The Unknown Costs of Dodd-Frank

BY SAM BATKINS AND IKE BRANNON

This July marked the third anniversary of the passage of the Dodd-Frank Act, which represents the most far-reaching change of the U.S. financial regulatory environment since the Great Depression. A natural question to ask after such an interval is whether the compliance costs experienced by the affected industries approximate what was originally anticipated. Unfortunately, the most appropriate answer to this question is a shrug of the shoulders because neither Congress nor the various agencies tasked with enforcing Dodd-Frank have ever bothered to estimate the costs of a good portion of the legislation.

While Congress has the right to legislate out of ignorance, the independent government agencies should not be allowed to do likewise. Yet that is precisely how they operate. Extending the executive branch requirement that independent agencies estimate the costs and benefits of proposed regulations is a common-sense reform that both parties have broached but neither has seen fit to implement. The far-reaching and complex mess that the implementation of Dodd-Frank has become proves to be a great argument for doing precisely that, and imposing a degree of accountability on the branches of government tasked with its enforcement.

Regulatory missteps | The enormity of what Dodd-Frank encompasses has made implementation extremely complex. The law charges 20 different federal agencies with oversight and regulatory authority, which to date have produced 120 regulations with a monetized cost or paperwork burden.

One result of the enormous scope of the legislation is that it has created numerous mistakes that various regulatory authorities had to go back and fix. Regulators have already published 66 corrections to previous regulations.

There have also been numerous missed deadlines during implementation. According to Davis Polk, a law firm that tracks Dodd-Frank implementation, there are 279 rulemaking deadlines in the law. Based on the most recent data, “175 (62.7%) have been missed and 104 (37.3%) have been met with finalized rules...”

Dodd-Frank costs | Without oversight from the Office of Information and Regulatory Affairs, financial regulators have largely hidden or simply omitted the costs of financial reform. There have been some published estimates, but it took the D.C. Circuit Court of Appeals to vacate a Securities and Exchange Commission rule (Business Roundtable v. SEC) for failing to conduct a proper analysis. Other entities, such as the Consumer Financial Protection Bureau (CFPB), still rarely bother to monetize the effects of their rulemakings.

From compiling the relevant data published in the Federal Register, agencies calculated that the explicit societal cost of complying with Dodd-Frank is currently $15.4 billion and growing, with 58.3 million paperwork-burden-hours that employees of various financial services will have to spend to ensure compliance with the law. To provide some perspective, the newly created CFPB has already listed 39.5 million paperwork hours at an associated cost of $842 million, or $21.40 an hour. In previous research, we found that the median cost of complying with one hour of Dodd-Frank was roughly $100, with high-end costs approaching $400 (see “What Does An Hour Of Regulatory Compliance Cost?” Summer 2012).

However, Dodd-Frank’s $15.4 billion estimate depends on the assumption that many of its paperwork requirements have no corresponding cost for businesses and consumers, which is obviously nonsense. For example, the Volcker rule would produce an estimated 6.5 million hours of paperwork, but no agency attempted to monetize this figure. Some regulators do engage in a back-of-the-envelope calculation by multiplying an average hourly wage rate and regulatory compliance hours, but many do not, in part because arriving at an acceptable value for an hourly wage rate is no small feat.

Various government agencies issued 42 regulations under Dodd-Frank that create paperwork burdens but did not quantify their cost to the economy. Together, those 42 rules impose 17.3 million hours of paperwork, or 30 percent of the law’s paperwork burden.

It may be difficult to come up with an opportunity cost for an hour of regulatory compliance, but regulators do accomplish this in other instances. If we look across the government regulatory bureaucracy we see that the value placed on an hour spent complying with a government regulation to be somewhere between $40 and $400 an hour. If we merely apply the average hourly compliance cost used by Dodd-Frank regulations that do monetize hours, we get $265 an hour; the upper-end total reflects the fact that wages tend to be higher in the industries most affected by Dodd-Frank.
Multiplying that rate by 17.3 million hours gives us an additional $4.5 billion in compliance costs, for a total compliance cost of approximately $20 billion just for regulations already issued.

If that cost isn’t daunting enough, Davis Polk projects that nearly a third of the law is pending without any formal rulemaking yet introduced. Assuming the cost of compliance remains constant throughout the final third of implementation, this would yield “on paper” compliance costs of roughly $30 billion, with 86.1 million paperwork-burden-hours. In other words, financial reform would cost more than the nation of Estonia produces in a year, with a few billion dollars to spare.

**Hiding costs** | Failing to simply monetize paperwork hours is just one way that regulators conceal Dodd-Frank’s costs. Another tool is to pressure economists to omit relevant cost data. Two separate inspector general reports have highlighted instances in which policy personnel within the SEC and Commodity Futures Trading Commission pressured economists to omit compliance costs. One report concluded with the IG declaring that it was “troubled at the lack of available (and verified) data pertaining to compliance costs borne by the industry, at least at the proposed rulemaking stage.” Little has changed at those two agencies since the IG reports.

However, there are other avenues for determining the impact of major Dodd-Frank provisions than asking government regulators to make a good-faith estimate. Just as regulators fail to disclose cost data, regulated entities are more than willing to report what Dodd-Frank is doing to their bottom line.

We examined the recent 10-k reports of six major financial companies (Bank of America, Wells Fargo, JPMorgan Chase, US Bancorp, PNC, and MetLife) and found that all of them contained estimated losses from Dodd-Frank compliance. Those six companies alone reported $3.8 billion in Dodd-Frank-related regulatory losses, mainly attributable to the Durbin Amendment’s new price controls on debit cards. The Federal Reserve did not bother with a cost estimate for the debit card regulation, only noting that it would impose 73,000 paperwork hours. While it’s easy to say that the amendment merely transfers money from banks to customers, it’s also worth investigating whether fewer people will be given (or use) debit cards and if we see deadweight losses as a result.

**Reform baby steps** | There are some nascent regulatory reform efforts afoot in academic circles and on Capitol Hill. Sen. Rob Portman (R-Ohio) has reintroduced the “Independent Agency Regulatory Analysis Act” (S. 1173), which would require all independent agencies to conduct a comprehensive cost-benefit analysis and “design rules in the most cost-effective manner.” A similar bill was introduced in the Homeland Security and Government Reform Committee last year, but it never received a vote. Senator Portman’s legislation has two cosponsors, including Democrat Mark Warner, but prospects for passage appear remote.

Fortunately, promoters of regulatory transparency received a strong endorsement this summer from the Administrative Conference of the United States (ACUS). The group, which President Obama described as a “public-private partnership designed to make the government work better,” is also considered an independent federal agency tasked with issuing recommendations to federal agencies on how to improve procedures. It recently opined, “Each independent regulatory agency should develop and keep up to date written guidance regarding the preparation of benefit-cost and other types of analysis.”

In a surprise to no one, other independent federal agencies oppose this so-called “paralysis by analysis,” as if there are no competent economists at the SEC or Federal Reserve that could do such analysis. Although ACUS is now a strong ally of cost-benefit analysis (as is the president, ostensibly), Senate Democrats appear almost universally opposed to any new requirements on independent agencies.

**Ignorance isn’t bliss** | Neither the members of Congress nor the public had much of an idea of the implementation costs of Dodd-Frank when the bill was approaching final passage. The sad reality is that even today, as the regulations emanating from that legislation wind their way through the bureaucracy, we still have no clue what Dodd-Frank will truly cost the economy.

Legislating or governing in ignorance is not only a terrible way of running a government, it’s also unnecessary. Requiring all agencies to provide rigorous cost-benefit analyses of regulations would improve the rulemaking process and force agencies to be more diligent about minimizing their burdens on the economy.
Immigration: Low-Skilled Workers Need Not Apply?

**BY DANIEL KUEHN**

Immigration is not typically considered a regulatory policy topic, but immigration statutes regulate the supply of workers—both permanent and temporary—to the American labor market. Congress and the U.S. Customs and Immigration Service shape the hurdles that migrants must jump to enter and maintain residence in the United States each year.

Comprehensive immigration reform has been on the front-burner in Washington in 2013 and it seems to stand alone on the congressional agenda as an issue that enjoys at least a modicum of bipartisan support. Some components of current proposals are more contentious than others, with the “path to citizenship” coming under intense criticism from conservatives and additional border security measures from liberals.

The political glue that keeps immigration reform “comprehensive” is the push to expand visas for high-skilled workers, which has been promoted by legislators as politically diverse as Rep. Darrell Issa (R-Calif.) and Sen. Charles Schumer (D-N.Y.). This includes increasing the number of temporary visas for college-educated immigrants, such as the H-1B or L-1 visas, and awarding green cards to foreign students who graduate from American universities with a science, technology, engineering, or mathematics (STEM) degree.

The popularity of high-skill visas presents a remarkable contrast with other policies governing access to American public life. Restrictions on voting based on education levels, such as literacy tests in the Jim Crow era, are today considered abhorrent. Low parental education levels are not a basis for restricting their children from public schools. And yet, on questions of citizenship and residence, it is a foregone conclusion for much of the public, and even more policymakers and analysts, that special accommodations should be made for people with high skill levels and their families.

**High-skilled labor shortage?** Interventions that favor the supply of high-skilled migrants become at least theoretically justifiable if there is a labor shortage or some impediment preventing labor supply from responding to price signals. Although we can’t look at the supply and demand curves associated with an occupational labor market, economists do expect to see the market respond to shortages in several predictable ways. First, wages should increase significantly as firms with unmet demand for workers try to outbid each other. Wages are expected to grow over time as productivity increases (a force that is particularly relevant when considering high-skilled labor), but shortages should provoke even faster compensation growth. Second, the ratio of unemployed workers in an occupation to job openings should be low. A labor market experiencing a shortage is by definition a “tight” labor market because fewer workers will lose their jobs and more jobs will be open for those without work. Finally, depending on how “labor shortage” is defined, we should not expect to see longer-term adjustment of behavior in response to price signals. In a well-functioning labor market, shortages would be eliminated by students attracted into STEM fields exhibiting growing wages and tight labor markets, and STEM graduates should enter these occupations at higher rates. (Many STEM graduates never work in STEM occupations.) If persistent shortages were a problem, this market-based remedy would not be operational.

The data suggest that occupations commonly filled by high-skilled visa-holders (principally information technology (IT) occupations, but also other STEM fields) failed to exhibit any of the major indicators of labor shortage during the repeated legislative attempts at comprehensive immigration reform over the last decade. Inflation-adjusted programmer salaries as well as the salaries of a broader group of computer and IT occupations have remained essentially flat since the end of the dot-com bubble in the early 2000s, only increasing or decreasing by a few percentage points each year with no discernible upward trend.

Job-opening data are generally not available at the occupational level, but are collected by industry. The professional, scientific, and technical services (PSTS) industry is the most relevant sector to consider for a high-skilled work force because it includes independent research and development, engineering, and IT firms. In the period before the Great Recession, the ratio of unemployed workers to job openings in the PSTS industry was relatively modest, averaging 0.8 from 2004 (after the recovery from the dot-com bust) to the end of 2007. After the Great Recession this ratio increased to 2.8 unemployed PSTS workers for every PSTS job opening. Not surprisingly, the recession has been associated with a loose labor market, but this is the opposite outcome of what we would expect in a work force plagued with shortages. There is no obvious indication of a labor shortage in the industries and occupations that typically employ high-skilled visa-holders.

We also know, from the record of the dot-com bubble, how students respond to fluctuating labor market prospects in a STEM field. As salaries and employment opportunities steadily grew for computer and IT workers during the 1990s, the number of computer science majors grew considerably. Between 1998 and 2003 alone, the number of computer science graduates doubled. A useful reference point for assessing this growth is the number of engineering graduates, which increased by only 12 percent over the same period. Computer science degrees declined from that peak for the rest of the decade as computer and IT salaries
flattened, losing over half of the gains made since 1998 by 2008. My recent research (with colleagues) on electrical, petroleum, and nuclear engineering degree awards over the last three decades generates similar conclusions: students respond to price signals in making educational choices, so that unmet labor demand attracts additional workers. Although the process is not instantaneous, persistent shortages of labor never seem to materialize. Economists have repeatedly observed these market responses to increases in demand for high-skilled labor for decades, going back at least to David Blank and George Stigler’s landmark 1957 book The Demand and Supply of Scientific Personnel and continuing to modern analysis by Richard Freeman, Sherwin Rosen, and many others.

Counterarguments from proponents of the high-skilled labor shortage view usually rely on absolute comparisons of salaries or unemployment rates across occupations. STEM workers consistently enjoy higher salaries and lower unemployment rates than workers with lower education levels. The problem with this argument is that STEM workers have higher productivity levels than most other workers, which enables them to command higher wages in the labor market. Just as wage rates in the economy as a whole are expected to grow with productivity in the long run, higher-productivity occupations will be associated with higher salaries at any point in time. These differences are principally derived from productivity differentials; they are less helpful for identifying shortages than stark changes in salary that cannot be attributed to growing productivity in a given occupation over time. Lawyers have earned more than the average worker since the commencement of that profession, but no one would use that fact to argue that we have a shortage of lawyers.

Visa-based labor market regulation | With decades of economic research suggesting that high-skilled labor shortages are problems that will resolve themselves in a market setting, why the increasing support for government intervention to restrict immigration on the basis of skill level? One reason, of course, is that the legislation is framed positively rather than negatively. Visas are not presented as being denied to low-skilled workers; instead they are said to be made available to high-skilled workers. This subtle distinction is sufficient in many cases to paint high-skilled temporary visas as the “pro-immigrant” option when it actually restricts the free flow of workers across borders. Unconditional defense of liberal immigration is difficult given the unpopularity of low-skilled and undocumented migrants, so the promotion of high-skill visas offers a way to tip-toe around the more controversial dimensions of immigration policy.

The high stakes of temporary visa policy for the information technology industry also generate what Bruce Yandle called a “bootleggers and Baptists” dynamic (“Bootleggers and Baptists,” May/June 1983). Yandle observed that both Baptists (for moral reasons) and bootleggers (for pecuniary reasons) advocated laws that would forbid the sale of liquor on Sundays. In other words, regulation tends to makes strange bedfellows. High-skill visa policy attracts advocates from the ranks of tech company CEOs like Bill Gates and Mark Zuckerberg, whose primary interest is steering immigration policy to help them access low-cost labor with specific skill sets. However, the resources brought to bear on the debate by the tech industry also attract more idealistic advocates who conceive of themselves as being “pro-immigrant” or “pro-science.” Wider and more powerful political coalitions are made possible by restricting the scope of immigration liberalization to a narrow class of potential migrants (such as highly educated workers or STEM graduates).

In addition to the politics of high-skilled immigration policy, deeper structural issues around existing visa programs help to drive the debate, particularly the relationship between student visas (F-1s) and high-skill work visas (H-1Bs, L-1s, etc.). Student visas are relatively unrestricted. Unlike work visas, they have no caps and minimal entry requirements, so the number of student visas awarded is determined primarily by academic institutions. The result is that despite the wide variety of visas that are dedicated to guest-workers, the number of foreign students graduating from American universities still substantially exceeds the number of high-skill work visas available. This imbalance between student visas and work visas is entirely a function of immigration policy itself, but it provides a perennial justification for expanding the number of visa opportunities that are exclusively available to high-skilled migrants. The inconsistencies of current policy redirect efforts away from immigration liberalization and toward catering to well-educated workers and their potential employers.

Market-based alternative | For some, a market-based immigration alternative implies the elimination of all restrictions on the access that the foreign born have to the United States: open borders. The prospect of open borders is intriguing, but public concerns about assimilation and security are likely to make some regulation of entrants to the United States a foregone conclusion in the future. However, even in the context of the continued regulation of migration, current practices can be reformed to eliminate many of the distortions caused by a skill-based visa policy.

A market-based immigration policy would of course be liberal, affording broad, orderly access to law-abiding individuals with an interest in building new lives in this country. More apropos to the subject of this article, a market-based policy would maintain legal recognition of the distinction between permanent residence and temporary migration to ensure that employers have ready access to foreign workers without crowding out (or competing with) migrants seeking permanent residence during boom years when labor demand is especially robust.

Critically, within the temporary visa program no distinction would be made between workers on the basis of their education level or the type of work they will be pursuing. Theoretically, special treatment of certain classes of workers might be justified if persistent labor shortages constrained certain occupations, but no evidence of this problem exists. Temporary visas should
also be “portable” in the sense that they are not tied to a specific employer or educational institution. Current visa rules that tie migrants to their employers (or at least introduce obstacles to mobility) create circumstances that have been referred to as “indentured servitude.” Employers use the leverage that they have over foreign workers to exploit them through lower pay, and in some extreme cases even through physical or sexual exploitation.

Unfortunately, most current efforts to rectify the problem of special treatment for high-skilled migrants rely on the creation of new regulatory authority to determine whether or not an occupation is experiencing a labor shortage. Even worse are proposals to establish wage floors for high-skilled immigrants based on prevailing domestic wages to ensure that high-skill visas are not used to undercut American workers. A more natural solution is to address the problem at its source and (1) end the policy of discriminating between immigrants based on their level of education, and (2) allow wages to fluctuate naturally.

Emma Lazarus’s poem “The New Colossus,” emblazoned on the Statue of Liberty, welcomes immigrants to the United States regardless of their background. It is a message that reflects not only the principles of American classical liberalism, but also a prudent economic policy that makes no effort to actively regulate international labor market flows. It is an ideal that is threatened by the recent popularity of high-skill visa policies.

READINGS


New York Times also liked the movie, though it did concede that at a length of two hours, “its anecdotal, hopscotch style starts to wear.” Hollywood insiders nominated GasLand for an Oscar—because they loved the politics, not the movie.

But the movie’s politics are even less interesting than its style. Fox embraces an especially simple-minded version of what can best be described as environmental utopianism.

In his world, the great material advances of the past 150 years simply happened. Dozens of dread diseases and the near-constant threat of famine that plagued humanity until the 19th century just sort of went away. No sensible reading of history suggests that this would have been possible without the hydrocarbon revolution that began in the 1850s with the first drilled oil wells in Pennsylvania. A world without petroleum is an environmental disaster, denuded of timber and choked by coal smoke. Just about everybody would be poor—and by that I mean North Korea poor. Life in such a world is nasty, brutish, and short.

Fox’s almost religious devotion to some unworldly utopian environmental ideal completely undermines the film’s credibility. Making films and viewing them is manipulation by mutual consent. But after just a few minutes of watching his work, one can’t help asking, “Why would I want to be manipulated by this guy?”

His perspective is all the more regrettable because it is unnecessary. Acknowledging the obvious—that oil and gas are essential for economic progress and that fracking offers enormous advances in production—does not preclude a hard-hitting, even intensely critical film about the industry. Economic progress requires difficult and complex tradeoffs. And the tradeoffs presented by hydraulic fracturing involve land use, water, and the environment—and thus are interesting, important and, indeed, theatrical.

Fracfocus | Fox’s films duck a very inconvenient truth: burning less gas—which he seems to favor—means burning more coal. Natural gas releases about half the carbon as an equivalent amount of...
coal, and strip-mining coal uses vast amounts of land and water. Fox ignores all this, instead hiding behind some child-like fantasy that energy can be produced from—well, he doesn’t say.

Ironically, among those most willing to consider tradeoffs and engage in a real debate are the cardboard-cutout villains of Fox’s film, the oil and gas industry. Google the term “fracfocus.” It’ll lead you to a database that allows you to search the records of tens of thousands of wells for detailed information about specific fracking fluids used in each well. Fracking fluids are pumped thousands of feet below the ground to break up shale formations, releasing oil or gas. While mostly water and sand, the fluids also contain a complex mix of other chemicals. Finding the right mix for the right formation can mean the difference between a well’s success and failure. Companies spend millions on fluid engineering and jealously guard the research as a critical trade secret. But local landowners and regulators also have a legitimate interest in knowing what, if any, hazardous materials are being used.

\textit{Fracfocus} might seem like a dense ball of engineering data of interest only to a handful of insiders, but it actually represents exactly the kind of conversation about tradeoffs that really matters. It is not perfect—regulators and locals often want more disclosure while producers want to protect their trade secrets—but accommodations are being made. In June, \textit{Fracfocus 2.0} was introduced to make the database even more user-friendly and easy to search. At present, 12 states deem the system sufficiently adequate so as to require well operators to report through \textit{Fracfocus}.

**Ignoring different views** But the dialog about tradeoffs that led to \textit{Fracfocus} is exactly the kind of discussion \textit{GasLand}’s backers don’t want. Consider, for example, the events surrounding the \textit{GasLand II} premiere in late April at the Tribeca Film Festival. A group of about 20 farmers and laborers from upstate New York and Pennsylvania—people whose jobs and income depend on developing the Marcellus shale—had purchased tickets to the showing. They wanted to see if the sequel addressed what they considered the first film’s gross inaccuracies and to question Fox. Yet they were barred from the showing even though there was no hint of disrespect or incivility.

Of course, Fox and the Tribeca Festival can show their movies to whomever they want. (It would be nice, though, if they announced their policies before people bought tickets. It would be even nicer if they would not insult the public with their shifting and laughable explanations as to why some people were banned.)

Because they ignore and try to suppress a reasonable opposing point of view, Fox and the environmental utopians should not expect to be taken seriously. That brings us to the image to bear in mind when watching the films: the road trip with the kids. At some point in the journey, the grownups are sitting in the front of the minivan trying to figure out the best road to take and maybe even arguing about whether the trip is a good idea. The kids are sitting in back, yelling for ice cream, complaining that “He’s touching me!” and repeatedly asking, “Are we there yet?” \textit{Gasland} and \textit{GasLand II} are the equivalent of the kids in the back seat—whiny, ill-informed, and not even cute.

\textbf{Small Farms, Big Costs}

BY SOFIE E. MILLER AND CASSIDY B. WEST

The Food and Drug Administration recently extended to November 15 the deadline for public comment on its proposed rule, \textit{Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption}. This is the second extension, providing the public an unusually long 304 days to comment on the proposed regulation and offer suggestions for its improvement. It is also a welcome opportunity, as the draft rule does not meet statutory and executive requirements and may needlessly harm consumers as well as small farmers domestically and abroad.

The proposed rule, which would implement the Food Safety Modernization Act of 2011 (FSMA), establishes certain standards for farm-grown produce that are intended to reduce the presence of microbiological hazards that can lead to food-borne illness. It includes requirements related to worker training, worker health and hygiene, agricultural water quality, soil treatment, the presence of domesticated animals on produce fields, and for equipment, tools, and buildings.

The FDA estimates the cost of complying with these requirements at $630.18 million per year. It also predicts benefits of $1.04 billion per year; however, the benefit estimates are based on very limited data and unscientific methods. The agency concedes that it probably overstates the likely incidence of food-borne illness in the absence of the proposed regulations, and its estimates of the effectiveness of the proposed requirements at reducing microbial hazards are based on nothing more scientific than surveys of its own staff.

However, even accepting the FDA’s analysis at face value, the proposed rule does not maximize net benefits as required by Executive Orders 12866 and 13563, which require agencies to “select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity).” In its proposal, the FDA rejected alternatives that it estimates would provide more than $100 million in net benefits annually above the benefits of its selected alternative.

\textbf{Very small farms} According to the FDA’s analysis, implementation of the proposed rule will result in significant compliance costs to all covered farms. However, the costs will be especially burdensome for farms with sales of less than $250,000 annually, which the FDA defines as “very small” farms. Very small farms beneath this threshold comprise nearly one-quarter of all farms that would be covered under this rule.

Table 1 shows the FDA’s estimates of annualized compliance costs for farms with sales of less than $250,000.

<table>
<thead>
<tr>
<th>Farm Size</th>
<th>Annualized Compliance Costs</th>
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<td>&lt; $250,000</td>
<td>$100 million</td>
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Sofie E. Miller and Cassidy B. West are policy analysts in the George Washington University Regulatory Studies Center. Miller also is editor of the center’s \textit{Regulation Digest}.
costs (over a seven-year period) for farms of different sizes. “Large”
farms (which the agency defines as having sales of more than
$500,000 per year) have average food sales of $2.6 million. Their
compliance costs—$30,566—constitute only 1 percent of their
annual sales. For “very small” farms (sales less than $250,000 per
year) and “small” farms (sales between $250,000 and $500,000 per
year), the FDA expects compliance costs to consume a higher share
of the farms’ annual food sales—6 percent and 4 percent, respectively.

According to the FDA’s analysis, its preferred version of the
proposed rule, which would exempt farms with annual food sales
of less than $25,000, would produce $411 million in annual net
benefits. However, of all the exemption thresholds the FDA con-
sidered in its analysis, this proposed option offers the lowest net
benefits. Net benefits are maximized by exempting all farms with
produce sales less than $100,000, which would increase the annual
net benefits of the rule by $115 million, to $526 million annually.
Over a 10-year timeframe, exempting farms smaller than $100,000
would increase the rule’s anticipated net benefits by more than $1
billion above the estimated benefits of the FDA’s preferred version.

Given that the FSMA specifically directs the agency to “provide
sufficient flexibility to ... small businesses” and gives the FDA both
the discretion to exempt small farms from the standards in this
proposed rule and to determine what constitutes a “small farm,”
the agency’s proposed exclusion threshold is too low. Given the
requirements of the statute and the instructions in EOs 12866
and 13563, the FDA cannot justify limiting its proposed exemption
to farms smaller than $25,000.

**Better regulation** | The FDA’s multiple extensions of the comment
period suggest it recognizes that its proposed regulation
could be improved and is open to public input on how to do
so. There are a number of improvements the agency can make.
First, the FDA needs to gather better information on both the
prevalence of food-borne illnesses attributable to farm-grown
produce and the potential for different requirements to reduce
the incidence of food-borne illnesses. Second, the agency esti-
mates that some of the standards it is proposing have high costs
relative to their benefits, and thus the agency should shift its
should commit to retrospectively measure efficacy of the stan-
dards at two-year increments following implementation of the
rule, measured as percent reductions in food-borne illnesses. This
information will tell both the agency and the public how accurate
the FDA’s impact estimates were and will provide information for
future rulemakings on how to tailor standards to achieve desired
outcomes. In addition, retrospective review efforts may be able to
provide information on whether the small business exemption
was appropriate for maximizing net benefits. If the retrospective
reviews indicate that the FDA’s standards were ineffective, the
agency should consider a rulemaking to change the standards to
best reflect the lessons learned.

### Electronic Cigarettes at a Regulatory Crossroads

**BY THOMAS A. HEMPHILL**

In 2000, a Chinese pharmacist named Hon Lik invented the
modern electronic cigarette, or e-cigarette. The product uses
a piezoelectric ultrasound-emitting element to vaporize a
pressurized jet of liquid containing nicotine diluted in a propyl-
ene glycol solution. The “smoker” inhales the vapor through his
mouth, simulating smoking. Though nicotine is addictive, e-cig-
arettes are thought to be much less of a health hazard than their
combustible tobacco cousins, for both smoker and bystanders.

In 2011, retail e-cigarette sales in the United States reached

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**TABLE 1**

<table>
<thead>
<tr>
<th>Farm size by annual sales</th>
<th>Very Small</th>
<th>Small</th>
<th>Large</th>
<th>All Farms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; $250,000</td>
<td>$250,000 –</td>
<td>&gt; $500,000</td>
<td></td>
</tr>
<tr>
<td>Average annualized compliance cost for the proposed rule (over a seven-year period)</td>
<td>$4,697.19</td>
<td>$12,972.36</td>
<td>$30,566.23</td>
<td>$11,429.70</td>
</tr>
<tr>
<td>Average annual monetary value of food sold</td>
<td>$75,279</td>
<td>$320,696</td>
<td>$2,638,384</td>
<td>$656,108</td>
</tr>
<tr>
<td>Compliance cost as a percentage of value of food sold</td>
<td>6%</td>
<td>4%</td>
<td>1%</td>
<td>2%</td>
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Thomas A. Hemphill is an associate professor of strategy, innovation, and public policy in the School of Management at the University of Michigan, Flint.
$500 million, according to a recent Wall Street Journal article. Industry experts expect 2013 sales to reach $1 billion.

E-cigarettes are not without their critics, who see them as “gateway” products to eventual tobacco use and nicotine addiction. Many of the critics want e-cigarettes to be tightly regulated or removed from the marketplace altogether.

**FDA weighs in** | In 2009, the U.S. Food and Drug Administration’s Division of Pharmaceutical Analysis tested 19 varieties of e-cigarettes manufactured by two vendors, NJOY and Smoking Everywhere. The scientists found that tobacco-specific nitrosamines, known cancer-causing chemicals, were detected in all of the cartridges of one brand, and two of the cartridges from the other. In July of that year, the FDA announced that it would publicly discourage the use of e-cigarettes and raised concerns that they could be marketed to youth and that they did not have appropriate health warnings.

Critics of the FDA study responded that the detected harmful chemicals were measured by researchers at levels approximately one-millionth of the concentrations believed to be relevant to human health. Further, according to the results of a 2010 study by researchers at Boston University’s School of Public Health, the levels of carcinogens in e-cigarettes are upwards of 1,000 times lower than tobacco cigarettes, had a level of toxicity similar to existing nicotine replacements (e.g., the nicotine patch, nicotine gum), and were found to be “much safer” than tobacco cigarettes.

**Federal control** | Nonetheless, the federal government has attempted to tightly control access to e-cigarettes. On June 22, 2009, the Family Smoking Prevention and Tobacco Control Act was enacted into law. An amendment to the venerable Food, Drug, and Cosmetic Act of 1938, the 2009 law gives the FDA authority to regulate products that are “made or derived from tobacco.” E-cigarettes’ nicotine is typically derived from the tobacco plant, so the legislation put the product under FDA authority.

Under the law, the FDA initially labeled some e-cigarettes as unapproved drug/medical device combination products, a designation that gave the agency considerable authority to control the product’s availability. The FDA thus detained or refused to allow e-cigarettes to enter the United States.

One e-cigarette manufacturer, Sottera, challenged the FDA’s action in court. In December of 2010, the U.S. Court of Appeals for the D.C. Circuit issued a 3–0 decision striking down the FDA’s authority to regulate e-cigarettes as a drug/medical device. The U.S. Circuit Court subsequently held that e-cigarettes and other products made or derived from tobacco can be regulated by the FDA as “tobacco products,” which limits the FDA’s ability to suppress the devices. In January of 2011, the D.C. Appeals Court declined to review the circuit court’s decision and the FDA decided not to appeal the decision further.

As a result of the Sottera decision, in April 2011 the FDA announced that it planned to take the following steps to institute regulatory mechanisms for all “tobacco products” and all other products made or derived from tobacco:

- The FDA intends to propose a regulation that would extend the agency’s “tobacco product” controls under Chapter IX of the Food, Drug, and Cosmetic Act to other categories of tobacco products, as well as to the pre-market review requirements for “new tobacco products” and “modified-risk tobacco products.”
- The FDA had previously issued draft guidance on products made or derived from tobacco regulated under the Tobacco Control Act (excluding those “marketed for therapeutic purposes”). The agency announced that it was considering whether to issue a guidance document and/or regulation on the “therapeutic” claims of e-cigarette manufacturers.
- The FDA intends to finalize already-issued draft guidance on prohibiting the marketing of “tobacco products” in combination with other FDA-regulated products.
- The FDA has already developed draft guidance explaining how manufacturers can request a determination from the agency that a “tobacco product” is “grandfathered” under Chapter IX requirements (i.e., marketed as of February 15, 2007), thus excluding the product from being subject to pre-market review as a “new tobacco product.”

The FDA is moving its planned e-cigarette regulatory agenda forward. Last September, the agency issued an advanced notice of rulemaking (“Non-Face-to-Face Sale and Distribution of Tobacco Products and Advertising, Promotion, and Marketing of Tobacco Products”) on possible regulation. The comment period closed in December. As of this June, the FDA’s rule (“Tobacco Products Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the
Family Smoothing Prevention and Tobacco Control Act”) is in the “Proposed Rule Stage.” In the above mentioned Wall Street Journal article, Mitch Zeller, director of the FDA’s Center for Tobacco Research, justified these steps by characterizing the present e-cigarette marketplace as the “wild, wild West” in terms of federal regulations.

**Possible regulation |** E-cigarette regulatory policy options enacted by state and local governments generally consist of the following:

- Bans or restrictions on e-cigarette marketing to minors, or making unsubstantiated marketing claims
- Prohibiting e-cigarette smoking in public places
- Prohibiting e-cigarette sales to minors

At the state and local level, there appears to be little resistance to public policy restricting the sale or marketing of e-cigarettes to minors. Through 2012, 13 states had passed legislation prohibiting such sales. Several state and local governments have amended laws and ordinances against smoking in public places to include e-cigarettes, and that push is certain to continue.

**Wrong time for federal regulation?** The federal regulatory environment for e-cigarettes is evolving, but it has been bounded by Sottera: e-cigarettes are legally considered a “tobacco product.” The FDA will thus likely attempt to regulate e-cigarettes in a fashion similar to tobacco cigarettes, and restrictions or bans will be initiated in the marketing and advertising of e-cigarettes. But the extent of this regulation needs to be carefully crafted, as the health impacts of e-cigarettes remain in scientific question. Beyond that,

The FDA will likely attempt to regulate e-cigarettes in a fashion similar to tobacco cigarettes, and restrictions or bans will be initiated in their marketing and advertising.

there is the question of what authority the FDA would have over e-cigarettes that do not derive their nicotine from tobacco—these products, after all, would not be “tobacco products.”

Without a sound body of scientific knowledge to draw on, regulations requiring federal government warnings on e-cigarette packaging and restricting advertising and variety of flavors are problematic. In the aforementioned Wall Street Journal article, Richard Carmona, former U.S. surgeon general and a previous supporter of an outright ban on the consumer use of tobacco products, argues that it is important to explore alternatives to traditional cigarettes because “initial information certainly suggests there is significant potential for harm reduction” associated with e-cigarettes.

For those reasons, it is premature for the FDA to move forward with a regulatory agenda, if such regulatory policies discourage tobacco smokers from switching to potentially “less harmful to their health” e-cigarettes. In June, the Centers for Disease Control and Prevention reported that the percentage of U.S. adult smokers had declined from 18 percent in 2012, down from 20 percent in 2011 (and the previous seven years). A safer alternative to traditional tobacco-based products, if technologically feasible, should be encouraged by regulators for the benefit of those who choose to continue smoking and wish to reduce the adverse health effects from their use of tobacco.

**More Economic Freedom, More Jobs**

*BY LAUREN R. HELLER AND E. FRANK STEPHENSON*

There is much variation in the unemployment rate across the states. Barely 3 percent of North Dakotans who are looking for work do not currently have a job, yet more than 9 percent of Mississippians, Illinoinsans, and Nevadans who want a job do not have one.

There are many reasons why unemployment can vary across states. Unemployment varies across demographic groups—younger people and black people have higher unemployment rates than older people and white people, respectively. As a result, demographic differences across states can be associated with interstate variation in unemployment.

Likewise, there can be state-specific effects that lead to unemployment differences. For example, part of Nevada’s high unemployment rate is likely a hangover from the housing bust in Las Vegas. On the other hand, the oil and gas boom in North Dakota has pushed down that state’s unemployment rate.

It is also possible that the variation in labor market conditions across states is partly attributable to differences in economic freedom. This is the question we examine in a paper that will appear in this October’s Contemporary Economic Policy.

Economic freedom means that workers and entrepreneurs can engage in mutually beneficial dealings without interference from high taxes, big government, and heavy regulation of labor markets. Conveniently, the Fraser Institute’s Economic Freedom of North America (EFNA) reports provide an annual index of economic freedom for each state dating back to 1981. Each state is rated on a scale from 1 to 10, with a higher EFNA rating indicating more economic freedom.

Before turning to a summary of our paper’s statistical analysis, consider Figure 1, which depicts each state’s EFNA rating and its unemployment rate. (The data are for 2010, the most recent year the economic freedom index is available.) As the plotted line indicates, a higher EFNA rating is associated with lower unemployment rates.

Lauren R. Heller and E. Frank Stephenson are professors of economics at Berry College in Rome, Ga.
economists, there is a strong negative relationship between economic freedom and unemployment. That the fit is somewhat noisy, rather than being tightly clustered around the plotted line, is not surprising because this simple plot does not control for any of the other factors that might affect unemployment rates.

There are some well-known limitations to the unemployment rate as an indicator of labor market conditions. For example, people who are no longer seeking work do not count as being unemployed. However, Figure 2 shows that a similar relationship exists between the labor force participation rate and a state’s EFNA rating. The plotted line indicates that more economic freedom is associated with more favorable labor market conditions—in this case, a higher labor force participation rate. (For brevity, we restrict the remainder of our discussion to the relationship between economic freedom and unemployment, but the relationship also exists with labor market indicators such as the labor force participation rate and the employment-to-population ratio.)

In our *Contemporary Economic Policy* paper, we examine the relationship between economic freedom and labor market outcomes from 1981 to 2009 (the most recent year available at the time we wrote the paper) while controlling for factors including natural resource endowments, demographic differences, and educational attainment. Since there is substantial variation across states in several of these factors, controlling for them is important to be sure that the relationships depicted in Figures 1 and 2 are not spurious, as well as to make sure that these factors are not camouflaging even stronger relationships than those depicted in the figures. In order to be confident in our results, we also estimate several alternative specifications as robustness checks. These include controlling for “right to work” states, net federal tax inflows or outflows, geographic factors such as being located on a coast or border, and state-specific fixed effects to control for persistent (but hard to parameterize) factors present in each state.

Regardless of specification, our findings show a strong relationship between economic freedom and unemployment across the states even after controlling for other factors affecting labor market conditions. Our estimates indicate that a one-point increase in a state’s EFNA rating is associated with a decrease of 0.6 to 1.4 percentage points in a state’s unemployment rate depending on specification.

That our results confirm a negative relationship between economic freedom and the unemployment rate is not surprising. A large body of research across countries shows the same pattern: countries with more economic freedom have lower unemployment rates. More generally, the positive relationship between economic freedom and economic growth is well-documented and job creation goes hand-in-hand with economic growth.

The implication for policymakers is clear. Consider Michigan, California, and Rhode Island. All have EFNA scores between 5.5 and 5.7, which place them among the least economically free states, and all have unemployment rates above 8.3 percent. Those states could shave about a percentage point off their unemployment rates simply by adopting policies more like their neighbors Indiana, Arizona, and Connecticut, which score about a point better on the EFNA index and rank just above the middle of the 50 states.

While the regulatory and tax policies coming out of Washington present a strong headwind for all states’ labor markets, our results indicate that governors and legislators who choose high government spending, incentive-killing marginal tax rates, and job-killing labor market regulations are also to blame for their residents’ labor market difficulties.
Who Is Satoshi Nakamoto?

BY PIERRE LEMIEUX

Bitcoin is a private, non-centrally managed “cryptocurrency” that users create and exchange over the Internet via an open-source protocol. The concept of Bitcoin was first made public in a 2008 paper by the pseudonymous Satoshi Nakamoto and its first client software appeared the following year. Bitcoin is fascinating for at least three reasons: its technological virtuosity, the light it throws on the nature of money (including the possibility of private fiat money), and its clash with the regulatory state.

On the technological front, “bitcoins” (the capitalized form of the word refers to the overall system, while the lower-case version refers to the actual unit of exchange) are exchanged on a peer-to-peer computer network. “Peer-to-peer” means that participating computers are directly linked to each other through the Internet, without any central controller. Bitcoins are divisible units (down to one hundred-millionth of a bitcoin, or one satoshi) of a digital currency that exists only virtually on the network. Creation (in Bitcoin parlance, “mining”) of a bitcoin, which can be done by anybody with enough mathematical and computer knowledge, requires a lot of computer power, part of which is simultaneously used to process and verify Bitcoin’s encrypted transactions.

Anybody who just wants to buy, sell, or store existing bitcoins can easily create his own Bitcoin account by downloading a version of the client software (see bitcoin.org); there are also less computer-literate methods of using the system. A person can even manage his account using just his smartphone. With an account, your computer or device becomes part of the peer-to-peer network.

The Wall Street Journal has tied Bitcoin to “the rise of a digital counterculture,” but real venture-capital money is flowing into Bitcoin ventures. We are witnessing history in the making. Yet, the future of Bitcoin is uncertain.

Private money? | Are bitcoins really money? This question brings us to the second reason for the system’s fascinating character: it helps us understand the nature of money. Money is anything that is generally accepted as a medium of exchange. Anything that has currency in this sense is a currency. Currency—and thus money—is a question of degree. A dollar bill would not be money for a jungle tribe that has no contact with the external world. A dollar bill has more currency in the United States than in northern Canada. As George Selgin points out, bitcoins are not (yet?) currency: they apparently are accepted by thousands of retailers, but those retailers represent only a tiny fraction of market participants. Try to pay for gas with bitcoins—or gold, for that matter—at a randomly chosen service station and you will see what is not money.

Yet Bitcoin’s lightning development suggests that it has the potential to become money. Some 11 million bitcoins are in circulation, and are traded on a number of virtual markets. Bitcoin is a fiat pre-currency.

Taking subjective preferences seriously, Friedrich Hayek envisioned the possibility of private fiat money nearly four decades ago. After all, money is just what people think is money. Even gold has value only because people assign value to it. The challenge with fiat money is keeping its value stable against the inflationary incentives of its supplier—who will find it tempting to just “crank up the presses” to pay bills. Hayek’s response to that challenge was to argue that the supplier of a private currency would have an incentive to fine-tune supply so as to keep price constant—a response that has not satisfied everybody.

The mathematical wizardry of Bitcoin solves this problem. In a couple of decades, when the number of bitcoins approaches 21 million, the stock of coins in circulation will become fixed, with no possibility of monetary inflation.

Bitcoins are mined by computers at an increasing cost in terms of computing power, and that cost will become infinite when, in a couple of decades, the number of bitcoins approaches 21 million. From then on, the stock of bitcoins in circulation will be forever fixed, with no possibility of monetary inflation. Creating new bitcoins will be a mathematical impossibility.

Avoiding government | To get an idea of how Bitcoin enthusiasts see the future of this currency (when and if it becomes one), imagine that bitcoins eventually replace all U.S. dollars and coins. The value of one bitcoin would then exceed $50,000. In the summer of 2013, a bitcoin was worth around $110, so the return on an investment in bitcoins could be mind-boggling. The reality will of course be different: were the dollar to recede, other currencies, whether virtual or not, may compete with bitcoins, pushing down demand for the latter and thus their relative price. Yet it is easy to understand how the upside potential of Bitcoin attracts speculators.

Combined with speculation, the low liquidity of the bitcoin market makes its price very volatile. On a typical day, less than 200,000 bitcoins are exchanged on Mt. Gox, the largest exchange. Between the beginning of 2013 and mid-August, the value of a bitcoin has fluctuated between $13 and $166. Compared to that, even gold looks stable.

With such fluctuations, retailers take a risk in accepting bit-
coins. The risk could be minimized if a bitcoin futures market were to develop, but it is far from guaranteed that government regulators would permit it. More generally, Bitcoin is subject to a large regulatory risk.

That brings us to a third issue with Bitcoin: will the regulatory state allow the development of such digital currencies? The prospects do not look good.

We can understand why Leviathan does not like Bitcoin. Since this would-be currency is electronic, encrypted, and peer-to-peer, transactions in it are untraceable. Of course, getting in and out of the system is traceable under current surveillance laws. You come under official eyes when you buy bitcoins with dollars (or any other official currencies) or when you take your bitcoins out of the network. Entry or exit transactions between you and your bank (or other established financial intermediary) are monitored. As long as transactions are made between Bitcoin accounts, however, their authors remain anonymous. There is no central authority necessary to authorize bitcoin transactions and capable of knowing who carries them. The transactions are recorded as anonymous entries in a virtual registry that is synchronized on all computers on the network.

This decentralized anonymity distinguishes Bitcoin from previous attempts at bypassing government surveillance of financial transactions. An early attempt was the Digital Monetary Trust (DMT) created by J. Orlin Grabbe around 2001. As a virtual bank, DMT aimed at offering an encrypted and anonymous platform for storing and transferring currencies—mainly official currencies. Grabbe explained that DMT was “specifically constructed on the principle of don’t know your customer” (bold in original), in direct violation of money-laundering requirements. “Is DMT legal?” he asked rhetorically. His answer is worth quoting: “Is privacy legal? Is encryption legal? If your answer is Yes, then DMT is legal. If your answer is No, then please just go away somewhere and die quietly.”

Aside from suffering from the entry-exit problem, DMT’s centralized character made it less secure. Somebody was ultimately in charge. The system collapsed when Grabbe shut it down after it ran into problems. He died shortly afterward and was never proactively prosecuted by the U.S. government. Some more recent enterprises (such as Liberty Reserve or E-gold) were not so lucky.

Bitcoin too can be used to avoid money-laundering laws. These laws were adopted to fight the war on drugs and subsequently found another justification in the war on terror. Any cash transaction or export or import of negotiable instruments over $10,000 has to be declared to the Financial Crimes Enforcement Network, a federal government bureau. Regulated financial institutions have to play cop by enforcing tight know-your-customer rules. A wide surveillance net has developed, which Bitcoin can circumvent.

Governments are also concerned with the tax evasion potential of a parallel monetary system where transactions are untraceable.

Leviathan’s problems would be multiplied if bitcoins were to become a real currency. Governments would have no control over this currency. Monetary policy would be impossible, and so would the inflationary debauchment of the currency used to finance the state.

Governments have thus been trying to bring Bitcoin exchanges and intermediaries under their surveillance systems. They have been intimidated into requiring from their customers proof of identity with official documents. Governments are also forcing the exchanges to register as money transmission businesses. In the middle of the summer, the New York Department of Financial Services sent subpoenas to request information from 22 Bitcoin intermediaries. Earlier this year, the Department of Homeland Security seized two bank accounts tied to Mt. Gox, accusing the company of being “part of an unlicensed money service business.” When Homeland Security attacks Bitcoin, one may ask exactly whose security is being advanced.

The current value (as of mid-August) of bitcoins in circulation is barely over $1 billion, a tiny amount compared to the hundreds of trillions of dollars roaming in financial markets. But this is already a great feat for a four-year-old candidate to the status of fiat currency without any government backing—in fact, under government attack. The future of Bitcoin and other digital currencies depends largely on whether the regulatory state will kill the experiment.

**READINGS**

Legalizing Marijuana: Money Over Minds

BY IKE BRANNON

With the sudden lurch toward public acceptance of gay marriage, it would only be natural for the liberal/libertarian crowd to turn its eyes toward legalizing marijuana. While it doesn’t quite have the human rights cachet of gay marriage, legalization still resonates with people beyond the stoner crowd who see marijuana as a largely harmless substance (less so than tobacco, anyway) whose prohibition has put millions of people in jail and cost taxpayers billions of dollars to enforce its prohibition.

The presumption that a groundswell of support for legalization will eventually develop and that it will provide a sufficient impetus for Congress to act is misplaced, however. Unlike gay marriage, there’s no sense that a politician might see his political career get prematurely cut short by failing to be on “the right side of history.” And any public relations push will find it difficult to come up with stoners as empathetic as gay couples with young children.

But supporters of legalization don’t need to change any more hearts and minds; they already have a majority of the population with them and adding another 10 percent isn’t going to improve their political lot. Rather than worry about the masses, they should concentrate their attention and effort on precisely two people. Those people aren’t senators or congressmen, and don’t include the current occupant of the Oval Office, but instead are the two staffers for the Congressional Joint Committee on Taxation (JCT) who will be tasked with estimating the amount of revenue that legalization would generate for the government. The bigger that number, the more likely it is that the federal government will legalize marijuana—and tax the stuffing out of it.

But if the marijuana lobby decides to eschew perfidy, it could help the cause. If this were a bad 1990s comedy, the pro-marijuana lobby would maneuver to ensure that the head of the JCT gives the estimation assignment to a couple of stoner staffers. But if the marijuana lobby chooses to eschew perfidy, it could help the cause of legalization by funding studies for the JCT staff to reference. For a good deal of legislation, the JCT staff does not use some rigorous one estimating that legalization could generate nearly $10 billion in tax revenue a year—not churn change, but insufficient to sway the debate. There are plenty of reputable economists with sterling reputations who would deliver sufficiently big revenue estimates for legalization; throwing money at them would be a good investment for the National Organization for the Reform of Marijuana Laws.

There are a few existing papers that attempt to do this. Harvard economist and Cato Institute senior fellow Jeffrey Miron wrote a rigorous one estimating that legalization could generate nearly $10 billion in tax revenue a year—not chump change, but insufficient to sway the debate. There are plenty of reputable economists with sterling reputations who would deliver sufficiently big revenue estimates for legalization; throwing money at them would be a good investment for the National Organization for the Reform of Marijuana Laws.

There are not that many members of Congress who want to legalize marijuana at this point. But if legalization would help them to do other things that they earnestly want to accomplish, then it could happen. The billions of dollars that legalization could generate for the Treasury’s coffers should be the sole focus of the marijuana lobby.
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