MARKETS, TORT LAW, AND REGULATION TO ACHIEVE SAFETY

Paul H. Rubin, Emory University

There are three major forces for safety. We tend to think first of regulation and second of litigation in the form of tort law (including malpractice and product liability) to increase safety, but in fact the most important force for safety is the market itself. People want safety and markets provide what people want. Moreover, safety is what economists call a “normal” good – a good where demand increases with income. Therefore, as societies become richer, safety increases. The other two forces for safety may also lead to increases (although this is by no means certain, as we will see below) but the role of markets is paramount.

In what follows I will discuss each element in turn. In discussing regulation and tort law, I will compare each to the market. I then discuss interactions between regulation and tort law. Throughout the discussion, I stress the role of what I call “ambiguous” goods – goods that both increase and decrease safety. For example, pharmaceuticals reduce risk of disease but have side effects that are sometimes harmful. This class of goods turns out to be both important and difficult for any of the three safety systems to handle.

Markets

Markets will provide the amount of first party safety that consumers desire if the information environment is correct. That is, if consumers want safer products enough to be willing to pay for them, then businesses will find providing safety profitable and will provide the level of safety that consumers desire. This is the strongest force for safety. As shown in figures 1 and 2 and in Table 2, as incomes increase accidental death rates, a measure of safety, are reduced. In Table 2 we see that coefficients on death rates as a function of per capita incomes

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1Department of Economics, Emory University, Atlanta GA 30322; paul.rubin@gmail.com. Thanks to Margarita Zabelina and Eliska Repkova for exceptional research assistance.
are negative, meaning that higher incomes lead to lower death rates, and these coefficients are statistically significant. This happens both within the U.S. over time (Figure 1) and across countries (Figure 2.) While there are many other factors involved, the simple graphs and regression equations capture an important component of what is going on: higher incomes lead to more safety.

Because markets do lead to increased safety and because well functioning market will provide the correct amount of safety (as measured by consumer preferences), in what follows I will compare regulation and tort law with the market solution. I will show that these alternatives can sometimes improve on the market solution, but that they can also make the situation worse.

There are two qualifications to the above statement regarding the efficiency of the market. First is the limit to “first party” safety and second is the state of the information environment. Moreover, some products are both safe and unsafe. That is some products can lead to reductions in some risks but increases in other risks. As we see below, these products create difficulties for the market and for both the regulatory and the tort system.

There is another point to make about markets and safety. Markets provide the amount of safety that consumers desire, but they mostly do so quietly. Product safety is also improved by voluntary standards organizations, such as the International Organization for Standardization (ISO) or the American National Standards Institute (ANSI). Products become safer over time as minor improvements occur, but these may not be noticed by consumers.

Indeed, markets are most noticeable when they fail – when there is some mishap. It is at this point that there is pressure to “Do something” – either stronger regulation or a lawsuit to punish the evildoers, or both. For example, the predecessor of the FDA was empowered to demand pre-market approval of drugs as a result of poisoning by Elixir Sulfanilamide in 1937.
In 1962 the FDA was allowed to demand proof of efficacy as well as safety in drugs as a result of the harms caused by the drug Thalidomide (even though the FDA already had enough power to prevent the sale of this drug in the U.S.) At CPSC we referred to “headline hazards,” meaning that regulatory efforts were commonly spurred by notorious accidents, even if the products involved were relatively harmless. Recently the CPSC Improvement Act, passed in response to lead found in some toys, has greatly expanded the power of the agency and has probably caused the shutdown of the used children’s products industry (Trottman, 2008; Rubin, 2009). Litigation and regulation are more obvious than pressure from markets, but not necessarily better. (For a similar argument with respect to regulation in response to financial breakdowns, see Ribstein, 2003).

First and Third Party Safety

In deciding on the level of safety associated with a product, a consumer will consider risks to herself (first party safety). However, some products may impose risks on third parties who are not part of the transaction. In modern societies, the most important such product is the automobile. Automobiles can impose risks to the driver and to passengers – first party risks. Presumably purchasers of cars will consider this risk when deciding on the level of safety to acquire when buying a car. Features such as seat belts, collapsible steering columns, and air bags impact this form of safety. However, automobiles can impose risks on third parties as well. These may be to other drivers (from collisions) or to pedestrians or bicyclists or motorcyclists. Drivers have some incentive to consider collision risks since they may be harmed as well, but these incentives are inadequate because car buyers will not fully consider risks to other cars and drivers. Drivers will have little reason to consider risks to pedestrians or to cyclists. Thus, in buying a car a consumer will purchase too little safety equipment.

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2 I consider only physical safety of consumers and only the US.
Fires may also cause harms to third parties – particularly in multi-family dwellings. Again, because a consumer bears part of the risk of fire consumers will make some effort to reduce this risk, but because the consumer bears only part of the risk, she will spend insufficient resources on avoiding this danger.

**Information**

Lack of information may also impede the functioning of markets. Most remaining risks in modern society are rather small because markets have already acted to reduce large risks. It may not pay for a consumer to learn about these risks because the cost of the time spent in such learning may outweigh the expected benefits of the additional safety. Nonetheless, there are many relatively low cost sources of information for widely distributed products, such as cars or drugs. (For an important discussion, see Polinsky and Shavell, 2010). The media often publicize these risks and firms suffer losses in stock value when products are identified either by tort suits or by regulatory agencies as causing harms (Rubin et al, 1988; Rubin and Prince, 2002).

Moreover, there are market corrections for lack of safety information. A firm with a safer variant has an incentive to advertise this, and in so doing to inform consumers (directly or indirectly) about risks from other products. For one example, Volvo ads point out the risks of automobile accidents (by claiming that Volvo is less likely to suffer such accidents,) For another example, before they were stopped by misguided regulation, cigarette companies making low tar cigarettes emphasized the risks of smoking by claiming that they were safer (Calfee, 1997). Nonetheless, for low probability events or events where causation is delayed or uncertain, information may be difficult to obtain and understand, and markets may not work well.

**Ambiguous Products**
Some products and services reduce some risks but increase others; I call these “ambiguous” products (including goods and services). The prime examples are pharmaceuticals and medical care. The primary function of these products is to reduce risks, but they may in turn create different risks. For medical care, these additional risks are called “malpractice.” For drugs they are called “side effects.” Proper regulation of the risks associated with these items requires a careful balance between harms created and harms averted. It is not clear that any of the three systems under consideration can correctly provide this balance. Markets may not work because the risks are often subtle and hidden, and so information problems may arise. For example, sick people see physicians and take drugs. Even so, they may become sicker or even die. If they suffer harms, they may not be able to tell if these harms are due to the underlying illness or to behavior of the physician or drug. Therefore, information about competence of a physician or safety of a drug may be difficult for an individual to determine. I discuss regulatory and tort problems below.

**The Market: Summary**

In sum, markets provide a good deal of safety. But for risks where third parties are involved or for risks where information may be lacking, other forces – regulation or tort law – may be desirable. Where products and services both reduce and increase risks, more difficult issues arise.

**Regulation**

There are many agencies that regulate consumer safety – the National Highway Traffic Safety Administration (NHTSA) for automobile and traffic safety, the Food and Drug

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3 I confine my discussion to Federal agencies and I omit discussion of OSHA and other agencies that deal with workplace safety.
Administration (FDA) for safety of foods and drugs, the Federal Aviation Administration (FAA) for airline safety, and the Consumer Product Safety Commission (CPSC) for consumer product safety.\(^4\) (Since all dangerous products have their own agency, it is sometimes often said that the CPSC is responsible for safety regulation of all safe products.) Regulation works ex ante: regulators mandate safety before products are manufactured or sold.

From the above analysis, some principles are immediately obvious. Where markets will work then there is no need for regulation. Markets work when risks are to first parties and potential victims are informed about risks or can easily learn about risks. If risks affect many users of a consumer product, then there will be forces leading to safety. Media will inform consumers of risks. Competitors making less risky products also have incentives to advertise this. Consumers can discuss risks and mishaps with each other, and the Internet and all of its discussion mechanisms (for some examples, product rating sites, social groups, and blogs) has given this mechanism great power. I discuss first information, and then third party effects.

**Information**

If consumers are misinformed about risks and underestimate risks, then there is an argument for regulation. (In many cases consumers may overestimate risks.) This is because consumers may unknowingly purchase risky products. A simple solution to information problems is to provide the missing information. In cases where risks are easily explained and remedies simple, information provision, for example, through labeling, would be a feasible alternative. This would apply to many aspects of auto safety regulation, such as seatbelts and airbags. It would also apply to pharmaceuticals. For example, the FDA could require manufacturers to prominently indicate that some drug “HAS NOT BEEN APPROVED BY THE

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\(^4\) I was Chief Economist at the CPSC from 1985-1987
FDA” and allow consumers to take their chances if they so desired. But agencies do not like this approach, and avoid it unless it is forced on them, as in the case of cigarettes.

However, information provision will not always be the best solution. Information may be complex or difficult to absorb. Moreover, for some risks, a regulator may believe (correctly or incorrectly) that a consumer if properly informed would not ever buy the product, so that a ban is appropriate. This is presumably the justification for forbidding sale of unapproved pharmaceuticals and toys with small parts or high levels of lead. It is clear that regulators would like to ban the sale of cigarettes, but they do not have the power because voters who smoke would punish elected representatives if this were allowed. Regulators have instead required extensive warnings and limits on sale. On the other hand, when the CPSC mandated that baby cribs have slats no more than 2 3/8 inches apart to avoid strangulation, consumers were pleased that children were protected from this risk, which was probably unknown to them before the CPSC action.\(^5\)

Arguments based on lack of information may lead to over regulation. There is a risk of overregulation in many markets, most fully demonstrated in the case of the FDA regulation of drugs (first analyzed by Peltzman, 1973). This overregulation is especially likely in the class of ambiguous goods which both increase and reduce risk, as discussed above. This is because there is an asymmetry with respect to some risks. If a regulator allows an unsafe product (a Type 1 error), and consumers are injured, then Congress and the press will generally blame the regulator. If the regulator does not allow a safe product (a Type 2 error) and consumers are harmed by the lack of this product, the injured parties will often not know that they could have been saved by a product. The result is that the FDA is excessively cautious, and that consumers

\(^5\) Manufacturers were also pleased as this rule killed the used crib market.
are harmed by this excessive caution. This excess caution applies both to approval of a drug for sale and to promotion of that drug once it is approved. It is interesting that the FDA prides itself on being a science based organization and rejects anecdotes about the benefits of drugs, but in discussing its drug regulation program it relies on anecdotes rather than discussing the scientific evidence about the effects of its regulation. For example, Meadows, 2006, is an official history of the FDA. This paper mentions many examples of FDA regulation, but cites no evidence of the costs or benefits of this regulation.

Note that this harm is caused by an informational asymmetry. I argued above that lack of information could in some circumstances be a justification for regulation. However, here we see that lack of information (albeit of a different sort) can also lead to excessive regulation. Thus, if consumers are unaware of side effects of drugs, then those in favor of regulation will argue that there is a market failure and regulation is justified. However, if this justification is used and regulation is imposed, the regulators themselves have an incentive to over regulate because of consumer ignorance about alternatives. (If a drug is not approved, consumers will generally not be aware of the existence and possible benefits of this drug). This means that it is not possible to unambiguously justify regulation based solely on a lack of consumer information. It is necessary to consider what sort of information consumers lack and to determine if regulation is likely to increase consumer welfare or reduce it. If consumers are unaware of unapproved alternatives for safety increasing products, then regulation may actually be harmful because it will create incentives for over regulation.

Third Party Effects

A good source of information about FDA overcaution is the website FDA Review, organized by Daniel Klein of George Mason University: http://www.fdareview.org/index.shtml. Klein shows, for example, that all 35 economists (including two Nobel Prize laureates) identified as being experts on some aspect of the FDA believe that it is too restrictive. This source also has many citations to the literature showing that the FDA imposes net harms on consumers.
Although regulators seem to somewhat understand issues of information failure, there seems to be little understanding of third party effects. That is, many regulations affect purchasers of products where there is little information justification and no justification based on third party effects. Consider for example regulation of automobile safety. Certain features of an automobile effect only drivers or purchasers. These concern what is commonly are referred to as the “second collision” or “second impact” – the collision between the occupant of the automobile and the automobile itself following the “first collision” between the vehicle and another object. Remedies for this second impact include lap and shoulder belts, padding, airbags, and collapsible steering columns. Note that none of these items have any influence on third parties. In fact, by making occupants safer they may actually increase risks to third parties because of “Peltzman effects”. This is the tendency of drivers in safer vehicles to compensate by driving more carelessly (Peltzman, 1975). Other elements of auto safety do affect third parties. These include brakes, lights, mirrors, dangerous hood ornaments, and bumper heights. In regulating auto safety NHTSA does not seem to distinguish between regulations that involve only first parties and those that involve third parties as well.

Other agencies ignore this distinction as well. For the FDA, some drugs – primarily antibiotics and vaccines -- have third party effects. For antibiotics, the third party effects are ambiguous. Antibiotics may reduce the spread of infectious diseases. However, overuse may lead to antibiotic resistance which also harms third parties. Vaccines seem to provide unambiguously beneficial third party effects. For antibiotics, the agency actually seems to make approval more difficult in spite of these third party effects (Rubin, 2004-5). But most drugs do not have such effects; most involve only the patient herself. Nonetheless, the agency does not hesitate to regulate these drugs. Similarly, some products regulated by CPSC – primarily those
associated with fires – may have third party effects, but most (for example, toys) do not and again this does not impact agency decision making.\textsuperscript{7}

\textbf{Regulation: Summary}

In sum, regulators seem to pay insufficient attention to market forces. While some regulation is justifiable because of lack of consumer information, much is not. Even when provision of information would be a reasonable remedy, the agencies will often directly regulate. Moreover, lack of information about alternatives can lead to harmful regulation in the case of ambiguous goods. Regulators seem to ignore the distinction between first party and third party effects.

\textbf{Tort Law}

Classic tort law dealt with accidents between “strangers” – parties with no pre-accident relationship. This is a strict third party effect. Because the parties had no pre-accident relationship, they could not decide in advance what terms would govern in the event of an accident, nor could they bargain over optimal safety precautions. Therefore, the courts were forced to decide how to allocate costs and liability if there was a mishap. This model still governs the most common class of tort events – automobile accidents. Here the tort system (coupled with traffic laws and private insurance) works reasonably well, although there are those who suggest that “no-fault” accident insurance would be an improvement because it would save substantial amounts in legal fees (Keeton and O’Connell, 1965).

The tort system contributes to safety through an ex post mechanism. Those causing injuries are required to pay the victims, and the threat of this payment causes potential injurers to

\textsuperscript{7} When I worked at the CPSC I never heard the issue of third party effects mentioned. To regulate only items with such effects would have led to a virtual shut down of the agency.
take precautions to avoid accidents. Under certain circumstances it can be shown that this system will lead both victims and injurers to take optimal (efficient) precautions for accident avoidance (Landes and Posner, 1987; Shavell, 1987). (Note that optimal precautions are not maximal precautions. In other words, the optimal number of accidents is greater than zero.)

However, modern tort law has expanded well beyond this model. The most difficult areas of tort law are product liability and medical malpractice. Both of these differ significantly from classic tort law. In particular, in both cases parties are not strangers – they are in a pre-accident relationship, as sellers and buyers or as doctors and patients. This has three implications. First, parties could in principle agree through contract or through a system of waivers on the level of precautions before any accident occurred. Second, they could also agree in advance on the terms that would govern in the event of an accident (Rubin, 1993). Third, any payments by injurers will ultimately be reflected in the price of the good, and so will be paid for by customers. That is, the tort system will act as an insurance system: consumers pay premiums in the form of higher prices for goods and services, and receive compensation if they are injured. To the extent that tort law is mandatory (that is, to the extent that consumers cannot choose to opt out of tort law) then the insurance is mandatory. If it is insurance that is not worth the cost to consumers, then consumers may not purchase products with the attached insurance.

There are many problems with the product liability and malpractice systems as methods of accident prevention. A comprehensive critical analysis of product liability is in Polinsky and Shavell, 2010. Their critique focuses on several issues. First, for widely sold products, there are market and regulatory forces that will lead to safety, so the product liability system is at best marginal in adding safety. Second, the system is extremely expensive – about fifty percent of the cost of the system is for expenses, including legal fees. These administrative costs are much
greater is than either private insurance or than costs of the regulatory systems. (This is why the
tort system is not an efficient system for compensation of victims.) Third, the system may not
even work on its own terms. That is, it may not even increase safety.

Tort litigation focuses disproportionately on what I call “ambiguous” goods. The website
for the American Association for Justice (the current name of what was the Association of Trial
Lawyers of America) lists on its website “Litigation Groups,” groups of affiliated attorneys
specializing in one type of lawsuit. There are currently 105 such groups (see Table 3). Of these,
over half (55) specialize in litigation involving ambiguous goods (Table 4). Lawyers focus on
ambiguous goods for several reasons. First, people using these goods are already in some
danger. Something unfortunate such as death is more likely to occur when someone is already
sick or injured. Moreover, since the person was already is a bad situation, it is not always
possible to determine if the good or service was responsible for the harm suffered (e.g., Would
the patient have died anyway?) and some lawyers specialize in casting blame on physicians or
drugs in this situation. Finally, injurers in these situations (doctors, pharmaceutical companies)
are wealthy or have insurance (are “deep pockets”) and so make inviting targets.

To the extent that litigation increases the price of such goods, then one effect is to reduce
demand for the good and so perhaps increase risk. The result is that some consumers may not
purchase these goods and so may forgo the safety benefits of the goods. Consumers may choose
not to purchase goods because goods are bundled with insurance and some of the insurance –
notably, that for “pain and suffering” (also called nonpecuniary damages) – is not worth the cost.
Moreover, because of high administrative costs of the tort system, the value even of what would
otherwise be desired insurance may not be worth the cost. In fact there is evidence that reducing
the scope and power of tort law leads to increased safety. Rubin and Shepherd (2007) show that
tort reforms in the states from 1981 to 2000 led to 24,000 fewer accidental deaths because of increased access to medical care.

**Tort Law: Summary**

Classic tort law dealing with accidents between legal strangers (mainly auto accidents) is a reasonable way to reduce risks from driving. However, expansions of tort law into non-stranger areas (primarily malpractice and product liability) have severe problems. Tort law is the most expensive method of providing safety because of high transactions and administrative costs, including legal fees. Moreover, it is not clear that this branch of law does actually increase safety. Because tort law makes safety increasing products (e.g., drugs and medical care) more expensive, it may actually increase risks; there is empirical evidence consistent with this proposition.

**Interaction Between Tort Law and Regulation**

Many products are governed both ex ante and ex post, in the form of ex ante regulation and ex post liability for tort law. Whether this is a desirable set of policies is highly debated. The issue is called “preemption” and the question is whether FDA or other federal government safety regulation “preempts” state tort law. The issue has been most carefully studied for drug regulation by the FDA.  

The situation is this: Because of fear of negative publicity if a harmful drug is approved, the FDA is overly cautious in approving drugs. That is, patients are harmed and even killed because some beneficial drugs are not approved or approved too late, or because FDA advertising regulations mean that some patients do not learn about beneficial drugs. Patients are

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8 This section is based on Calfee et al (2008). That brief has many additional literature citations. I was a co-author of that brief, but received no compensation, as stated in the brief.
also harmed by tort regulation, which increases the price of ambiguous goods (including drugs) and so prices some out of the market, even though on net the drug is beneficial (since FDA overcaution means that many useful drugs will be delayed or not approved at all.)

This issue has been litigated in two recent Supreme Court cases. Riegel v. Medtronic (128 S. Ct. 999, 2008) was a case involving a medical device (a balloon catheter used in heart surgery) which was used in a way inconsistent with the label (directions) and which ruptured and caused an injury. The injured party sued in state court. Ultimately the U.S. Supreme Court held that FDA approval preempted state law. However, this finding was based on an explicit provision in the statute that preempted state court actions for approved medical devices.

Wyeth v. Levine (decided 2009) was a similar case involving a pharmaceutical rather than a device. A drug (Phenergan, an antihistamine used to treat nausea) was improperly administered to Diana Levine, leading to an injury and ultimately to amputation of her arm. She successfully sued the physician and health center where the drug was administered, and then sued the manufacturer (Wyeth) on the grounds that the labeling of the drug (which was approved by the FDA) was inadequate. In this case, the Supreme Court held that there was no preemption – that is, the Court held that the lawsuit under state law could proceed. The difference was that Congress had not specifically preempted state litigation when the FDA approves a drug (unlike the case of a device, where there was explicit preemption.)

While the Court decided these cases on legal grounds, the economics is the same in both cases. Indeed, the case for preemption may be stronger in Wyeth than in Riegel because the approval process for drugs is more stringent than the process for devices. The main point is that both the tort laws and the regulatory process are excessively restrictive, in that both lead to net
harm for patients. Piling one overly restrictive process on top of another will simply lead to increasing harm.

Drugs will be more expensive because of the cost of the tort system. There will be fewer drugs because it will not pay manufacturers to invest in developing as many drugs. Those that are developed and approved will be used less frequently because they will be more expensive. There is no reliable statistical evidence that either the FDA process or the tort system leads to greater safety and much evidence (cited elsewhere in this paper) that both lead to increased harm. There is also evidence that newer drugs lead to reduced costs and improved health (Lichtenberg, 2003; Lichtenberg and Virabhak, 2007). Thus, not allowing preemption will be a net harm for consumers. Congress could fix this by amending the Food, Drug and Cosmetic Act to allow the same preemption that is now granted to manufacturers of medical devices.

Summary

The three major forces for safety are markets, regulation and tort law. Markets are the most important source of safety, but the workings of the market in improving safety are not obvious to consumers. This creates pressure for tort law and regulation, which often follow some crisis or disaster.

Markets may not provide the optimal amount of safety because of third party effects and perhaps information deficiencies. In principle, these problems could be corrected by other forces. Classic tort law solves many externality problems (for example, in the case of automobile accidents.) Regulation can solve information problems (for example, in cases where risks are difficult to measure or where there are long lags between use of a product and harm.) However, both of these systems overreach. Product liability and medical malpractice do not
seem to improve safety, and are quite expensive to operate. Regulation often causes harm by delaying new safety enhancing products (particularly pharmaceuticals.) The most difficult class of goods is what I call “ambiguous” goods – those that reduce some harms but cause others.

An important issue is the relationship between regulation and tort law. For medical devices FDA regulation does lead to an exemption from state tort law, but this is not true for pharmaceuticals. A simple improvement would be to extend this exemption to pharmaceuticals.
Figure 1. U.S. Accidental Death Rates and per Capita GDP, 1959-2004.
Figure 2. International Accidental Death Rates and per Capita GDP, 2002.

Sources:

Data Description

The U.S. time series data was collected for years 1959 to 2004 while the cross sectional international data was collected for year 2002. The accidental death (dependent variable) rate is defined here as the number of accidental deaths per 100,000 population. The cause of death was determined according to the International Statistical Classification of Diseases (ICD), Revisions 7, 8, 9, and 10 and includes all unintentional deaths. In case of the U.S., a separate chart for motor vehicle accidents is included.

The values of U.S. per Capita GDP are in 2005 chained U.S. dollars. The values of per Capita GDP for countries in the cross sectional analysis are in current U.S. dollars. Table 1 displays the mean, minimum, and maximum values for the variables.

Table 1. Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>U.S. GDP per capita</td>
<td>27466.49</td>
<td>15534.53</td>
<td>41849.44</td>
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<tr>
<td>U.S. Accidental Death Rate</td>
<td>45.10</td>
<td>34.03</td>
<td>59.02</td>
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<tr>
<td>Cross Sectional GDP per capita</td>
<td>9479.14</td>
<td>193.50</td>
<td>50417.18</td>
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<tr>
<td>Cross Sectional Accidental Death Rate</td>
<td>41.59</td>
<td>9.98</td>
<td>158.75</td>
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The results of the time series and cross sectional regressions of accidental death rate dependent on per capita GDP are the following. In case of the time series data for the U.S., the coefficient on per capita GDP is -0.0009 with a t-statistic of -10.4621. The $R^2$ value for this regression is 0.7133. In case of the time series data for 112 countries, the coefficient on per capita GDP is -0.0005 with a t-statistic value of -2.6579. The $R^2$ value for this regression is 0.0603. Table 2 displays the simple regression results.

Table 2. Time Series and Cross Sectional Regression Results, Accidental Death Rate as a Dependent Variable.

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<th>Time Series</th>
<th>Cross Sectional</th>
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<tr>
<td></td>
<td>Coefficient</td>
<td>t value</td>
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<td>Constant</td>
<td>69.0457</td>
<td>29.0382</td>
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<tr>
<td>Per Capita GDP</td>
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<td>-10.4621</td>
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<tr>
<td>Number of Observations</td>
<td>46</td>
<td>112</td>
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<tr>
<td>R Squared</td>
<td>0.7133</td>
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All coefficients are statistically significant and conventional levels.

References for Figures 1 and 2 and Tables 1 and 2


Note: Footnote: Due to frequent revisions of the International Statistical Classification of Diseases (ICD) codes and the accidental death data being condensed or expanded into different groups in each revision, it is possible that the reported accidental death data may be slightly inconsistent over time. However, the death counts when graphed show a clear trend without any large deviations. Thus the impact of the ICD code changes is only minor.
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<td>4.</td>
<td>Automated External Defibrillator (AED)*</td>
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<td>5.</td>
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<td>Bad Faith Insurance</td>
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<td>Benzene/Leukemia*</td>
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<tr>
<td>29.</td>
<td>Electronic Discovery</td>
</tr>
<tr>
<td>30.</td>
<td>Embolization Devices (Cyanoacrylate)*</td>
</tr>
<tr>
<td>31.</td>
<td>ERISA, Health and Disability Insurance *</td>
</tr>
<tr>
<td>32.</td>
<td>Expert Witness (Daubert)</td>
</tr>
<tr>
<td>33.</td>
<td>Eye Refractive Surgery*</td>
</tr>
<tr>
<td>34.</td>
<td>Fair Housing</td>
</tr>
<tr>
<td>35.</td>
<td>Federal Employers’ Liability Act (FELA)</td>
</tr>
<tr>
<td>36.</td>
<td>Federal Tort</td>
</tr>
<tr>
<td>37.</td>
<td>Fentanyl Pain Patch*</td>
</tr>
<tr>
<td>38.</td>
<td>Firearms and Ammunition</td>
</tr>
<tr>
<td>39.</td>
<td>Firefighters &amp; EMS Hearing Loss</td>
</tr>
<tr>
<td>40.</td>
<td>Foodborne Illness</td>
</tr>
<tr>
<td>41.</td>
<td>Fosamax*</td>
</tr>
<tr>
<td>42.</td>
<td>Funeral Services</td>
</tr>
<tr>
<td>43.</td>
<td>Gadolinium*</td>
</tr>
<tr>
<td>44.</td>
<td>Gas Cans</td>
</tr>
<tr>
<td>45.</td>
<td>Gas Fire &amp; Explosions</td>
</tr>
</tbody>
</table>

Table 3: Litigation Groups Listed Alphabetically: All
46. Gastric Bypass Surgeries*
47. Gulf Coast Oil Spill
48. Healthcare Management Organization*
49. Heart Devices*
50. Heparin*
51. Herbicides & Pesticides (Incl. Agent Orange, Dioxin & PCB’s)
52. Hormone Therapy*
53. Human Bone & Tissue Recovered from Cadavers*
54. Hydroxycut*
55. Inadequate Security*
56. Industrial Agriculture
57. Insulin Pump*
58. Intellectual Property
59. Interstate Trucking
60. Interventional Cardiology*
61. Jury Bias
62. Kugel Mesh*
63. Laparoscopy*
64. Lawn Mowers
65. Lead Paint
66. Levaquin*
67. Liquor Liability
68. Mandatory Arbitration
69. Medical Negligence Information Exchange Group*
70. Meridia*
71. Motorcycle
72. Neurontin*
73. Nursing Homes*
74. NuvaRing*
75. Oil & Gas
76. Oral Sodium Phosphate (OSP)*
77. Ortho Evra*
78. Orthopedic Implant *
79. Pain Pump-Chondrolysis*
80. Pharmacy Liability*
81. Preemption Law
82. Qui Tam
83. Radiation Overexposure*
84. Railroad/Highway Crossing & Derailment
85. Reglan/Metoclopramide*
86. Resort Tort
87. Schools: Violence, Misconduct, and Safety
88. Securities
89. Selective Serotonin Reuptake Inhibitors (Anti-Depressants including Paxil, Zoloft and Prozac)*
90. Seroquel and other Anti-Psychotic Drugs*
91. Sexual Dysfunction Drugs*  
92. Stand-up Forklift  
93. Tap Water Burns  
94. Taser  
95. Telemarketing, Spam or Junk Fax  
96. Toys and Recreational Equipment  
97. Trasylol (Aprotinin)*  
98. Traumatic Brain Injury*  
99. Vaccines*  
100. Vioxx/Bextra (Includes all Cox-2 Inhibitor NSAIDs)*  
101. Wage & Hour  
102. Welding Rods  
103. Workers Injury Law & Advocacy Group  
104. Yaz/Yasmin*  
105. Zimmer Durom Cup*  
*Ambiguous: Increases and Reduces Risk  

American Association for Justice website,  
http://www.justice.org/cps/rde/xchg/justice/hs.xsl/1150.htm
Table 4: Litigation Groups Listed Alphabetically: Ambiguous Items

1. Asbestos  
2. Automated External Defibrillator (AED)  
3. Avandia  
4. Benzene/Leukemia  
5. Birth Trauma  
6. Breast Cancer  
7. Breast Implant  
8. Burn Injury  
9. Byetta  
10. Chantix  
11. Chiropractic Malpractice  
12. Complex Regional Pain Syndrome ("RSD")  
13. Contact Lens Solution  
14. Denture Cream  
15. Digitek (Digoxin)  
16. Embolization Devices (Cyanoacrylate)  
17. ERISA, Health and Disability Insurance  
18. Eye Refractive Surgery  
19. Fentanyl Pain Patch  
20. Fosamax  
21. Gadolinium  
22. Gastric Bypass Surgeries  
23. Healthcare Management Organization  
24. Heart Devices  
25. Heparin  
26. Hormone Therapy  
27. Human Bone & Tissue Recovered from Cadavers  
28. Hydroxycut  
29. Inadequate Security  
30. Insulin Pump  
31. Interventional Cardiology  
32. Kugel Mesh  
33. Laparoscopy  
34. Levaquin  
35. Medical Negligence Information Exchange Group  
36. Meridia  
37. Neurontin  
38. Nursing Homes  
39. NuvaRing  
40. Oral Sodium Phosphate (OSP)  
41. Ortho Evra  
42. Orthopedic Implant  
43. Pain Pump-Chondrolysis  
44. Pharmacy Liability  
45. Radiation Overexposure
46. Reglan/Metoclopramide
47. Selective Serotonin Reuptake Inhibitors (Anti-Depressants including Paxil, Zoloft and Prozac)
48. Seroquel and other Anti-Psychotic Drugs
49. Sexual Dysfunction Drugs
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51. Traumatic Brain Injury
52. Vaccines
53. Vioxx/Bextra (Includes all Cox-2 Inhibitor NSAIDs)
54. Yaz/Yasmin
55. Zimmer Durom Cup

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