# Improving the Bar by Lowering the Bar
# Licensing Difficulty and Attorney Quality in Japan

December 14, 2012

J. Mark Ramseyer and Eric B. Rasmusen

*Abstract*

Making a test easier can increase the quality of those passing under certain circumstances due to the increase in the number of those willing to go to the trouble to take the test. Thus, a relaxation of quality standards in occupational licensing can increase the quality of those licensed. We explore the theoretical circumstances under which this can occur and the actual effect of the relaxation of the difficulty of the bar exam in Japan from 1992 to 2011.

J. Mark Ramseyer, Mitsubishi Professor, Harvard Law School, Cambridge, MA 02138. ramseyer@law.harvard.edu. 617-496-4878.

Eric B. Rasmusen, Dan R. & Catherine M. Dalton Professor, Department of Business Economics and Public Policy, Kelley School of Business,Indiana University,Bloomington,Indiana 47405-1701. erasmuse@indiana.edu. http://rasmusen.org. (812) 855-9219. Cell: 812-345-8573. Fax: 812-855-3354.

This paper: http://rasmusen.org/papers/barpass-ram-ras.pdf.

Keywords: Tests, occupational licensing, legal profession, screening, Japan, deregulation

We would like to thank Hidetaka Aizawa and the Indiana University BEPP Brown Bag for useful comments.

## 1 Introduction

Scholars typically give two very different accounts of occupational licensing. In some industries, they posit market failure that makes unconstrained consumer choice problematic. Perhaps consumers lack the sophistication or training necessary to identify low quality sellers. Hospital administrators may correctly gauge the ability of a nurse, for example, but perhaps a disabled elderly patient looking to hire home healthcare cannot. If a patient cannot distinguish the trained from untrained, then perhaps the government can raise social welfare by letting nurses sell their services only if they pass a battery of tests.

In other industries, scholars attribute occupational licensing to an attempt by industry incumbents to cartelize the market and capture monopoly rents. The classic works are Friedman & Kuznets (1945), Friedman (1962), and Stigler (1971). Much fun has been had with the difference between the stated public-interest intent of licensing and the actual institutions. In a 1961 issue of the *Journal of Law & Economics*, for example, Moore sarcastically quoted legislative committee testimony to the effect that ‘‘The intent of the tree expert law was primarily to protect the public against tree quacks, shysters and inexperienced persons’’ (p. 93).

The literature understates the importance of licensing. According to Kleiner & Kruger (2010), between Kleiner's 2000 *Journal of Economic Perspectives* survey and the time their 2010 survey was written, no articles on occupational licensing had appeared in the *American Economic Review, Journal of Political Economy, Quarterly Journal of Economics,* or *Econometrica*, and only one article each in the *Journal of Labor Economics* and the *Industrial and Labor Relations Review*. Yet in 2000, the percentage of the workforce in occupations licensed by states was at least 20 percent according to Department of Labor and 2000 Census data. In 2012 the Institute of Justice put the number at 33 percent in its description of licensing laws. Kleiner and Kruger write:

> The general estimates of cross-sectional studies using Census data of state licensing's influence on wages with standard labor market controls show a range from 10 to 15 percent for higher wages associated with occupational licensing. Estimates were developed from the National Longitudinal Survey of Youth (NLSY) from 1984 to 2000 and show the difference in wages between changers from unlicensed to licensed occupations and between those who move from a licensed occupation to an

unregulated one. The estimates show an impact of about 17 percent of moving to a licensed occupation relative to moving from a licensed occupation to an unlicensed one. However, within-occupation wage variations both for service occupations and for individuals in jobs that repair things suggest a wide range of wages changes from zero to 40 percent of regulation within an occupation.

Over the course of the past decade or so, scholars have studied the licensing of doctors (Broscheid & Teske (2003), Kugler & Sauer (2005)), radiology technicians ( Timmons & Thornton (2008)), dentists (Kleiner & Kudrle (2000)), dental hygienists (Wanchek (2010)), teachers (Larsen(2012)), electricians (Kleiner & Park (2011)), mortgage brokers (Kleiner & Todd (2007), Shi, (2012)), florists (Carpenter (2012)), Vietnamese-American manicurists (Federman, Harrington & Krynski (2006)), cremators(Harrington & Krynski (2002)), barbers (Timmons & Thorton (2010)), and lawyers in America (Pagliero (2010, 2011)) and Italy (Pellizzari & Pica (2011)). Think tanks have found licensing a perennial source of amusement and outrage: e.g., the American Enterprise Institute on tour guides (2011) and hair braiders (2012), the Brookings Institution on lawyers (2012), and the Heritage Foundation on plumbers (2008).

Although the think tanks focus on the most egregious licensing laws and scholars vary in the fraction of licensing they attribute to public-interest motives and cartelization, we usually take it for granted that even cartelizing regimes raise the quality of services.[1] Moore's tree-expert law may not raise social welfare. It may transfer wealth from homeowners to gardeners. If it induces some homeowners to hire illegal unlicensed substitutes (nephews, neighbors, local high-school students), it may lower the quality of services consumed. But even the tree-expert law should raise the quality of tree care sold on the legal market.

We will show that this intuition is wrong: licensing need not even raise the quality of services sold by licensed sellers. Under plausible conditions it will lower the quality. The reason lies in opportunity cost. If prospective sellers must spend substantial time studying for an examination, they are less likely to do so. Instead, those with better outside opportunities will pursue those other job prospects instead. Because the most talented people have better outside opportunities, they face higher opportunity costs to studying for the occupational license. The license, in other words, will not just exclude those

[1]Larsen (2012) and Kugler & Sauer (2005) are noteworthy exceptions.

without the talent to pass it. It may also exclude those talented enough to receive attractive job prospects in other fields.

We will take as our example of the effect of opportunity cost on licensing a natural experiment in turn-of-the-century Japan. Japan's bar exam was fearsome in the fifty years after World War II. For decades, the government imposed a test that only 2-3 percent of the test-takers passed. Since 1990 it has gradually expanded the number of people who passed. The result has not been a fall in the quality of new lawyers. Instead, the industry has become an increasingly attractive field for the most talented college graduates.

The study perhaps closest in spirit to ours is Kugler & Sauer (2005). They investigate the large number of physicians who emigrated to Israel after the collapse of the Soviet Union. Under Israeli law, those with extensive clinical experience were exempt from a relicensing requirement, but the number of years required for the exemption changed in 1992 from 20 years to 14. They ask whether the quality of the doctors who pursued re-licensing shifted with the law, and find that it did. Although licensing generated large rents to physicians, they find that disproportionately the weaker physicians pursued re-licensing. Physicians need not practice medicine. They can also obtain unlicensed jobs in scientific fields. The more talented the physician, the higher will be the return to those alternate jobs, and --- necessarily --- the higher the opportunity costs to pursuing relicensing as a physician.

We will start with a model to formalize the intuition that opportunity cost could play an important role in the interaction between exam difficulty and the quality of those passing. We will then look to Japan, explaining the institutional features before and after the change in bar passage rates and looking at what happened to quality.

## The Model

A population of students has ability $x$ uniformly distributed over $[0, 1]$. Each student has the option to take a test to become a lawyer at cost $c(x)$ with $c' > 0$ and $c(0) > 0$. He passes the test with probability $p(x)$, where $p' > 0$ and $p(0) = 0$. The value of passing is $w$. A student's payoff function is thus:

$$\pi(x) = p(x)w - c(x). \tag{1}$$

Our question is what effect the difficulty of the test has on the types of

students taking and passing the test.

Those types with $\pi(x) \geq 0$ will take the test. Denote by $\underline{x}$ and $\overline{x}$ the lowest and highest types taking the test. We will only consider cases where $\underline{x} > 0$ and $\overline{x} < 1$. It will be true that $\pi(\underline{x}) = 0$ and $\pi(\overline{x}) = 0$. Thus, we are restricting ourselves to situations where the lowest quality and the highest quality of students choose not to take the test.

We will define ''the test becomes easier'' as that $p(x)$ increases for every $x$ except possibly $x = 0$, the type which originally has zero probability of passing.

We will define ''the test becomes equally easier for all types'' as that for $k > 0$ $p(x)$ becomes $p(x) + k$. We will also consider the alternative definition that $p(x)$ becomes $(1 + k)p(x)$.

Let us use ''lawyers'' and ''students'' as our names for the licensed occupation and its prospective members.

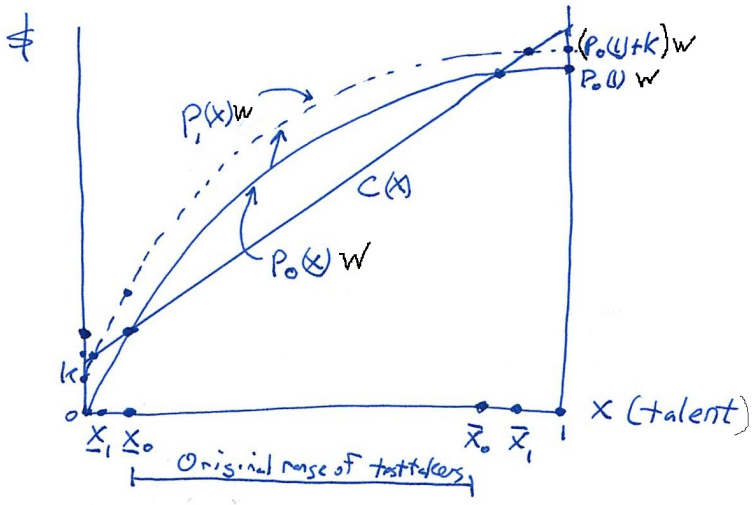



Figure 1: Talent, Cost and Benefit

In Figure 1, the cost of taking the test starts positive and rises convexly with talent, $x$. This represents there being a floor level of cost even for the untalented, but then not much more cost until talent becomes high. Most college graduates are the same in their opportunities, but a few talented ones have much better opportunities, not just a little better.

The initial pass rate, $p_0(x)$, gives us the initial benefit from taking the

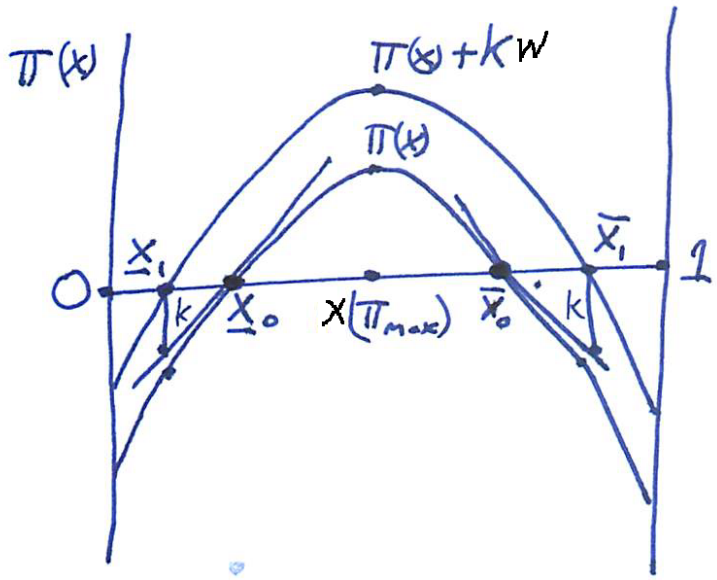



Figure 2: The Payoff from Taking the Test for Different Talent Levels

test, $p_0(x)w$. Students with talent below $\underline{x}_0$ do not take the test, because they have too little chance of passing. Students with abilities greater than $\overline{x}_0$ do not take the test because they have too high an opportunity cost.

**Proposition 1.** *If the test becomes easier, the quality of the top lawyers will increase.*

*Proof.* Initially, $\pi(\overline{x}_0) = p_0(\overline{x}_0)w - c(\overline{x}_0) = 0$. After the test becomes easier, $\pi(\overline{x}_0) = p_1(\overline{x}_0)w - c(\overline{x}_0) > 0$. Since $p(x)$ and $c(x)$ are both continuous, there will be at least a few types greater than $\overline{x}_0$ for which it is also true that $\pi(x) > 0$, even though $p'(x) > 0$ and $c'(x) > 0$. These few types will now take the test, so $\overline{x}$ will rise, and since some of them will pass the test, the quality of the top lawyers has risen too. ■

It can be similarly shown that the quality of the worst lawyers will fall when the test becomes easier. What, then, happens to the average quality of lawyers?

If the test does not become equally easier for all ability levels, then we cannot say what happens to the average quality of lawyers. It could be that the test becomes much easier for low abilities and only slightly easier for high

abilities, which is consistent with our assumptions so long as $p(x)$ is still increasing--- it simply would increase at a slower rate. Then, making the test easier would reduce the average quality. On the other hand, biasing the change in ease in the other direction could increase the average quality. Thus, we will look at a change that is ''equal'' in the senses defined earlier.

Some more notation will be useful. Let the interval of students taking the test before and after the test is made easier be denoted by $[\underline{x}_0, \overline{x}_0]$ and $[\underline{x}_1, \overline{x}_1]$, as in the Figure, and define:

$$\pi(x) \equiv p(x)w - c(x) \tag{2}$$

$$\tag{3}$$

**Proposition 2**. *If the test becomes equally easier for all students, the quality of the average lawyer will rise if the payoff from taking the test is concave and increasingly curved as the student's quality increases: if $\pi' > 0, \pi'' < 0$, and $\pi''' < 0$, then $[\underline{x}_0 + \overline{x}_0]/2 < [\underline{x}_1 + \overline{x}_1]/2$.*

*Proof.* Under the uniform density for $x$, the average quality is $\frac{\overline{x}-\underline{x}}{2}$. Average quality will rise if $\overline{x}$ rises more than $\underline{x}$ falls; that is, if

$$(\underline{x}_1 - \underline{x}_0) > (\underline{x}_0 - \underline{x}_1) \tag{4}$$

''Equally easier'' was defined as meaning that $p(x)$ becomes $p(x) + k$.

(1) Referring to Figure 2, note that since $\pi(x)$ is concave, using $k$ and its derivative at $\underline{x}_0$ to approximate the size of $(\underline{x}_1 - \underline{x}_0)$ is not exact and we can sign the bias:

$$(\underline{x}_1 - \underline{x}_0)\pi'(\underline{x}_0) > k \tag{5}$$

Using $k$ and the derivative at $\overline{x}_0$ has the opposite bias:

$$(\underline{x}_0 - \underline{x}_1)\pi'(\underline{x}_0) < k \tag{6}$$

The biases fall with $k$, so we can say that:

$$(\underline{x}_0 - \underline{x}_1)\pi'(\underline{x}_0) = k + \epsilon_1 \tag{7}$$

with $\epsilon_1$ approaching zero as $k$ becomes small. Similarly (except that since the slope is negative beyond $\pi(x_{max})$ we need to insert a negative sign to make the change a magnitude),

$$(\overline{x}_0 - \overline{x}_1)(-\pi'(\overline{x}_0)) = k + \epsilon_2 \tag{8}$$

We can make the test easier for large value of $k$ by adding a sequence of small values of $k$, so it is enough to show that $(4)$ is true for any starting values and for a sufficiently small $k$. Thus, to see whether $(4)$ is true we need to see whether

$$\pi'(\underline{x}_0) < -\pi'(\overline{x}_0) \tag{9}$$

(2) (Heuristic--- strictly speaking, the proof can continue with (3) below) The truth of $(9)$ depends on the characteristics of $\pi(x)$. First, let us show that $\pi'(\underline{x}_0) = -\pi'(\overline{x}_0)$ if $\pi(x)$ has $\pi''' = 0$; that is, if $\pi(x)$ is quadratic. From our assumptions that $\underline{x} > 0$ and $\overline{x} < 1$, if $\pi(x)$ is quadratic it takes the following form with the parameters $\alpha, \beta, \gamma$ all positive:

$$\pi(x) = -\alpha + \beta x - \gamma x^2, \tag{10}$$

From the first-order condition,

$$Argmax\pi(x) = \frac{\beta}{2\gamma}, \tag{11}$$

and, using the quadratic rule, $\pi(x) = 0$ at

$$(\underline{x}, \overline{x}) = \left( \frac{\beta}{2\gamma} - \frac{\sqrt{\beta^2 - 4\alpha\gamma}}{2\gamma}, \frac{\beta}{2\gamma} + \frac{\sqrt{\beta^2 - 4\alpha\gamma}}{2\gamma} \right). \tag{12}$$

Moreover,

$$\pi'(x) = \beta - 2\gamma x \tag{13}$$

so

$$\pi'(x_{max} + \Delta) = \beta - 2\gamma \left( \frac{\beta}{2\gamma} + \Delta \right) = \beta - \beta - 2\gamma\Delta \tag{14}$$

so $\pi'(x)$ takes the same magnitude whether $\Delta$ is positive or negative; $\pi(x)$ is symmetric around $x_{max}$. But that means, since from $(12)$ $\underline{x}$ and $\overline{x}$ are equidistant from $x_{max}$, that $\pi'(\underline{x}_0) = \pi'(\overline{x}_0)$ (noting that $\epsilon_1 = \epsilon_2$ also because of the symmetry).

(3) Note that if $Argmax(f(x)) = x^*$ then $Argmax(f(x) + k) = x^*$ also since the first order conditions are the same: $f'(x) = 0$.

Next, pick a different constant, $\kappa$, and consider the following positive expression:

$$-f'(x^* + \kappa) - f'(x^* - \kappa) \tag{15}$$

See that:

$$f'(x^* + \kappa) = f'(x^*) + \int_0^{\kappa} f''(x^* + z)dz \tag{16}$$

The expression above becomes, since $f'(x^*) = 0$,

$$-f'(x^*+\kappa) - f'(x^*-\kappa) = -\int_0^{\kappa} f''(x^*+z)dz - \int_0^{\kappa} f''(x^*-z)dz = \int_0^{\kappa} [-f''(x^*+z) - f''(x^*-z)]dz \tag{17}$$

If $f'''(x) < 0$ then $f''(x)$ is a decreasing function, and so, since $f''(x) < 0$, it follows that $-f''(x^*+z) - f''(x^*-z) > 0$. Thus, we have proven that $|f'(x^*+\kappa)| > |f'(x^*-\kappa)$" if $f''' < 0$, which proves Proposition 2. ■

**Corollary.** *Proposition 2 also holds true if we redefine "equally easier" as that the probability of each type of student passing rises by the same percentage.*

**Proof.** If the test becomes equally easier for all types in a different sense, that each type's probability of passing is multiplied by the same amount so $p_1(x) = \kappa p_0(x)$ for $\kappa > 1$, the result is true a fortiori, because now the absolute increase in $p$ is $\kappa p_0(x)$, which is bigger for bigger $x$.

If the average quality of those taking the test rises, so does the average quality of those passing, if the absolute increase in the probability of passing is equal for all types or is greater for higher quality types. ■

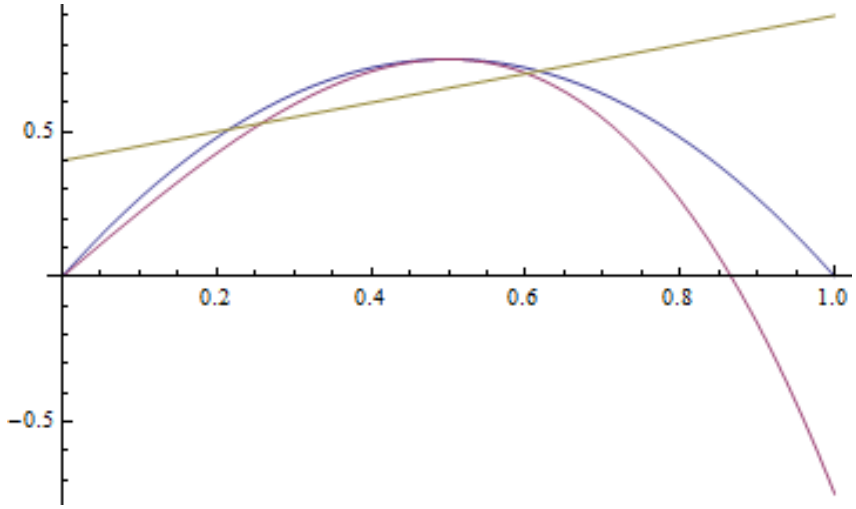



Figure 3: Quadratic $p(x)$, Cubic $p(x)$, and Linear $c(x)$

Figure 3 and 4 show situations in which $\pi''' = 0$ and $\pi''' < 0$. The curves are $p(x) = 1.5x - x^2$, $p(x) = 1.5x - x^3$, and $c(x) = 0.1 + x$.

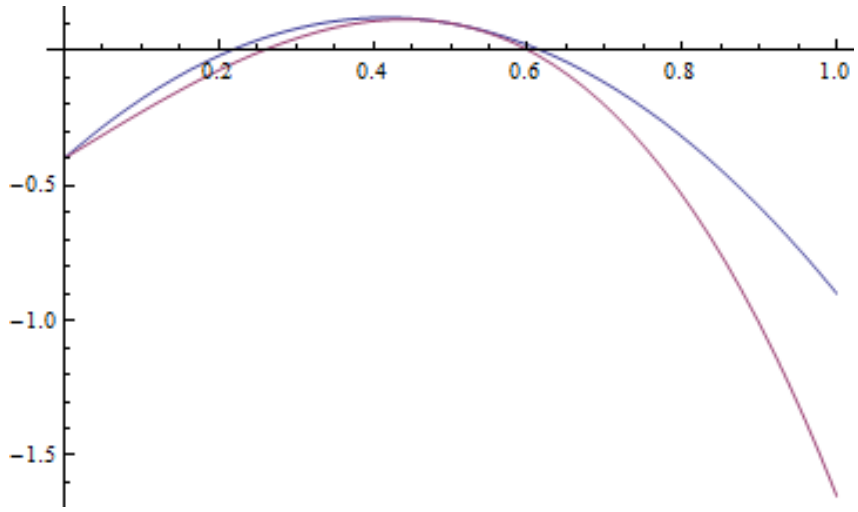



Figure 4: Quadratic and Cubic $\pi(x)$

Proposition 1 is robust to many of the assumptions of the model. We can take it as a general prediction.

Proposition 2 is just an ‘‘it can happen’’ result. It requires $\pi'''(x) < 0$, which is special, though not unrealistically so. It includes the following cases, for example: $p(x)$ is cubic and concave, $c(x)$ is quadratic and convex (if $p(x) = \alpha x - \beta x^3$ then $p'''(x) = -6\beta$); $p(x)$ is linear and concave, $c(x)$ is cubic and convex; $p(x)$ is logarithmic and concave, $c(x)$ is linear (if $p(x) = log(x)$ then $p'''(x) = \frac{-2}{x^3}$).

Also, if $c(x)$ is convex rather than concave, that adds another effect running counter to those in our second point. The second point said that when $p$ becomes higher by an absolute amount, a greater range of types is added at the end end of the interval than at the low. If $c(x)$ increases convexly instead of linearly, though, the increase at the high end has to be greater than at the low end for a type to be willing to take the test.

If $f(x)$ is not uniform, but instead is downward-sloping ($f' < 0$; more talented types are less common) that runs counter to the effect in the second point. The reason is that now the average change in quality is a weighted average of the types, and though fewer new low types take the test than new high types, the low types are more common.

In our model we have treated the value of the prize for passing the test, $w$, as being independent of the number of those passing. If the test was difficult

because existing lawyers wanted to protect their incomes, one's first thought is that our assumption is false: $w$ should fall with the number passing.

On second thought, one should pull back a little. What if existing lawyers are of low quality? Then they might want the test to be hard so as to keep high-quality lawyers out of the market. Salaries could actually rise as the test became easier and lawyers became more numerous--- but not the salaries of low-quality lawyers. Much here depends on the degree of substitutability or complementarity between low-talent and high-talents lawyers, as well as between young lawyers and old lawyers.

## Licensing and Quality in the Japanese Bar

Theory tells us two things. Proposition 1 says that if the test becomes easier, the number of high quality lawyers will increase. Proposition 2 says that if the test becomes easier, the average quality of lawyers can increase, but only under particular assumptions on how opportunity cost and the difficulty of test passage interact with student quality. We will now look at a particular case in which a test did become easier: the bar exam in Japan.

### A. The Exam

1. The post-war regime.--- The vicissitudes of the licensing exam for the Japanese bar illustrate the conflicting ways occupational licensing can affect service quality. For most of the post-war period, those who would become lawyers in Japan attended the two-year government-run Legal Research & Training Institute (LRTI). Virtually all who attended the LRTI passed the exam at the end of the program.

People could become lawyers only by training at the LRTI, but the government capped the Institute's capacity at 500 (Ramseyer & Nakazato, 1999, ch. 1). As a result, the entrance exam to the LRTI functioned as the effective "bar exam," and limited the number of new lawyers to 500 a year. Given how many applied, this process yielded a pass rate on the entrance exam of two to four percent. The government gave the exam only once a year, and those who passed it typically failed it many times first. To explore the effect of the exam, we randomly sampled from the bar directory about 700 lawyers who had passed the exam by 1990. On average, these men and women failed the exam 6.7 times before they eventually

passed.[2]

Although this exam obviously excluded those who scored low, it did not necessarily yield a cohort of higher-quality lawyers. The reason is simple: the law graduates with the highest opportunity costs did not invest many years in taking it. Consider the position of a decent student at the preeminent University of Tokyo. The university administered the hardest (blindly graded) entrance exam of all law faculties, and at age 18 he had passed it.

Precisely because he was so bright, this University of Tokyo law graduate enjoyed access to a wide range of elite and high-paying jobs. Employers ranging from prestigious government offices to the Tokyo-Stock-Exchange-listed banks and manufacturing firms bid for the chance to hire him. Should he prefer to practice law instead, he might pass the LRTI examination on one of his first two or three attempts. If he did, fine and good--- he could become a lawyer. If not, however, however, he could spend years studying for the exam only if he abandoned his job offers from elite and well- paying employers.

Contrast this University of Tokyo student with a student at one of the many third-tier law faculties. That this other student is at a third-tier college suggests he does not test well: put less euphemistically, he brings a lower set of cognitive skills. Probably, he also has a lower chance of ever passing the LRTI exam. Yet he also incurs much lower opportunity costs to study for it. The prestigious government offices would never hire him, and neither would most of the TSE- listed firms. Compared to his University of Tokyo peer, he sacrifices less if he spends years studying for the exam.

The number of times various lawyers failed the LRTI exam reflects these contrasting opportunity costs. In our random sample, University of Tokyo graduates failed the exam a mean 5.4 times (as estimated by their age upon finally passing it). Graduates of its arch-rival Kyoto University also failed it 5.4 times, and those of the third-ranked Hitotsubashi University failed it 5.9 times. By contrast, graduates of the second-tier Chuo University failed it 7.0 times. Those from the third-tier Nihon University failed it 9.1 times.

Tokyo graduates did not have mean failure numbers lower than Nihon graduates just because would-be lawyers from Tokyo passed the exam within a few tries. They had lower numbers because those who did not pass dropped out of exam-taking pool. Many Tokyo graduates did pass on one of their very first tries, but those

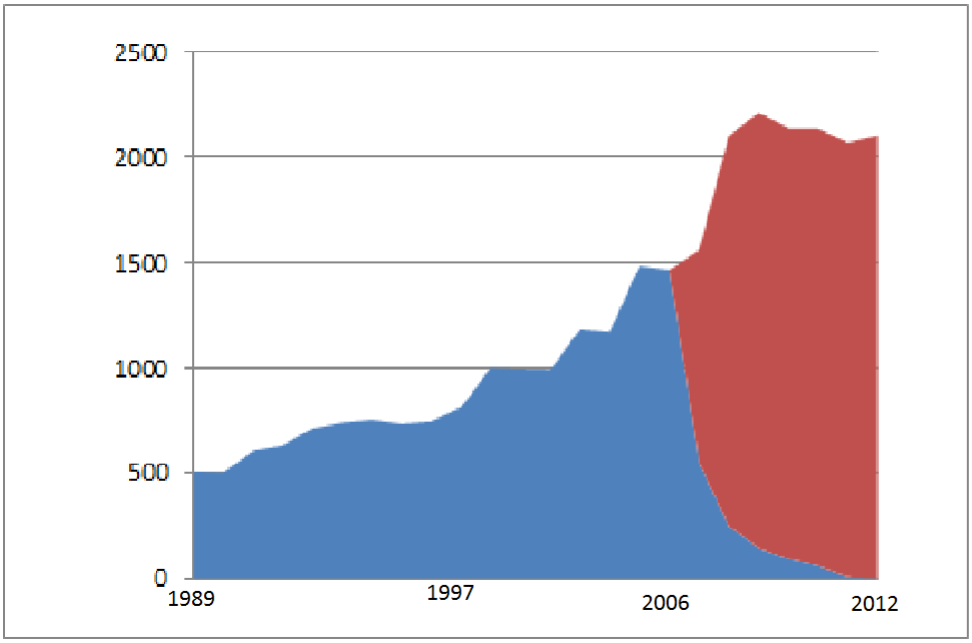
[2]We describe the data in more detail at Nakazato, Ramseyer & Rasmusen (2010).

who did not abandoned the effort before losing access to the elite, well-paying employers. Nihon graduates had many fewer job offers anyway, so they stayed to take the exam, year after year. Eventually, a few of them passed --- and joined the bar.

| Year | Old Test | New Test |
|---|---|---|
| 2003 | 2.58 | |
| 2004 | 3.42 | |
| 2005 | 3.71 | |
| 2006 | 1.81 | 48.25 |
| 2007 | 1.06 | 40.18 |
| 2008 | 0.79 | 32.98 |
| 2009 | 0.60 | 27.64 |
| 2010 | 0.45 | 25.41 |
| 2011 | | 23.54 |
| 2012 | | 25.06 |

Source: http://bar-exam.shikakuseek.com/data/index.html.

TABLE 2: PERCENTAGE PASSING THE OLD AND THE NEW LRTI EXAMS




Source: The Ministry of Justice, at:
http://www.moj.go.jp/jinji/shihoushiken/press_071108-1_19syutu-gou.html.

FIGURE 5: NUMBERS PASSING THE OLD EXAM AND THE NEW

2. THE CURRENT REGIME--- Beginning in 1991, the government began to expand the Institute. Concurrently, universities began to build post-graduate ‘‘law schools.’’ By 2007, the first law school graduates were ready and new lawyers started coming from two sources: the "old exam," taken after undergraduate college, and the "new exam," taken after the post-graduate law school. From 2007 to 2011 was a transition period. A college graduate who did not go to law school could take the old exam any number of times, once per year, as before. Alternatively, he could start law school and take the new exam -- but possibly start law school after taking the old exam one or more times. He could take the new exam only three times within five years, but the pre-law school attempts under the old exam did not count against this limit. After 2011, someone who had not graduated from law school could take a preliminary exam and then the LRTI exam (the "new exam"), while a law-school graduate would go straight to the LRTI exam. Table 2 shows the pass rates for the two exams during the overlap period. Figure 5 shows the number passing of each type.

As before, would-be lawyers usually but not necessarily majored in law in college. Upon graduation, however, they now entered law school where they

studied law for another two years. At the end of the time, they took the entrance exam to the Institute. Although they could only take it three times, the Institute now accepted about 2,000 applicants per year.

Contrast lawyer quality in the 1945--1990 regime with quality in the 2007--present regime. Our 700-lawyer random sample of lawyers who joined the bar between 1945 and 1990 has the following composition:

University of Tokyo: 16.7 percent
Top three law faculties: 26.4
Top ten law faculties: 47.5

The top three law faculties were Tokyo, Kyoto, and Hitotsubashi. We take the other members of the top ten from a recent university ranking by entrance-exam difficulty.

The students who passed the LRTI exam from 2009 to 2011 included the following:

University of Tokyo: 10.1 percent
Top three law schools: 21.2
Top ten law schools: 47.6

For these numbers, we look to a student's post-graduate law school rather than undergraduate law faculty. We keep the identity of the top-ten universities unchanged.

Apparently, new lawyers bring roughly the same intellectual ability as before. The fraction from the University of Tokyo has fallen, and so has the total fraction from the top three schools. Yet the fraction from one of the top-ten universities has apparently remained unchanged.

| Under-graduate Colleges | | | Post-Graduate Law Schools | |
|---|---|---|---|---|
| Waseda | 262 | | Tokyo | 200 |
| Keio | 225 | | Chuo | 196 |
| Tokyo | 223 | | Keio | 165 |
| Chuo | 136 | | Waseda | 130 |
| Kyoto | 116 | | Kyoto | 100 |
| Hitotsubashi | 80 | | Meiji | 84 |
| Doshisha | 64 | | Hitotsubashi | 78 |
| Osaka | 52 | | Kobe | 70 |
| Kobe | 43 | | Tohoku | 59 |
| Jochi | 39 | | Ritsumeican | 59 |
| Meiji | 39 | | Doshisha | 59 |
| Tohoku | 33 | | Kansai gakuin | 51 |
| Ritsumeikan | 33 | | Jochi | 50 |
| Nagoya | 27 | | Osaka | 49 |
| Kyushu | 25 | | Kansai | 38 |
| Osaka City | 25 | | Kyushu | 38 |
| Total | 1,422 | | Total | 1,426 |

Table 3: Academic Origins of Passers of the New Test in 2008

Simultaneously, however, the absolute number of top-quality lawyers rose. That 16.7 percent of the lawyers under the old regime had studied at the University of Tokyo implies (on a 500-student LRTI class) a cohort of about 80 graduates a year. Given the 400-student class size at the university, those 80 graduates comprise about a fifth of the class.

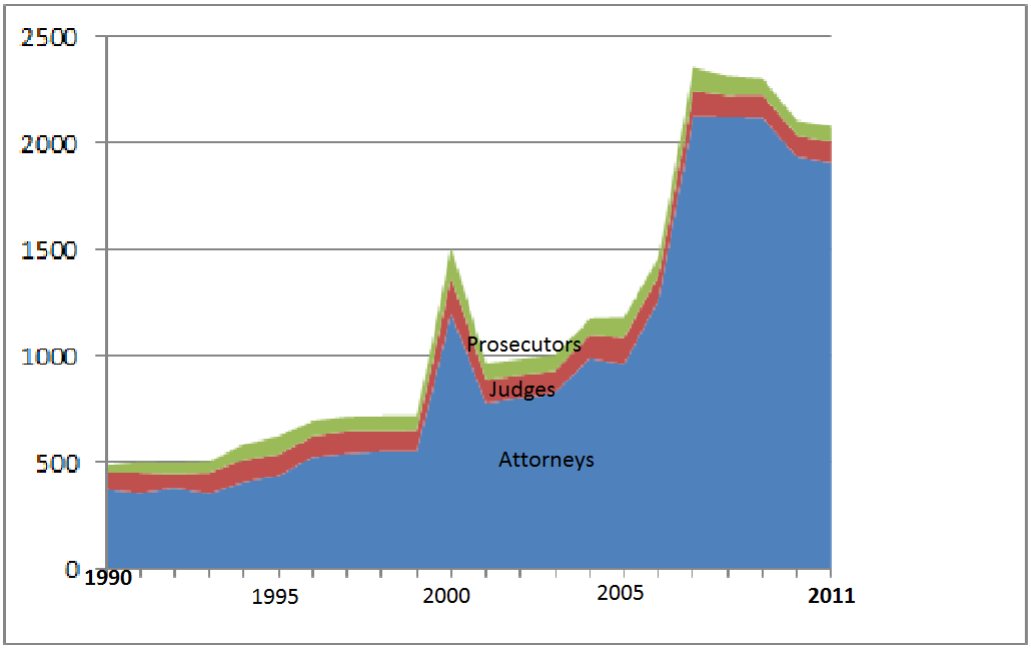



FIGURE 6: JOBS OF NEW LAWYERS

Sources: The Japan Federation of Bar Associations and the Ministry of Justice, as found in: http://www.nichibenren.or.jp/library/ja/publication/books/data/housou4-4.pdf, http://www.moj.go.jp/content/000102262.pdf, http://www.nichibenren.or.jp/jfba_info/statistics/reform/fundamental_statistics.html. Because of the transition from the old to new testing and training regimes, the LRTI graduated two classes in 2000.

From 2009 to 2011, an average of 209 graduates of the University of Tokyo law school moved to the LRTI. For a law school that graduates 240 students a year (300 students through 2009), this constitutes an 87-percent eventual pass rate. Not all passed the exam on their first attempt, of course. Given that those who fail it may take it a second or third (but not more) time, in any given year the actual University of Tokyo pass rate will be closer to 1/2. But if the university graduates 240 people a year and 209 enter the LRTI, virtually all Tokyo graduates must eventually become lawyers. The entering lawyer class is only 10.1 percent Tokyo graduates for a simple reason: there are not many more Tokyo graduates to admit. Before 1990, the bar took only 80 Tokyo graduates a year; now it takes nearly all available candidates --- 200.

Thus, as Proposition 1 says, the number of top-quality lawyers has risen. We cannot tell whether average quality has increased. We do know that the data show no obvious sign that it has declined.

### Incomes

In 2006, there were 1,244 new lawyers. By 2010, there were 2,118. What did this do to incomes? If the number of high-quality graduates rose, then there will be two opposite effects. One is that the number of high-earning young lawyers will rise, because of the increase in talent. The other is that the incomes of all young lawyers will fall, because of the increased quantity supplied. In addition, depending on the complementarity or substitutability, we would see the incomes of older lawyers rise or fall.

Mean incomes have been falling all across the experience levels over that period. In 2006, new lawyers made 10.5 million yen; in 2010, they made 7.8 million yen. In 2006, 5th year lawyers made 24.4 million yen; in 2010, 5th years made 21.7 million yen. In 2006, 10th year lawyers made 31.1 million yen; in 2010, 10th year lawyers made 26.6 million yen (Homu sho, 2011, Sec. 21a).

If we trace the mean incomes of each class over the 5 year period, they increased until 2009 or 2010, when they dipped. For example, take the 2002 class. They were 5th year lawyers in 2006, and made 24.4 million yen. Their mean earnings went from 28.2 (2007) to 30.0 (2008) to 31.4 (2009) to 30.1 (2010) (Homu sho, 2011, Sec. 21a). This was a strange period in the Japanese economy, with stagnant growth in the first part and recession in the second. Table 3 compares the salaries (including bonuses) of employees (not law firm partners or sole proprietors) in four occupations. The wild swings suggest that individual years cannot be taken too seriously, but it gives some idea of how salaries have been moving.

| | 2001 | 2002 | 2003 | 2004 | **2005** | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Doctors | 119 | 114 | 115 | 117 | **100** | 105 | 105 | 111 | 109 | 109 | 112 |
| Dentists | | | | | **100** | 61 | 86 | 82 | 80 | 64 | 83 |
| Lawyers | | | | | **100** | 65 | 72 | 67 | 57 | 107 | 55 |
| Professors | 103 | 102 | 100 | 99 | **100** | 97 | 96 | 96 | 98 | 95 | 95 |

Table 3: Incomes of Employees

Sources: Kosei rodo sho. Various years. ‘‘Chingin kozo kihon tokei chosa’’ [Basic Survey of Wage Structure], Tokyo: Ministry of Health, Labor & Welfare. http://www.mhlw.go.jp/toukei/youran/roudou-nenpou2010/03.html. Incomes are normalized so that the 2005 income of each occupation equals 100.

The percentage of LRTI grads who didn't register with the bar immediately is a proxy for those who couldn't find a job. This climbs from 5% in 2008 to 39.8% (old exam) in 2012 (Tsujikawa, et al., 2012, 16). The starting salary of those who did get jobs also shows those at the bottom doing worse over time. Those who made 3 million yen or less went from 0.5% in 2006 to 6.6% in 2010 if they took the old exam, from 1.4% to over 2.3% if they took the new (Fujihara, 2012, 9).

On the other hand, those at the top did not decline as much. Those who took the old exam who made over 10 million yen went from 0% in 2006 to 6.6% in 2010, though those who took the new exam went from 8% to 5.8% (Fujihara, 2012, 9).

Another indicator is the number of firms a lawyer had on retainer, a sign of success. Lawyers in their 50's had about the same number of firms on retainer in 1990, 2000, and 2010: 16.4, 16.3 and 16.8. Among those in their 20's, however, the number has risen radically, from 0.1 to 2.1 to 3.7 (Jiyu to seigi, 2011, 73). Most young lawyers do not have clients who pay a regular retainer, but those who are superstars increasingly do.

We can also look at the difference between mean and median incomes. The income of attorneys in their 20's had a mean of 6.80 million yen and a median of 6.35 in 1990, a ratio of 1.07 By 2000, the mean was 7.44 and the median was 5.85, a ratio of 1.27 (Jiyu to seigi, 2002, 149). For 2010 we do not have quite the same category of data available, but the income of attorneys with less than 5 years experience had a mean of 6.70 and a median of 5.00, a ratio of 1.34 (Jiyu to seigi, 2011, 121). These numbers indicate that median income of young lawyers was falling from 1990 to 2010, but the number of high-income young lawyers was not falling so much or was even rising.

## III. Conclusion

Making it easier to enter an occupation can actually increase the quality of those engaged in it. If more talented people have a greater opportunity cost of studying for an examination, apprenticing themselves to an incumbent, or spending time taking coursework, a relaxation in the rigor of the requirements can attract them to a formerly avoided occupation. Quality does not necessarily become better--- it all depends on the sizes of the opportunity cost and the ability of the requirements to screen quality--- but there is not an inevitable tradeoff between quality and quantity, between keeping quality high and keeping prices low. The key to the phenomenon is the difference between starting with a fixed population of test-takers and starting with voluntary participation. Starting

with a fixed population, a more difficult test will always increase quality and reduce quantity. Starting with a variable population, a more difficult test can both reduce quality and reduce quantity.

Thus, each occupation must be looked at individually to decide how requirements affect its quality. We looked at the specific case of lawyers in Japan, a case of great intrinsic interest for Japan and countries with similarly difficult exams and of illustrative interest for us because of how drastic the change was. The old examination was terrifically hard, and lawyers were an elite group in Japan. The new examination is much easier. We do not find that the quality of the average lawyer has increased--- though we have not disproved that either--- but we do find that the number of lawyers at the talented end of the scale has increased. This is particularly remarkable in that the prize--- the value of being a lawyer--- has been diluted by the increase in the number of lawyers.

## References


American Enterprise Institute; Mark J. Perry (2011) ‘‘Government Licensing Gone Wild: Institute for Justice Fights for Tour Guides in New Orleans,’’ http://www.aei-ideas.org/2011/12/government-licensing-gone-wild-institute-for-justice-fights-for-tour-guides-in-new-orlean (December 13, 2011).

American Enterprise Institute; Mark J. Perry (2012) ‘‘Should It Really Be Illegal To Braid Hair Without First Getting a License from the Government?’’ http://www.aei-ideas.org/2012/06/should-it-really-be-illegal-to-braid-hair-without-first-getting-a-license-from-the-govern (June 13, 2012).

Brookings Institute; Clifford Winston (2012) ‘‘Deregulate the Lawyers’’ http://www.brookings.edu/research/opinions/2012/04/deregulate-lawyers-winston (April 2012).

Broscheid, Andreas & Paul E. Teske (2003) ‘‘Public Members on Medical Licensing Boards and the Choice of Entry Barriers,’’ *Public Choice*, 114:445--459 (2003).

Carpenter, Dick M. (2012) ‘‘Testing the Utility of Licensing: Evidence from a Field Experiment on Occupational Regulation,’’ *Journal of Applied Business and Economics*, 13(2) (2012).

Federman, Maya N., David E. Harrington & Kathy J. Krynski (2006) ‘‘The Impact of State Licensing Regulations on Low-Skilled Immigrants: The Case of Vietnamese Manicurists,’’ *The American Economic Review*, 96(2): 237--241 (2006).

Friedman, Milton (1962) *Capitalism and Freedom*, Chicago: University of Chicago Press.

Friedman, Milton & Simon Kuznets (1945) *Income from Independent Professional Practice*, National Bureau of Economic Research (1945).

Fujihara, Yasuo (2012) ‘‘Shin 63 ki bengoshi no shugyo jokyo ni tsuite’’ [Regarding Job Searches for the New 63d Term Lawyers], *Jiyu to seigi*, 63, 5:8--13 (2012).

Harrington, David E. & Kathy J. Krynski (2002) ‘‘The Effect of State Funeral Regulations on Cremation Rates: Testing for Demand Inducement in Funeral

Markets,'' *Journal of Law and Economics*, 45(1): 199--225 (2002).

Heritage Foundation; Conn Carroll (2008) ''Defending Joe's Right To Earn a Living,''
http://blog.heritage.org/2008/10/17/defending-joes-right-to-earn-a-living/
(October 17, 2008).

Homusho. 2011. Shiho shushu shuryosha to no keizaiteki na jokyo ni kansuru chosa [Survey on Economic Circumstances of Legal Training Graduates] (May 2011), available at: http://www.moj.go.jp/content/000077036.pdf

Institute of Justice; Carpenter, Dick M., Lisa Knepper, Angela C. Erickson & John K. Ross (2012) ''License to Work: A National Study of Burdens from Occupational Licensing,'' http://ij.org/images/pdf_folder/economic_liberty/occupational_licensing/licensetowork.pdf (2012).

Ito, Takashi (2012) '' Kongo no saiyo jokyo no yosoku to kadai ni tsuite'' [Issues and Predictions Regarding the Future Hiring Circumstances], *Jiyu to seigi*, 63, 5: 23--26 (2012).

Jiyu to seigi (2002) ''Nihon no horitsu jimusho 2000: Bengoshi gyomu no keizaiteki kiban ni kansuru jittai chosa hokokusho'' [Japanese Law Offices, 2000: Report on Survey Regarding the Economic Basis of the Work of Lawyers], *Jiyu to seigi*, 53, 13 (spec. issue) (Dec. 2002).

Jiyu to seigi (2011) ''Bengoshi gyomu no keizaiteki kiban ni kansuru jittai chosa hokokusho'' [Report on Survey Regarding the Economic Basis of the Work of Lawyers], *Jiyu to seigi*, 62, 6, (spec. issue) (Dec. 2011).

Homusho (2011) ''Shiho shushu shuryosha to no keizaiteki na jokyo ni kansuru chosa'' [Survey on Economic Circumstances of Legal Training Graduates], http://www.moj.go.jp/content/000077036.pdf (May 2011).

Kleiner, Morris M. (2010) ''Occupational Licensing,'' *Journal of Economic Perspectives*, 14 (4): 189--202 (2000).

Kleiner, Morris M. (2006) *Licensing Occupations: Ensuring Quality or Restricting Competition?* W.E. Upjohn Institute (2006).

Kleiner, Morris M. & Kudrle, R. T. (2000) ''Does Regulation Affect Economic Outcomes? The Case of Dentistry,'' *Journal of Law and Economics*, 43: 547--582.

Kleiner, Morris M. & Alan B. Krueger (2010) ‘‘The Prevalence and Effects of Occupational Licensing,’’ *British Journal of Industrial Relations*, 48(4): 676--687 (2010).

Kleiner, Morris M., Allison Marier, Kyoung Won Park & Coady Wing (2012) ‘‘Relaxing Occupational Licensing Requirements: Analyzing Wages and Prices for a Medical Service* January 2012).

Kleiner, Morris M. & Kyoung Won Park (2011) ‘‘Life, Limbs, and Licensing: Occupational Regulation, Wages, and Workplace Safety of Electricians,’’ working paper (September 12, 2011).

Kleiner, Morris M. & Richard M. Todd (2007) ‘‘Mortgage Broker Regulations That Matter: Analyzing Earnings, Employment, and Outcomes for Consumers,’’ NBER Working Paper No. 13684 (December 2007).

Kosei rodo sho (Various years) ‘‘Chingin kozo kihon tokei chosa’’ [Basic Survey of Wage Structure], Tokyo: Ministry of Health, Labor & Welfare, http://www.mhlw.go.jp/toukei/youran/roudou-nenpou2010/03.html.

Kugler, Adriana D. & Robert M. Sauer (2005) ‘‘Doctors without Borders? Relicensing Requirements and Negative Selection in the Market for Physicians,’’ *Journal of Labor Economics*, 23(3): 437--465 (2005).

Larsen, Bradley (2012) ‘‘Occupational Licensing and Quality: Distributional and Heterogeneous Effects in the Teaching Profession,’’ Massachusetts Institute of Technology Economics working paper (October 30, 2012).

Moore, Thomas G. (1961) ‘‘The Purpose of Licensing,’’ *Journal of Law & Economics*, 4: 93--117 (1961).

Nakazato, Minoru, J. Mark Ramseyer & Eric B. Rasmusen (2010) ‘‘The Industrial Organization of the Japanese Bar: Levels and Determinants of Attorney Income,’’ *Journal of Empirical Legal Studies*, 7(3): 460--489 (September 2010).

Nihon bengoshi rengo kai (2011) ‘‘Comment on Homusho, 2011,’’ http://www.moj.go.jp/content/000076942.pdf (2011).

Pagliero, Mario (2010) ‘‘Licensing Exam Difficulty and Entry Salaries in the US Market for Lawyers,’’ *British Journal of Industrial Relations*, 48, 4: 726--739 (December 2010).

Pagliero, Mario (2011) ‘‘What Is the Objective of Professional Licensing? Evidence from the US Market for Lawyers,’’ *International Journal of Industrial Organization*, 29, 4: 484--492 (2011).

Pellizzari, Michele & Giovanni Pica (2011) ‘‘Liberalizing Professional Services: Evidence from Italian Lawyers,’’ U. of Bocconi working paper (May 2011).

Ramseyer, J. Mark & Minoru Nakazato (1999) *Japanese Law: An Economic Approach,* Chicago: University of Chicago Press.

Shi, Lan (2012) ‘‘The Effect of Mortgage Broker Licensing On Loan Origination Standards and Defaults: Evidence from U.S. Mortgage Market 2000-2007,’’ University of Washington, Department of Economics, working paper UWEC-2012-02 (2012).

Society of American Law Teachers (2002) ‘‘Statement on the Bar Exam,’’ *Journal of Legal Education*, 52 (3): 446--452 (2002).

Stigler, George J. (1971) ‘‘The Theory of Economic Regulation,’’ *Bell Journal of Economics & Management Science*, 2, 3--21 (1971).

Timmons, Edward J. & Robert J. Thornton (2008) ‘‘The Effects of Licensing on the Wages of Radiologic Technologists,’’ *Journal of Labor Research*, 29:333--346 (2008).

Timmons, Edward J. & Robert J. Thorton (2010) ‘‘The Licensing of Barbers in the USA,’’ *British Journal of Industrial Relations,* 48(4):740--757 (2010).

Tsujikawa, Masato, Taro Takahashi & Kazunari Fujimoto (2012) ‘‘Shinki toroku bengoshi no shushoku jokyo to Nichibenren no koremade no torikumi,’’ [The Placement Circumstances of Newly Registered Attorneys and the JFBA’s Reponse to Date], Jiyu to Seigi (May 2012).

Wanchek, Tanya (2010) ‘‘Dental Hygiene Regulation and Access to Oral Healthcare: Assessing Variation across the US States,’’ *British Journal of Industrial Relations*, 48(4):706--725 (2010).