the grounds of differential inaccuracy, which is described above.

A second, logically distinct, objection to the use of characteristics that are not perceived to be causally connected to risk is that they have the effect of masking classification practices that are objectionable for reasons noted above, such as lack of policyholder control or because they trade on socially suspect characteristics. For instance, the primary objection to insurers’ use of credit scores to rate individuals is that this simply proxies for other, more objectionable, policyholder characteristics, such as race and income.

Part II: The Empirical Approach: Coding Anti-Discrimination Law in All 50 States57

Although there has been considerable theorizing about the extent to which insurance companies should be permitted to discriminate among insureds in the underwriting process, there has been almost no research on the question of what the law actually allows. It is a surprisingly complex and difficult question. Because the governing law in this area is primarily state law, we first had to identify and analyze the relevant state statutes and regulations in all 50 states as well as the District of Columbia. In the interest of making the project manageable, we focused specifically on how states have regulated insurers’ use of the nine characteristics—race, religion, ethnicity, Katy Chi-Wen Li, The Private Insurance Industry’s Tactics Against Suspected Homosexuals: Redlining Based on Occupation, Residence, and Marital Status, 22 AM.J.L. & MED. 477 (1996).


56 See American Academy of Actuaries. [Find cites]

57 This Article includes only a brief discussion of the empirical approach. For more details on how data was selected and coded, see Avraham et al, supra note __, at ___[Anatomy Paper].
gender, age, genetic testing, credit score, sexual orientation, and zip code—and we focused on the five largest lines of insurance—life, health, disability, auto, and property/casualty.

Based on these state statutes, we assigned a code or score for each line/trait combination for each state. We ended up with six possible codes that we arranged along a continuum, from those that are least restrictive of insurers’ underwriting decisions to those that are most restrictive. At one end of the continuum are statutes that expressly permit the use of a particular trait, and at the other end are the outright prohibitions of particular traits. The entire continuum is reproduced below:\textsuperscript{58}:

\textbf{Expressly Permit (-1)} — The state has a statute expressly or impliedly permitting insurers to take the characteristic into account.

\textbf{No Law on Point (0)} — The state laws are silent with respect to the particular characteristic.

\textbf{General Restriction (1)} — The state has a statute that generally prohibits “unfair discrimination,” either across all lines of insurance or in some lines of insurance, but that statute does not provide any explanation as to what constitutes unfair discrimination and does not single out any particular trait for limitation.

\textbf{Characteristic-Specific Weak Limitation (2)} — The state has a statute that limits the use of a particular characteristic in either issuance, renewal, or cancellation.

\textbf{Characteristic-Specific Strong Limitation (3)} — The state has a statute that prohibits the use of a particular characteristic when the policy is either issued, renewed, or cancelled, or the state has a statute that limits but does not completely prohibit the use of a particular characteristic in rate-setting.

\textbf{Characteristic-Specific Prohibition (4)} — The state has a statute the expressly prohibits insurers from taking into account a specific characteristic in setting rates.

After arriving at an initial code based upon the state statutes for every line of insurance, for every characteristic, in every state, we went back and examined judicial decisions and administrative rulings within each jurisdiction to determine if the initial code was changed by a decision. Surprisingly, out of the 2295 trait/line combinations (9 traits times 5 lines of insurance times 51 jurisdictions), only 16 total trait/line combinations were changed. In sum, judicial and administrative interpretation of the state statutes had very little effect on the final coding results.

\textsuperscript{58} We acknowledge that this continuum from permissive to stringent restrictions is neither perfectly continuous nor perfectly scaled, but it is the best that can be done given the nature of the data. It allows us to “see” the data in a way that makes it more accessible.
Part III: Analyzing the Data

There are a number of different ways to analyze the results, including by insurance line, by characteristic, or by state. In this Part we look at variations along just one of these three dimensions, focusing on cross-line variation. This type of variation is where a state regulates the same characteristic differently across different lines of insurance. For instance, some states (including California, Georgia, and Pennsylvania) permit the use of age in life insurance but prohibited the use of age in auto insurance.

Section (a) first looks generally at cross-line variations. Section (b) then focuses attention on classification by gender, age, genetics and credit score, four characteristics that raise particularly difficult issues.

a. General Observations

(1) Cross-Line Variation in the Intensity of Risk-Classification Regulation

We first examine the intensity or restrictiveness of the state regulation of risk-classification practices in each line of insurance in the United States. As our measure of restrictiveness or intensity of the state regulations, we simply calculate the mean score of the risk-classification laws applicable to a particular line of insurance using the codes described above. As illustrated in Chart 1 below, if we focus on the mean score across lines of insurance, the restrictiveness score varies between just more than a “General Restriction” (or numerical score of 1) for disability insurance to just more than a Characteristic-Specific “Weak Limitation” (or numerical score of 2) for auto and property/casualty. Thus, according to this measure the state laws regulating risk-classification practices in the auto and property/casualty insurance lines are the most restrictive; they permit on average the least amount of discrimination or risk-classification by insurers. By contrast, the least restrictive state regulations apply to disability and life insurance, which means that they permit the highest amount of discrimination or risk-classification based on the characteristics in our study.\(^{59}\)

\(^{59}\) One possible explanation for the restrictiveness of each line of insurance is that states with general restriction statutes for a specific line of insurance may not have felt a need to pass stricter laws. However, as seen in Avraham et al, supra note ___, at ____[Anatomy Paper], this was not a relevant factor in explaining cross-line variations.
(2) Cross-Line Regulation

The next step in our big-picture look at the data is to uncover what hides beneath the green bars in Chart 1, which averages all nine characteristics in all states. Chart 2, below, reports the restrictiveness of state risk-classification regulations by characteristic as well as by coverage line. Again, it is the same information as in Chart 1, but with the green bar “removed” to expose the more detailed information underneath. Chart 2 is initially imposing because it contains forty-five different bars (nine characteristics for each of the five insurance lines), but a careful review of the data provides some very enlightening starting points for analysis.
Chart 2 confirms that race, ethnicity, and religion (the top 3 bars—black, red, and blue—in every line of insurance) are the most intensely restricted characteristics in every line of insurance. We call them “the big three” because with respect to every line of insurance, these three are almost always the most restricted characteristics, with sometimes a full one-point difference between them and the next most restricted characteristic, namely gender.  

With respect to genetics (the green bar), 48 of the 51 jurisdictions completely prohibit the use of genetics for health insurance, giving it the highest overall restrictiveness score of any characteristic for any line of insurance, even though in the other four lines the mean score for genetics is low.  

This near consensus among states regarding the use of genetic information in

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60 The only exceptions are restrictions on genetic traits in health insurance underwriting and restrictions on gender in disability insurance. The “big three” phenomenon can also be seen when looking at the number of jurisdictions that completely prohibit the use of a characteristic across all five lines of insurance. Race (8 states), ethnicity (7 states), and religion (6 states), along with sexual orientation (4 states), are the only characteristics that were banned in all five lines of insurance by a state. For more on this, see Avraham et al, supra note ___, at ____ [Anatomy Paper].

61 New York is the only state which allows (with heavy restrictions) to make use of genetic testing in health insurance. See N.Y. INS. LAW § 2615.
health insurance is reflected in the 2008 passage of the federal Genetic Information Non-Discrimination Act, which forbids the use of genetic information in health insurance.  

Chart 2 also shows that gender (the brown bar) is highly restricted in auto, disability, and property/casualty insurance, but only weakly restricted in health and life. Indeed, insurance companies have routinely based their premiums on gender in health and life insurance. Somewhat similarly, Chart 2 shows that credit score (the yellow bar) is intensely restricted in automobile and property/casualty insurance (in both lines it scores above “weak limitation”, or 1) compared to its regulation in disability, health and life insurance, where it scores below it. Recent reports suggest that insurers in health and life are starting to use credit information to price coverage, though this practice is not as pervasive as it is in the property/casualty context.

Age (the dark gray bar) is the only characteristic that tends towards the “permitted” score for a given insurance line, especially in the health and life insurance lines. Again, this fits well what we know about the practice in the insurance industry, since age is regularly used by insurers in health and life insurance. We will discuss gender, credit score, and age in more detail below. Lastly, Chart 2 reveals that on average sexual orientation (pink) and zip code (light blue) are treated very similarly in all lines of insurance. They almost always fall around the score of “general restriction.”

(3) Summary

In summary, there are wide variations in the regulation of risk classification across insurance lines. This initial analysis reveals the most restrictive lines of insurance (property/casualty and auto), the most restricted characteristics (the big three of race, ethnicity, and religion), and the most restrictive combination (genetics in health insurance). The next Part turns to a more detailed analysis of age, gender, and credit score.

b. Specific Analysis

This section demonstrates the wide range of variation between states regarding specific characteristics. Part b.1. focuses on genetics, Part b.2. focuses on gender, Part b.3 on age, and Part b.4 on credit score.

1. Cross-Line Treatment of Genetics

As seen in Chart 2, genetics is one of the most interesting characteristics because of the huge variation in its treatment. Charts 3a, 3b, and 3c on the next page demonstrates visually how most states permit the use of genetic information in disability insurance, forbid it in health insurance, and do both in life insurance.

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63 As noted later, federal health care reform will prohibit this practice in health insurance starting in 2014.
Chart 3a – 3c
Genetic information’s use in health insurance underwriting is the most restrictive trait in our study. The biggest surprise is how little regulation occurs in other insurance lines. Many states go so far as to permit the use of genetic information in other lines of insurance. This can be seen in life insurance, and to a greater degree in disability insurance. New York is the only state to permit the use of genetic testing in health insurance, making it an outlier. If nothing else, New York is consistent, also permitting its use in life and disability insurance. However in auto and property/casualty insurance (not depicted in the charts) New York restricts the use of genetics.

2. Cross-Line Treatment of Gender

States vary dramatically in the extent to which they allow insurers to take into account gender in classifying policyholders. This is most vividly demonstrated in the domain of health insurance. As Chart 4 reveals, 19 jurisdictions expressly permit the use of gender in health insurance, and 26 jurisdictions strongly limit or expressly prohibit its use. Gender is such a prominent issue for health insurance that every jurisdiction has addressed it in one way or another—either with a general or a specific statute; in other words, there are no entries in the “no-law-on-point” column of Chart 4.

The wide variation in states’ treatment of gender in health insurance suggests the contentiousness of this issue. Starting in 2014, The Affordable Care Act will prohibit insurers from charging
higher rates due to gender in the individual and small group insurance markets.\textsuperscript{64} Irrespective of whether this approach is “correct”—an issue that depends largely on one’s view of the role of health insurance in society\textsuperscript{65}—Chart 4 suggests that it can be defended on the basis that it establishes a national policy on the issue. Even though states generally have autonomy to make their own decisions about various issues, the federal government has long played a central role in regulating discrimination on the basis of gender.\textsuperscript{66}

As in health insurance, the treatment of gender in life insurance is fractured. Chart 5 shows that 21 jurisdictions permit its use compared with 20 jurisdictions strongly limiting it and one state, North Carolina, prohibiting it. The remaining 9 jurisdictions restrict its use.\textsuperscript{67} Once again, every jurisdiction has some opinion on how gender should be treated, as there are not any “no-law-on-point” entries. As in health insurance, these differences raise questions not just about the “correct” approach, but also about whether this type of variation among states should be allowed.

\textbf{Treatment of gender in Life Insurance}

\begin{center}
\begin{tabular}{c c c}
CA & MI & WA \\
WI & IL & PA \\
ME & FL & TX \\
KS & UT & NV \\
OH & ND & NM \\
OK & KY & OR \\
IN & MI & CO \\
NH & NY & VT \\
NC & AR & MN \\
SC & IA & SD \\
LA & WI & SD \\
CT & ME & WY \\
KS & GA & MA \\
ID & AZ & HI \\
AL & WY & ND \\
AK & MS & NC \\
\hline
\end{tabular}
\end{center}

\textbf{Chart 5}

While many states permit the use of gender in life and health insurance, the use of gender is more restricted in the other three lines of insurance. For the property/casualty line, only Maryland expressly permits the use of gender and Kansas has no law on point. The rest of the states are on the restrictive side of the chart, with twenty-six strongly limiting its use. Auto

\textsuperscript{64} Key Features of the Affordable Care Act, By Year, HEALTHCARE.GOV http://www.healthcare.gov/law/timeline/full.html#2014 (last visited Aug. 17, 2012).
\textsuperscript{65} See Stone, supra note Error! Bookmark not defined.
\textsuperscript{66} Cite Title VII or IX
insurance has similar treatment, with only four states (California, Delaware, Louisiana, and Maryland) permitting gender’s use and twenty-three strongly limiting it. Disability insurance is also restrictive with only Washington expressly permitting the use of gender and twenty-eight strongly limiting it.

The cross-line variation in the treatment of gender substantially matches the more general cross-line variation described in Chart 1. Both overall and with gender specifically, auto and property/casualty insurance received the most restrictive scores. Similarly, life insurance received the lowest score overall and with gender as well. The only lines for which gender differed from the average of all nine characteristics were health and disability. As seen in Chart 1, health insurance on average is treated more restrictively than disability insurance, but with gender the opposite is true—states are more restrictive with disability insurance and less restrictive with health insurance.

3. Cross-Line Treatment of Age

While more permissive overall than gender-based classification, states’ regulation of age-based classification also varies substantially across insurance lines. In fact, Chart 2 showed that age is the only characteristic that, on average, leans towards being expressly permitted on average for any line of coverage. This is true for both health insurance and life insurance. State laws are strongly permissive with respect to insurer use of age in life insurance, with 39 jurisdictions permitting its use and none specifically limiting or prohibiting it. Twelve states only have a general restriction applying to age discrimination in their health insurance laws. Charts 6 and 7 show state treatment of age in life and health insurance, respectively.

![Chart 6](image1)

![Chart 7](image2)
In health insurance, 37 jurisdictions—more than two-thirds—permit the use of age by insurance companies, while only 10 strongly limit its use. Age is strongly correlated with health care costs. It is therefore notable that ten jurisdictions\(^{68}\) strongly limit the use of age in health insurance underwriting decisions. Although most states permit the use of age in health insurance, starting in 2014 healthcare reform will limit differentials in premiums based on age to no more than a ratio of 3 to 1.\(^{69}\)

While many states permit the use of age in life and health insurance, in auto and prop/casualty lines of insurance the use of age is more restricted. For the property/casualty line, no state permits the use of age and six others have no law-on-point. The rest of the states are on the restrictive side of the chart, with twenty-seven having only general unfair discrimination rules applying to age.

Auto insurance has similar treatment: only Delaware, Louisiana, and Michigan permit the use of age, five others have no-law-on-point, and the rest are roughly equally distributed between the four restrictive categories. Even in jurisdictions that expressly prohibit the use of age, younger drivers may pay higher automobile insurance premiums if insurers are allowed to rate based on the number of years of driving experience.\(^{70}\) And states that have a specific restriction may permit the use of age under certain circumstances, like if there is a proven correlation between accident rate and the characteristic.\(^{71}\)

Only three states prohibit the use of age in disability insurance (Michigan, Pennsylvania, and Texas), and most jurisdictions do not mention age in their disability insurance laws, or only provide a general restriction. Overall, disability insurance is another non-restrictive line of insurance with the unique fact that most states (twenty six) do not mention anything at all.

4. Treatment of Credit Score.

Although insurer classification on the basis of credit score is of relatively recent vintage, it has become common over the last few decades in certain lines of coverage. It is therefore not surprising that insurers’ use of credit score is addressed by almost every state in all five lines of insurance in our study, even if only by a general restriction. For property/casualty, life, and health insurance, all fifty-one jurisdictions mention credit score in their laws. In auto insurance, the only jurisdiction that does not mention credit score is the District of Columbia. Disability insurance is the only outlier, with twenty states not mentioning the treatment of credit score.

\(^{68}\) See, e.g., California, Idaho, Illinois, Florida, Maine, Massachusetts, Michigan, Minnesota, Pennsylvania, and Vermont.

\(^{69}\) Patient Protection and Affordable Care Act, § 2701(a)(1)(A)(iii).

\(^{70}\) See, e.g., 10 COLO. CODE REGS. § 2632.4(a) (forbidding discrimination on the basis of age and many other characteristics); CAL. INS. CODE § 1861.02(a)(3) (allowing use of the number of years of driving experience).

\(^{71}\) See, e.g., N.Y. INS. LAW § 2331 (forbidding the state approval of auto insurance plans that consider age, gender, or marital status, “unless such filing is supported by and reflective of actuarially sound statistical data”).
The treatment of credit score in health and life insurance is very similar. As Charts 8a and 8b show, in both lines two states (Nevada and Indiana) strongly limit its use, few states permit, whereas in the vast majority of states limitation on usage of credit score falls under the general unfair discrimination laws.

In a similar fashion, the treatment of credit score in auto and prop/casualty lines of insurance is comparable. As Charts 9a and 9b show, in both lines no state refrains from mentioning it in its laws (besides District of Columbia in auto), and most states (at least twenty seven) strongly limit its usage. (Disability insurance is again an outlier in that only 17 states limit its usage, where the other 34 jurisdictions permit it or have no-law-on-point.)
Interestingly eleven states (Arizona, Georgia, Michigan, New Jersey, South Carolina, South Dakota, Indiana, Nevada, Pennsylvania, Vermont and Wisconsin) apply the same treatment regarding the usage of credit score in all five lines of insurance. Whereas the first six permit its usage in all five lines, the latter five restrict it. No other characteristic is treated the same by eleven states, and importantly, no other characteristic is permitted in all five lines by any state.

5. Summary

A table may be the best way to summarize what we have just discussed. The Table attempts to capture the general tendency towards regulating a specific characteristic in a specific line of insurance:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Auto</th>
<th>Disability</th>
<th>Health</th>
<th>Life</th>
<th>Property/casualty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetic Information</td>
<td>Allowed</td>
<td>Limited</td>
<td>Prohibited</td>
<td>Limited</td>
<td>Allowed</td>
</tr>
<tr>
<td>Gender</td>
<td>Prohibited</td>
<td>Prohibited</td>
<td>Allowed</td>
<td>Allowed</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Age</td>
<td>Prohibited</td>
<td>Limited</td>
<td>Allowed</td>
<td>Allowed</td>
<td>Prohibited</td>
</tr>
<tr>
<td>Credit Score</td>
<td>Limited</td>
<td>Allowed</td>
<td>Allowed</td>
<td>Allowed</td>
<td>Limited</td>
</tr>
</tbody>
</table>

Table 1

The next Part of this Article tries to explain these variations in how genetic information, gender, age, and credit score are regulated in insurance underwriting.

Part IV: Explaining Cross-Line Variation

This Section attempts to explain cross-line variations in risk classification restrictions based on the factors identified in Part I. We claim that, as a descriptive matter, legislatures behave as follows: if insurance companies do not discriminate based on a specific characteristic, and there is no reasonable likelihood they will discriminate in the future, then legislatures have no reason to prohibit the characteristic and refrain from enacting restrictions. When insurance companies

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72 We are aware that not every line of insurance was discussed in detail for each of the above characteristics.
73 As shown below, this is likely why states do not prohibit discrimination based on genetic information in automobile or property/casualty insurance.
discriminate or are likely to discriminate based upon a specific characteristic, then legislatures will prohibit its use unless there is a compelling reason to allow it. The legislatures’ behavior seems to follow the assumption that “equality needs no reasons, only inequality does so.” With this concept in mind, it is the inequality that needs to be explained, and that is what this Part of the paper seeks to do. It is clear from our research that the most compelling reason to allow discrimination is the risk of adverse selection.

We start by looking generally at cross-line variations in intensity of regulation and then move to exploring cross-line variations regarding specific characteristics.

(1) Explaining Cross-line Variation in Intensity of Regulation

As seen in Chart 1, state laws regulating risk-classification practices in the auto and property/casualty insurance lines are the most restrictive, laws regulating disability and life insurance are the least restrictive, and laws regulating health insurance are somewhere in the middle.

We claim that adverse selection can be used to explain this variation in the intensity of regulation between insurance lines. Specifically, the auto and property/casualty insurance lines are less susceptible to adverse selection, meaning that the government has more leeway in regulating them without negatively impacting the risk pool. This is because in both these lines of insurance, coverage is generally mandated. Automobile drivers are required to carry a minimum amount of insurance, and home owners are indirectly required to carry insurance because lenders make it a requirement for obtaining a mortgage. Recall from Part I, that when coverage is mandated, either de jure or de facto, the risk of adverse selection is smaller.

In contrast, the risk of adverse selection is greater with life and disability insurance, and this makes the efficiency argument for allowing discrimination in these lines of insurance stronger. This point is particularly compelling with respect to life insurance for two reasons. First, life insurance may be especially susceptible to adverse selection from asymmetric information because individuals can easily over-insure their own lives by purchasing policies from several insurers. Second, there exists a robust secondary market for life insurance policies, allowing high-risk individuals to immediately profit with certainty from the purchase of these policies when regulatory rules preclude accurate underwriting.

75 See Hoy & Polborn, supra note Error! Bookmark not defined., at 235–52 (“The fundamental difference between life insurance and other insurance policies is, from an institutional point of view, that individuals can buy life insurance from as many companies as they want and therefore price–quantity contracts are not a feasible means against adverse selection; insurance companies can only quote a uniform price for all life insurance contracts. A second important difference between life insurance and other insurance is that there is no natural choice for the size of loss.”).
Adverse selection may also be a problem in the context of disability insurance, though this is less clear than in the case of life insurance. The peculiar risk of adverse selection in disability insurance stems from the fact that, relative to other lines of coverage, disability insurance claims are low frequency, but often involve large payouts. This means that a small number of high-risk individuals can substantially skew the prices that low-risk individuals pay.

Adverse selection concerns are more nuanced in the health insurance context, which explains why in general the intensity of regulation is medium. First, none of the special factors noted above apply to health insurance markets: over-insurance is not possible, there are no secondary markets for policies, and substantial payouts are made on a comparatively large number of policyholders. Second, health insurance carriers can combat adverse selection through product design, for example they routinely ask in the application forms for any family history of genetic diseases. Third, health insurance carriers enjoy a unique ability to sell coverage on a group basis because the tax code confers substantial tax benefits on employer-sponsored coverage. Employer-sponsored coverage combats the risk of adverse selection without any underwriting because employees are relatively heterogeneous with respect to most health-related factors, and definitely with respect to their genetic predisposition to illness. For these reasons, health insurers may simply not have an incentive to attempt to identify such risks. On the other hand, as we show below, when it comes to both age and gender, adverse selection risks do exist in the health insurance context, a point which explains why the intensity of regulation in health insurance falls between that of property/casualty on the one hand, and life and disability, on the other.

Although adverse selection has the potential to explain a great deal of the variation in the intensity of insurance regulations, there is also room for other arguments. A fairness-based explanation for the comparative prevalence of risk classification restrictions in health insurance is that many view adequate health insurance to be a “right,” whereas few make similar arguments for life or disability insurance. Thus, while universal health insurance is for many people a


\[77\] This corresponds to the first adverse selection argument that there are a small number of high-risk individuals.

\[78\] The extent to which life and disability insurance underwriters also use product design to combat adverse selection is unclear. To the extent that they do not request information about one’s family history of genetic disease, the rationale for this is also unclear. What we do know is that requesting a family history of diseases is the norm in health insurance underwriting.

\[79\] While life and disability insurance are also frequently sold on a group basis, there is less bias towards group markets in these contexts, principally because of the absence of comparable tax subsidies.

\[80\] See Mark Hall & David Hyman, Two Cheers for Employer Sponsored Coverage, 2 YALE J. HEALTH POL'Y L. & ETHICS 23 (2002).

\[81\] See Nowlan, supra note 84 (“[A] clear distinction exists between economic and ethical considerations involved in underwriting health insurance and those that apply to life insurance. Life insurance in this country is not a societal right, although everyone is potentially eligible for limited survivorship benefits through social security.”). But see Wolf & Kan, supra note 32 (noting that the difference in the laws may be attributable to the difference in “social importance” that people place on health insurance over life and disability insurance, but arguing that genetic information should be banned from disability insurance as well).
central public policy goal, few have articulated a similar vision for disability or life insurance, even though Social Security does provide these benefits in some circumstances. Within the framework of Part I, this argument amounts to a claim that the solidarity argument is stronger in the health insurance context than in the life or disability context.

The next sections explore more nuanced puzzles about cross-line variation for specific characteristics.

(2) Explaining Cross-line Variation in Genetic Status

Insurer classification on the basis of genetic information is immensely controversial, which makes the variation in its treatment all the more interesting. While restricting insurers’ use of genetic information in the underwriting process is appealing because individuals have no control over their own genetic composition, these restrictions create real adverse selection risks.

We start by observing from Chart 2 that in automobile and property/casualty insurance genetic information is usually restricted under states’ general restriction laws. Indeed, many states do not even mention genetic information in their laws, and only two states permit discrimination based on genetic information. As explained at the beginning of Part IV, legislatures are unlikely to act when insurance companies are not using, and are not likely to use, a specific characteristic in their underwriting decisions. At this time genetic testing simply does not provide any relevant information that is predictive of expected losses in auto or property/casualty insurance, and therefore there is no reason for the legislatures to explicitly deal with it.

In contrast, genetic information is very relevant in life, health and disability insurance. Observed patterns in the regulation of genetics in these lines of insurance are the most intriguing. Part III suggests that the vast majority of states have enacted laws forbidding the use of genetic information in connection with health insurance, yet relatively few states have such laws for disability or life insurance. In fact, many states that have enacted laws forbidding the use of genetic information in health insurance also allow insurers to use genetic information in underwriting life and disability insurance.

As was explained in the previous section on the intensity of regulation, the best explanation for this trend is that the risk of adverse selection is greater with life and disability insurance than with health insurance, making the efficiency argument for allowing the use of genetic information stronger in the former case than in the latter. For the same reasons noted above this point is particularly compelling with respect to life insurance.

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82 See Charts 3a–3c, supra.
83 [List.]
Another reason that adverse selection concerns about genetic information in the health insurance context are muted is that health insurance policies purchased in individual markets are often only in force for a short time. This was especially true before the 2010 passage of the ACA, during which time it was common for insurers to refuse to renew high cost insureds. Genetic predispositions to illness represent a long-term, and typically a probabilistic, threat, and acquiring genetic information is often expensive. For these reasons health insurers often focus on the short terms risks of their policyholders and may not have an incentive to attempt to identify such risks.84

With genetic information, fairness based arguments are unpersuasive in explaining cross-line variation. One might argue that genetic risk should be prohibited as a factor for obtaining health insurance based upon the view that adequate health insurance is a “right.” While this argument may contribute to the differences in treatment of genetic information across insurance lines, the fact that gender and age are allowed to be taken into account in health insurance (as we show below), suggests that the economic impact of adverse selection is a more powerful explanation.

(3) Explaining Cross-line Variation in Gender

The extent of cross-line variation in the way state legislatures treat insurers’ use of gender is surprising. The use of gender is more strongly restricted in auto, disability, and property/casualty than it is in health and life. Particularly illustrative of this point is the fact that numerous states have passed laws explicitly permitting the use of gender in life and health insurance, whereas such laws are extremely rare in other lines of insurance.

Like with genetics, adverse selection once again is helpful to explain cross-line variation in the regulation of gender classification. Specifically, adverse selection with respect to gender is a greater risk in the life and health insurance lines—even though they are more commonly provided through employers85—than auto and property/casualty, which are sold predominantly in the individual market.

As described above, life insurance is more susceptible to adverse selection than other lines of coverage for various reasons, such as the prospect of over-insurance and the existence of a secondary market. When looking at gender and life insurance, the differences between men and women in mortality risks are more important than is often assumed. Although the average

85 Approximately 50% of life insurance policies are sold through employers, and approximately 50% are sold through the individual market, though policies sold in the individual market tend to be larger. Cheryll D. Retzloff, Person-Level Trends in U.S. Life Insurance Ownership, LIMRA.COM, at 12 (Mar. 2011) available at http://media.hbwinc.com/pdf/Person_Level_Trends_in_U.S._Life_Insurance_Ownership_2011.pdf. A substantial majority of private health insurance is sold through employers. See Hall & Hyman, supra note Error! Bookmark not defined.
difference in life expectancy between men and women is only several years, the difference in one’s chance of dying in a given year varies greatly by gender.\textsuperscript{86}

Adverse selection is also a substantial risk for prohibitions of gender-based discrimination in health insurance. A primary driver of the differences in expected health care costs of men and women is child bearing, and if insurers cannot discriminate on the basis of gender they may have to charge higher prices to men relative to their risk, causing them to drop out of the risk pool.\textsuperscript{87} This explanation is consistent with the ACA’s ban on gender-based underwriting, as the risk of adverse selection is largely counteracted by the incorporation of the individual mandate in the statute.\textsuperscript{88}

By contrast, adverse selection is not a substantial risk when state laws prohibit insurers from using gender in auto or property/casualty insurance. This is most obvious in the property/casualty context, as gender does not appear to correlate with risk, a fact that both limits the practical effect of the law as well as the risk of adverse selection. In the automobile insurance context, where gender may arguably play a role, adverse selection is limited by the prevalence of insurance mandates. Moreover, the expected differences in risk between men and women, once other policyholder characteristics are taken into account, may be relatively small.

Fairness-based arguments can also explain at least part of the observed cross-line variation, as fairness arguments against gender-based discrimination in the life insurance context are comparatively less compelling than in other lines. First, while gender-based discrimination increases women’s premiums for annuities, it decreases women’s premiums for life insurance products, so the net actual effect is likely to be small and may even be null.\textsuperscript{89} Second, the ultimate beneficiaries of life insurance products are frequently the spouse or children of the person insured therefore, even if discrimination were prohibited and one gender were forced to pay systematically higher premiums than the other gender, it is not clear that the incidence of such a premium differential would be borne systematically by one gender or the other. Both of these points mean that discrimination does not systematically harm or help women, and thus that any fairness-based argument trading on the notion that gender is a socially suspect classification category is substantially weakened. Third, the relationship between gender and life expectancy appears to be, at least in part, causal: women outlive men in virtually all societies, an effect that remains even after confounding social factors, such as likelihood of smoking or working in a dangerous occupation, are controlled for. All of this makes gender-based underwriting appear more natural and fair. By contrast, fairness-based arguments against gender-based discrimination are relatively compelling in the context of auto insurance, a domain where states

\textsuperscript{86} But see Mary W. Gray & Sana F. Shtasel, Insurers Are Surviving Without Sex, 71 A.B.A. J. 89 (1985).
\textsuperscript{87} Interestingly, this might have the opposite effect for women with no plans to become pregnant. Such women would face an even greater discrepancy between their true risks and their premiums if insurers charged only women for the expected costs of child birth than if they spread this risk among women and men.
\textsuperscript{88} See supra Part I.
\textsuperscript{89} Most states treat traditional life insurance and annuities similarly in their risk classification regulations [CHECK]
are less tolerant of gender-based discrimination. First, it is more likely that gender-based discrimination in this context will systematically harm one gender (men) relative to the other (women).\footnote{Can we get data on rates of accidents for men and women?} Second, the correlation between gender and the risk of a car accident seems to be less causal than the connection between gender and life expectancy. At the very least, it is easier to argue that gender seems to serve as a proxy for some other attribute—likely recklessness—that is a better causal explanation for observed accident rates.

The key limitation of fairness-based explanations for cross-line variation in the treatment of gender is health insurance, where fairness-based arguments do a poor job of explaining states’ relative tolerance of such discrimination. Child-rearing is in most cases a product of actions by both men and women, making the socialization of the related risks seem appropriate. These considerations may suggest that the efficiency arguments discussed above—specifically adverse selection—are better explanations for observed trends.

\textit{(4) Explaining Cross Line Variation in Age}

As Part III shows, age discrimination is often explicitly permitted in health and life, yet it is often affirmatively limited in auto and property/casualty. This pattern is best explained by the casual connection between age and risk in different coverage lines, the related possibility of differential inaccuracy, and the varying prospects of adverse selection.

Begin with the extent of the casual connection between age and risk in different coverage lines. The nature of the connections between age, on the one hand, and the risks of illness and death, on the other, are so intuitive that many deaths and illnesses (such as dehydration) are simply attributed to “old age.”\footnote{Lea Brilmayer et al., \textit{Sex Discrimination in Employer-Sponsored Insurance Plans: A Legal and Demographic Analysis}, 47 U. CHI. L. REV. 505 (1980) (“Age discrimination is so basic in life insurance and annuities that any serious challenge to it seems unlikely.”).} On the other hand, the lack of a direct causal relationship between, for example, age and driving safety raises potential fairness concerns because it creates the prospect of differential inaccuracy.\footnote{While it might be true that younger drivers are involved in more accidents, this is likely because they have less experience, not just because they are young. Or alternatively it might be because they drive more recklessly. Lack of driving experience and recklessness are correlated with youth, but it is not the age that directly causes these other traits which might better measure a driver’s risk.}

By contrast, it is much harder to argue that the use of age in the health or life context raises differential inaccuracy concerns, even though the claim is theoretically plausible: although older individuals may disproportionately bear the costs of a rating system that uses age as an imperfect proxy for likelihood of death and/or illness, the perceived causal connection between these two characteristics makes placing this burden on older individuals seem fair, or at least relatively
more fair. In sum, fairness-based arguments seem to be helpful in understanding the cross-line differences in the regulation of age.

However, a more promising explanation for cross-line variation in the treatment of age is the risk of adverse selection. Age-based adverse selection is a bigger concern in health and life insurance markets than in auto insurance markets, for at least two general reasons. First, the magnitude of the correlation between age and death/illness is more substantial than the magnitude of the correlation between age and driving risk. Older individuals can expect to incur more than three times the medical expenses of younger individuals, and the risk of death is even more dramatically impacted by age. Second, auto liability insurance is less prone to adverse selection than health and life because it is required in most states. Similar considerations apply in the homeowner’s insurance markets: while states do not mandate such coverage, lenders require it as a condition of the loan, thus mitigating the risk of adverse selection. As a result, adverse selection is inversely associated with the more heavily regulated insurance lines because the greater the chance of adverse selection, the less likely states are to impose undue burdens on insurance underwriters.

(5) Explaining Cross-line Variation in Credit Score

Part III suggests that credit score is more strongly regulated in the auto and property/casualty insurance lines than in life, health, or disability. A total of 37 states and the District of Columbia have statutes specifically limiting or prohibiting the use of credit scores for property/casualty and 40 states have such laws in auto insurance. By contrast, only two states have statutes specifically limiting the use of credit scores in life insurance and health insurance.93

This result is easily explained by our characterization of legislatures at the start of Part IV. Historically, automobile insurers and, to a lesser degree, homeowners insurers, have aggressively and visibly use credit scores in their underwriting processes.94 The practice is now so widespread that some reports suggest that virtually every auto and homeowners’ insurer uses credit scores to some extent in making issuance, renewal, or rating decisions.95 By contrast, neither health insurers nor life insurers have historically used credit information in their underwriting practice.96 Thus, cross-line variation in state laws restricting the use of credit scores appears

93 There are also sixteen states that adopted general laws that apply to use of credit scoring, all but one of which expressly allow the practice. [cites; double check numbers]
94 Are there other stats or charts that we might also want to cite for this basic point? See FTC Report, supra note Error! Bookmark not defined. (discussing widespread use of credit scores in auto and homeowners).
95 cite
96 See NAIC, Credit Reports and Insurance Underwriting, White Paper (1997) (“As reported by the American Council of Life Insurance (ACLI) and the Health Insurance Association of America (HIAA), life and health insurers do not use credit reports of the type that are used to establish a person's eligibility for credit…”); Christopher Cruise, How Credit Score Affects Insurance Rates, BANKRATE.COM (2003), available at http://www.bankrate.com/brm/news/insurance/credit-scores1.asp (“So far, spokesmen at the trade associations for health and life underwriters say they don't know of any of their members use credit scoring in underwriting and pricing policies…”).
simply to reflect cross-line differences in the historical usage of this information in underwriting: the use of credit score in certain lines of insurance led to its regulation.

Although relatively straightforward as a descriptive matter, this explanation raises interesting normative questions due to recent reports that health and life insurers are, in fact, starting to use credit information in their underwriting. The core justification for regulating credit score—that it is not causally linked to risk and instead serves as a proxy for socially suspect characteristics like race and income—is likely to apply equally in the life and health context as in the property/casualty context. In fact, policyholder “responsibility” in paying bills seems even less relevant to risk in the life and health settings than it does in the property/casualty and automobile insurance contexts. Moreover, adverse selection provides a poor rationale for leaving insurer use of credit information comparatively less regulated in life and health insurance. Adverse selection from restrictions on the use of credit score is less likely in life and health than in auto/property, simply because it can be inferred from insurers’ historic use patterns that the magnitude of the correlation between credit score and risk is much weaker in life and health than in auto and property.

All of this suggests that states should be cautious in restricting limitations on insurance underwriting to lines in which carriers presently use the characteristic at issue. Doing so can produce unjustified discrepancies in legal restrictions if insurers’ underwriting patterns change. To be sure, state legislatures can respond when, and if, that occurs. Thus, they may eventually extend restrictions on the use of credit information to life and health insurance, to the extent that the use of such information becomes sufficiently prevalent. But passing legislation is not always easy and, in the meantime, the state will have tolerated discrimination that it has disavowed in other contexts. Moreover, it may have undermined the efficiency of insurance markets by promoting regulatory uncertainty regarding the usage of the underlying characteristic.

**Conclusion**

Insurance regulations vary between states, between characteristics, and between insurance lines. This Article has presented empirical findings that demonstrate a tremendous amount of cross-line variation in insurance regulation. Although one might expect that states would subject a characteristic to the same amount of regulation for all insurance lines, this is not the case.

This Article argues that a single variable—adverse selection—can explain a lot of the variation in insurance regulation. Specifically, when a line of insurance is more susceptible to adverse selection with regard to some characteristic, there will be less regulation of that characteristic. When adverse selection is not an issue, states are more likely to regulate heavily because they know that there will not be a negative impact on the risk pool as a result of the regulation.

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97 We need RA work on this trend and evidence for it and how prevalent it is.
Fairness considerations and historical path dependency in the way insurers deal with specific characteristics play an important role in justifying some regulations, but ultimately it is adverse selection that seems to do most of the work in explaining why certain insurance lines are more heavily regulated.

In the future we plan to explore this question empirically, employing richer statistical models to explore not just cross-line variation, but also cross-characteristic and cross-state variations in insurance regulation.