

The Politics of Wine: Trade Barriers, Interest Groups, and the Commerce Clause

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Abstract

We investigate the contemporary impacts of the commerce clause of the U.S. Constitution by focusing on recent changes in state laws governing interstate direct shipment of alcohol. The elimination of interstate trade barriers, consistent with the intent of the commerce clause, clearly facilitates efficient markets. More specifically, in 2003, the state of Virginia legalized direct wine shipping to consumers from out-of-state sellers, and by 2004, the average price differential between online sellers and bricks-and-mortar stores in Northern Virginia was approximately 26-40 percent lower than in 2002. Virginia bricks-and-mortar retailers also began pricing their products as a function of interstate shipping costs following the legalization of direct shipment. These findings regarding the elimination of trade barriers serve as a guidepost to policymakers in various states who need to revise their laws in response to the Supreme Court's 2005 ruling striking down discriminatory direct shipment bans. The distributive consequences of these legal changes should induce intense political competition and mobilization among producers, consumers, retailers and other affected parties. Consideration of these recent political debates over changes in alcohol regulatory structures within Virginia, Illinois, and several other states provides an illustration of the impacts of interest group competition on lawmaking and the political consequences of the commerce clause.

If it be necessary to regulate trade at all, it surely is necessary to lodge the power, where trade can be regulated with effect, and experience has confirmed what reason foresaw, that it can never be so regulated by the States acting in their separate capacities. They can no more exercise this power separately, than they could separately carry on war...

-James Madison to James Monroe, August 7, 1785¹

Introduction

The commerce clause of the U.S. Constitution (Article I, Section 8) is considered to be a primary contributor to the development of America's unified national economy.² Although the U.S. Constitution does not explicitly prohibit states from enacting statutes affecting interstate commerce, a legal doctrine known as the "Dormant Commerce Clause" has evolved over the past 200 years and has effectively empowered the courts to strike down state laws interfering with, limiting, and burdensome to interstate commerce.³ As the courts have come to view virtually all state laws as components of a larger national economy, the dormant commerce clause has been invoked to justify the use of judicial veto-power over statutes governing practically every aspect of the American economy and society (Douglass 2000, Epstein 1987). The dormant commerce clause has become the means by which the commerce clause maintains its prominence as "one of the Constitution's central pillars in the protection of markets" (Weingast 1995, 8), ensuring that states do not engage in various forms of protectionism at the expense of the rest of the union.

Although scholars have accepted the commerce clause's role in facilitating a seamless economy, little scholarship has systematically analyzed its contemporary political and market influence. To the extent scholars (e.g., Carrubba and Rogers 2003,

545-547) point to clear evidence of the impact of the commerce clause, they typically identify the distant, historical characteristics of interstate commerce in the absence of such a legal doctrine (i.e., under the Articles of Confederation). This lack of attention to the empirical effects of the commerce clause, and more specifically, the dormant commerce clause, is unsurprising. After all, the constitutional mandate that Congress can regulate trade among the states has been in effect since ratification; and the courts' jurisdiction under the dormant commerce clause ostensibly applies to all commodities manufactured, sold, and consumed in the U.S. economy.⁴ Hence, there are practically no situations where one might observe how the world would look if the commerce clause did not exist, from which to draw inferences about its influence.

While this scholarly omission is understandable, it is unsatisfying. In a broader theoretical context, and as illustrated by Madison's message to Monroe in 1785, the concept of a Commerce Clause-like institution has attained the status of a necessary condition to ensure effective government within a federal system. Buchanan (1995, 21), in his treatise on "Federalism as an Ideal Political Order", argues that it is essential for a central government to be able to "enforce economic freedom and openness over the whole of the territory....the separate states [should] be prevented, by federal authority, from placing barriers on the free flow of resources and goods across their borders." The effectiveness and integrity of the dormant commerce clause, then, is clearly relevant to a broad range of questions pertaining to federalism, state policymaking, public law and constitutional design, and political economy, broadly construed. Its empirical impact should be assessed, rather than taken for granted.

As suggested above, to understand this important institutional constraint, and how politics and policy outcomes might look without the dormant commerce clause, one needs to explore a policy area for which the dormant commerce clause does not apply. Interestingly, one clear exception to dormant commerce clause is alcohol. Due to its unique status under the 21st Amendment, alcohol historically has been viewed as outside of the scope of the commerce clause (Douglass 2000, Shanker 1999), yet recent litigation and legislation following from debates over interstate direct-to-consumer wine shipment has changed its status. Variations in state laws have created a natural experiment that facilitates a relatively clean identification of the effects of direct-shipment bans on alcohol markets and provides us with a novel opportunity to investigate the political and market impacts of the commerce clause.

As states change their laws to comport with recent court rulings, political scientists will be presented with a bevy of opportunities to analyze the ways in which legal regimes can potentially alter economic interests, inducing changes in political preferences affecting the interest group environment. As organized interests press their cases in different legislative and regulatory arenas, scholars can identify how variations in the costs of collective action, lobbying strategy, campaign contributions, and several other factors culminate in the creation of new public policies across different states. Hence, the wine wars offer us a novel opportunity to study important aspects of interest-group politics, the political economy of regulation, and the process of policy diffusion among states and federations. By comparing how the politics of alcohol comports policy dynamics in other areas that have been historically covered by the dormant commerce

clause, scholars can glean additional insight on how the commerce clause influences the American polity.

A first step in such a research agenda is to clearly analyze how changes in these direct shipment bans influence market outcomes, and to this end, we focus on the state of Virginia, where prior to 2003, out-of-state direct shipment of alcohol to Virginia consumers was illegal. In July 2003, however, Virginia changed its law to permit direct shipment of wine from out-of-state sellers that register with the state and remit sales and excise taxes. Comparing online and bricks-and-mortar price and variety data collected in the summers of 2002 and 2004, one year before and after the statutory repeal of the ban, respectively, we find that although average bricks-and-mortar prices exceeded average online prices in 2004, the magnitude of the price difference decreased by nearly 40 percent compared to 2002, when direct shipment was illegal. Furthermore, following the ban's repeal, Virginia bricks-and-mortar winesellers priced their products as a function of interstate shipping costs. These findings offer empirical support to the claim that by reducing interstate trade barriers, the dormant commerce clause enhances the efficiency of markets.

Our research has obvious practical value for policymakers. As alluded to above, the Supreme Court's recent ruling in *Heald v. Engler* (2005) that the 21st Amendment does not condone the discriminatory treatment of intra-and interstate direct shipment of alcohol, requires almost every state to reevaluate its laws. Our results suggest that "leveling the playing field" by banning all direct shipment would lead prices in bricks-and-mortar stores to be higher than they would be if direct shipment were legal. Given the likely distributive consequences of this market reaction, it is unsurprising that recent

political debates over state alcohol policies have been heavily influenced by concerns other than economic efficiency. We review the political developments surrounding proposed legislation in Illinois and other states, highlight their relevance to existing theories of interest-group competition, and comment on how changes in alcohol's status in regards to the dormant commerce clause has impacted the nature of policy formation.

Section 1. Alcohol, the Commerce Clause, and the Law

Alcohol is a policy area in which politics and economics are intimately connected, and questions surrounding states' rights in alcohol policy have been widely debated for more than one hundred years.⁵ The passage of the 18th and 21st Amendments, as well as numerous alcohol-related laws and regulations, have been consistently marked by intense political maneuverings by different groups that are either promoting their goals through the political process, or responding to how laws have influenced their political or economic interests.

In 1913, the U.S. Congress passed the Webb-Kenyon Act, which made it a federal offense to ship any alcoholic beverage from one state to another, if it was in violation of either state's laws. Although the 18th Amendment (1919), establishing prohibition, temporarily mooted questions over states' rights in alcohol policy, its repeal in 1933 set the stage for a contentious political debate.⁶ Section 2 of the 21st Amendment effectively granted the earlier Webb-Kenyon Act constitutional standing by barring the "transportation or importation into any State ... of intoxicating liquors, in violation of the laws thereof," potentially granting states significant discretion with which to interfere with interstate commerce in alcohol.

With regulatory authority falling to the states, local interests (i.e., producers, retailers, etc.) pressed heavily on state legislatures for favorable legislation, leading to wildly diverse rules and standards for the sale and use of alcohol across the U.S. By 1940, forty-three states had some form of alcohol trade barriers, and contemporary scholarship (Green 1940, 718) likened the situation to trade among the states under the Articles of Confederation. Twenty-one states required out-of-state producers to obtain a license, some of which were very costly, to sell to an in-state wholesaler or state monopoly. Eight states had excise tax differentials between in-state and out-of-state products, and thirteen states charged different licensing fees based on whether the wine was made from in-state fruit. Besides raising state revenues, and often being couched in social-welfare terms, these discriminatory regulations obviously insulated in-state industries from out-of-state competition.⁷ Although these laws seemed to be a blatant violation of the commerce clause (as well as being motivated by local economic considerations), the Supreme Court consistently refused to hear cases on these matters because of the prevailing interpretation of Section 2 of the 21st Amendment (Lukacs 2000, 256-258).⁸

Variations in trade barriers aside, one common pattern that spread across states was a “three tier” system under which all alcohol sold in a state came from a producer (tier one) to a distributor (tier two) and finally to a retailer (tier three).⁹ Vertical integration between the tiers was generally prohibited, meaning that it was often illegal for wineries or retailers to ship wine directly to consumers, although many states made exceptions for in-state wineries, allowing them to sell directly to consumers at the winery or via home delivery. By the 1980s, almost every state in the U.S. had adopted some

variant of the three-tier distribution system; and with the exception of Alaska, California, and Rhode Island, interstate direct shipments of wine to consumers were generally illegal.

In 1986, however, the California legislature enacted legislation that led to the emergence of “reciprocity” agreements between states, whereby states would recognize two-way direct shipping rights with one another. As of 2004, 13 states allowed relatively unrestricted direct shipment of wine through such reciprocity agreements.¹⁰ At the same time, 13 other states and the District of Columbia allowed limited quantities of wine to be imported without going through the three-tier distribution system, and 24 states completely banned interstate direct shipment.

Of the 24 states that banned interstate direct shipment, a handful had passed laws that became the focus of legal challenges in the early 2000s, by allowing in-state wineries (and sometimes retailers) to ship directly to in-state consumers, and prohibiting out-of-state sellers from engaging in similar activities. Proponents of these laws argued that they were necessary, because in-state wine sellers were easier to monitor for taxation and other law-compliance purposes, and legally appropriate, given conventional interpretations of the 21st Amendment. Unsurprisingly, shipping ban opponents argued that they were a clear violation of the commerce clause.

These competing views met mixed results in court. In 2002 and 2003, federal courts found that such laws in Michigan, Texas, North Carolina, and Virginia were unconstitutional violations of the commerce clause, whereas a federal court decided in 2003 to uphold New York’s discriminatory direct shipment ban.¹¹ Texas, North Carolina, and Virginia subsequently legalized interstate direct shipping to comply with federal court decisions but Michigan petitioned the Supreme Court for certiorari, as did

the plaintiffs in the New York case. These contradictory federal circuit decisions were reconciled in May 2005, when the U.S. Supreme Court ruled, 5-4, that discriminatory laws were, indeed, an unconstitutional violation of the commerce clause. The Court stated that “Section 2 [of the 21st Amendment] does not allow States to regulate direct shipment of wine on terms that discriminate in favor of in-state producers” (544 US 12 2005). This decision placed the onus on states with discriminatory laws to re-evaluate them and decide how best to synchronize their practices across in-state and out-of-state sellers.

Section 2. The Anticipated Effects of Removing Interstate Trade Barriers

Although advocates of the dormant commerce clause would predict that repealing direct shipment bans will facilitate more efficient trade between the states, the interest group environment surrounding the wine wars and conventional microeconomic theory provide us with mixed expectations.

Throughout the late 1990s and early 2000s, lawsuits challenging interstate direct shipping bans were filed by various parties, including out-of-state wineries, consumers, and wine journalists. Amicus briefs supporting these plaintiffs came from wineries, winery and vineyard trade associations, the Cargo Airline Association, and a variety of firms interested in promoting electronic commerce, all of whom would presumably benefit from the expanded market following the repeal of direct shipment bans. Responding to constituency concerns, the congressional wine caucus and attorneys general of five reciprocity states, including California, likewise supported the plaintiffs with amicus briefs. Consistent with the spirit of the dormant commerce clause, the primary argument in favor of removing the bans was that repeal would contribute to a

more competitive wine market, enhancing selection and reducing retail prices for consumers.

The primary defendants in these cases were state governments and parties who stood to incur losses if direct shipment bans were overturned intervened as additional defendants. The Michigan Beer and Wine Wholesalers Association, several New York wholesalers, and parties with close ties to the wholesalers, such as the (New York) Local 2D of the Allied Food and Commercial Workers Union and the (New York) Metropolitan Package Store Association, quickly came to the support of state governments. Amicus briefs supporting the states' cause came from the (national) Wine and Spirits Wholesalers Association, the Beer Institute, the National Beer Wholesalers Association, state alcoholic beverage regulators, and 31 state attorneys general, who argued that the existing bans did not inhibit competition or inflate retail prices and had a clear, positive societal impact in facilitating tax collection and limiting the potential for underage drinking or alcohol abuse.

Reminiscent of earlier debates over prohibition, the composition of the coalition that emerged to defend the direct shipping ban was consistent with Yandle's (1983, 1999) theory of "Bootleggers and Baptists," which describes how coalitions of public-interest advocates and private industry support social regulation that curbs competition.¹² Consistent with Yandle's theory, various public health advocates intervened in the cases on the side of the wholesalers and explicitly endorsed higher prices to curb alcohol consumption.¹³ A broader "public interest" coalition that included the National Association of Evangelicals, Phyllis Schlafly's Eagle Forum, Gary Bauer's American Values, and Concerned Women for America also emerged on the side of the wholesalers,

contending in an amicus brief headlined by the Michigan Association of Secondary School Principals (2004), that direct shipment made it impossible for states to enforce the minimum drinking age.

Yandle's theory is consistent with broader economic theories of regulation (Stigler 1971, Posner 1974) in that it assumes that the private interests favoring regulation do so because they benefit from the resulting constraints on competition. Consideration of certain structural features of alcohol distribution networks clearly reveals that wholesalers had significant economic incentives to support barriers to direct shipment, and that repealing these bans could reduce retail prices.

Consider Virginia's law mandating that wineries, wholesalers, and retailers be established as separate entities in a three-tier system, and any bottle of wine sold in a retail store must be handled by a wholesaler before it reaches the retailer. If the wine comes from outside the state, it must pass through an importer, usually a wholesaler. In addition to requiring all out-of-state wineries to utilize a Virginia wholesaler, Virginia imposes a number of requirements that limit wineries' freedom to contract or to switch wholesalers, such as requiring wineries to designate a "primary area of responsibility" for each wholesaler, so there is only one distributor in each territory for a single brand. Although Virginia bans exclusive territories for wholesalers, this measure could have the same effect as exclusive territories if wholesalers refrain from selling to retailers outside of their primary area of responsibility (Jordan and Jaffee 1987, Culbertson and Bradford 1991, Sass and Saurman 1996).

Because the wholesale price that maximizes the wholesaler's profits is higher than the wholesale price that maximizes the producer's profits, wholesaler market power

creates a clear conflict of interest between the wholesaler and the producer (Klein 1995: 13). Similar to laws in 19 other states, however, a winery cannot terminate its agreement with a Virginia wholesaler in the absence of “good cause” (such as state revocation of the wholesaler’s license, bankruptcy of the wholesaler, or other factors). Hence, a winery could find itself powerless to terminate wholesalers who exploit market power created by the “primary area of responsibility” requirement. Furthermore, in the case of a dispute, a wholesaler must be given 60 days to cure any deficiency and the state’s Department of Alcoholic Beverage Control ultimately determines good cause after a hearing.¹⁴

Economic theory thus suggests that Virginia’s three-tier system could raise prices or have other deleterious effects on consumers; but could the repealing of its direct shipment ban provide an effective remedy? On this point, a growing body of literature on the potential benefits of e-commerce (e.g., Smith, Bailey, and Brynjolfsson 1999) suggests that the presence of many more sellers and lower search costs contributes to greater market competition, ensuring that consumers who are able to (legally) shop from out-of-state vendors will consistently face lower prices than those offered in local bricks and mortar stores.¹⁵ If direct shipment is legal, lower online prices would presumably induce local vendors to respond to competitive threats with their own price reductions.

Although Wiseman and Ellig (2004) found that prices for premium wines (including shipping costs) were lower online than in Northern Virginia bricks-and-mortar stores, they drew on data generated before Virginia’s repeal of its interstate direct shipment ban. Hence, there was no reason to expect that Virginia in-state retailers would be responsive to out-of-state prices. By comparing Wiseman and Ellig’s earlier findings to a period when direct shipping is legal, however, we can assess whether online

competition provides a viable alternative to a state's three-tier system and whether reducing interstate trade barriers is genuinely more beneficial to consumers than the current regime(s) in many states.¹⁶ In doing so, we can use this information to better understand the effects of the dormant commerce clause.

Section 3. Empirical Method, Data Sources and Calculations

To identify the effects of reducing interstate trade barriers, we focus on one specific market, Northern Virginia, within a limited time frame when no obvious economic shocks occurred, the summers of 2002 and 2004 (one year before and after Virginia legalized direct shipment in July 2003). We thus embrace the natural-experiments literature in economics and political science, wherein scholars analyze how changes in one variable of interest (e.g., regulations), *ceteris paribus*, influence the dependent variable of interest (e.g., market competitiveness).¹⁷

Milyo and Waldfogel (1999) employ this approach to studying alcohol markets in their analysis of the effects of the Court's *44 Liquormart* decision, which legalized product advertising for alcoholic beverages in Rhode Island. In comparing price differentials between Rhode Island--where the advertising policy changed as a result of the decision--and Massachusetts--where advertising was already legal—Milyo and Waldfogel find that product advertising was related to more competitive pricing but legalizing advertising did not influence several other indicators of market competition. In a similar vein, by examining the difference in online and offline prices and availability in 2002 and 2004 in Northern Virginia, we implicitly control for other major variables that might affect price fluctuations in wine, allowing us to draw conclusions about the market reaction to changes in the regulatory environment.

The wine sample, data collection and coding protocol, and analytical procedures we employ are identical to those used in Wiseman and Ellig's (2004) study of Virginia's direct shipment ban that employed 2002 data, which we incorporate here. To generate a comparable wine sample for 2004, we draw data from *Wine and Spirits* magazine's 15th Annual Restaurant Poll published in the April 2004 issue and focused on the "Top 50 Most Popular Wines" in America's restaurants.¹⁸ The 2004 survey consisted of questionnaires mailed to 2,112 restaurants in the United States which asked, among other questions, for each restaurant's top ten selling wines in the last quarter of 2003.¹⁹ For each of the ten wines listed on a restaurant's response, *Wine and Spirits* assigned a value ranging from ten (for the best selling wine) to one (for the tenth best selling wine). For example, if Winery X held spots 1, 2, and 3 on Restaurant Y's wine list for its Cabernet Sauvignon, Chardonnay, and Zinfandel, respectively, then its Cabernet, Chardonnay and Zinfandel would receive 10, 9, and 8 points, respectively. Each bottle's total score was determined by summing the scores across all respondents.²⁰

From the list of most popular wines arranged by varietal we selected the 50 highest point recipients for online and bricks and mortar comparisons from the collection of Cabernet Sauvignons, Chardonnays, Merlots, Pinot Noirs, Sauvignon Blancs and Zinfandels produced by American winemakers.²¹ Focusing on the top 50 point recipients actually identifies more than 50 bottles (in this case, 78) because *Wine and Spirits* recognizes all relevant bottles that fall under a given winery's varietal when it identifies the most popular Chardonnays, Merlots, and so forth.²² Six of the bottles were either unavailable for retail sale to consumers (i.e., they were only available directly to restaurants), or had been misnamed by *Wine and Spirits* and analogous bottlings could

not be identified. Hence, the current vintages of the remaining 72 bottles were used for comparisons between offline and online retail channels.

Data on price and variety from offline retailers were collected by first consulting “Yahoo! Yellow Pages” and identifying every store identifying itself as a “wine retailer” located in Virginia within a ten-mile radius of McLean, a wealthy suburb approximately ten miles from Washington, DC. This list was slightly larger than Wiseman and Ellig’s (2004) list, with a total of 15 wine stores identified by Yahoo. On-site visits were then conducted to collect price and variety data.²³

Data from online outlets were acquired from two sources. First, in our initial inquiry to wineries, we collected price information on the most recent vintages available for sale. To collect data from other retail stores that had an online presence, we engaged the shopbot Winesearcher.com, which at the time of data collection had access to price and inventory data from more than 2500 wine stores and wineries with online inventories.²⁴ For each bottle in the sample, Winesearcher.com produced a list of all retailers in its database that offered bottles and their respective prices (including the lowest price). The “best online price” was determined by selecting the lower of the two prices presented by Winesearcher.com and the winery, respectively, at the time of data collection. We do not include estimates of excise or sales taxes in our calculations, and focus solely on differences in posted prices on- and offline.²⁵

All online and offline prices for 2004 were collected between late July and early October. Table 1 presents summary statistics on the prices of the lowest-priced bottles found online and in bricks-and-mortar Northern Virginia stores.

Section 4. Findings

We seek to address the following questions. Is there any difference in product availability and prices for identical products in online and offline markets? How do the product and price differences in the 2004 sample compare to the 2002 sample? Are any differences consistent with the hypothesis that removal of the ban fostered a more competitive market environment by giving consumers an alternative to Virginia's three-tier distribution system?

On the question of product availability, at first glance our exercise might seem trivial. After all, it would be unsurprising that searching 2500 (online) stores would yield greater variety than searching 15 (offline) stores. Nonetheless, our sample makes this inquiry somewhat more interesting. We focus on a highly popular sample of wines that have been identified, based on consumption patterns, as the top sellers in restaurants. Throughout the direct shipment debate, advocates for wholesaler interests have consistently argued that any highly desirable wine can easily find its way into the distribution network (Gray 2002).²⁶ Hence, we take these claims at face value and analyze whether following a reasonable search highly desirable wines are truly found as easily offline as they are online.

Of the 72 bottles in our sample available for retail sale in the most recent vintage, all were available for sale from online wine sellers willing to ship to Virginia. Nine of the 72 bottlings (12.5 percent), however, were not available in bricks-and-mortar stores within 10 miles of McLean, Virginia, at the time of data collection. Prior to the repeal of Virginia's direct shipment ban, Wiseman and Ellig (2004) found that, for their 2002 sample, 15 percent of the wines available online could not be found in offline stores.

Contrary to the claims of wholesalers and related parties, even with the legalization of direct shipment some highly desirable wines are still not found in bricks-and-mortar outlets. Furthermore, although legalization of direct shipment has corresponded to an increase in product availability, the increase has not been substantial.²⁷

The small sample size, however, counsels modesty about these results. Moreover, because shelf space may be constrained in the bricks-and-mortar world, it is unclear whether we *should* expect substantial differences between bricks-and-mortar availability in the 2002 and 2004 samples. If retailers were stocking their shelves with as many highly-desirable wines as possible in 2002, legalizing direct shipment should not lead to better variety offline.²⁸ Even if retailers wanted to expand their selections, it might be infeasible to do so.²⁹

But because there are fewer obvious constraints preventing price changes in response to increased competition, prices may tell a different story. On this question, Table 2 presents the average price-per-bottle savings for wines from the least-costly online retailer over the least-costly bricks-and-mortar store, for all bottles in our 2004 sample and demonstrates that prices for the same wine are consistently lower online than in bricks-and-mortar outlets. The average per-bottle savings is approximately \$3.05 for the entire sample of bottles that could be found both online and offline in 2004 (N=63). Furthermore, per-bottle savings are larger for more expensive bottles, with bottles at an average offline retail price of \$40.00 or more in bricks-and-mortar stores being an average of \$12.26 less expensive online.³⁰ All price differences in Table 2 are statistically significant, regardless of the retail price of the bottle.

Given the wide variation of bottle prices in our sample, it is more informative to consider average percentage differences between online and offline sales—i.e., the percentage discount associated with purchasing the bottle online. Table 3 presents these percentage differences, where the difference is defined as:

$$\frac{(\text{cheapest bricks and mortar price for bottle } i) - (\text{cheapest online price for bottle } i)}{(\text{cheapest bricks and mortar price for bottle } i)}$$

For the entire sample, the average online price is approximately 8.9 percent lower than the offline price, and similar to Table 2, the percentage difference is greater for the more expensive bottles. Less expensive bottles--those with an average price less than \$20.00--are approximately 7.6 percent less expensive online than offline, whereas the most expensive bottles cost an average of 21 percent less online.

Qualitatively, these results are consistent with Wiseman and Ellig's earlier findings, and other findings about the market competitiveness of online versus offline retail outlets (e.g., Brynjolfsson and Smith 2000). A more interesting question to consider, however, is whether these price differences are statistically different from those that existed in 2002, when out-of-state direct shipment to Virginia consumers was illegal.

Models 1-4 in Table 4, which address this question, present the results from ordinary least squares analysis, where the dependent variable is the percentage price difference between offline and online retail channels for pooled data from 2002 and 2004.³¹ The coefficient for the 2004 dummy is of crucial interest in all models, which indicates data collected one year following the legalization of direct shipment, when the Virginia wine market was effectively covered by the dormant commerce clause. If the Virginia wine market became more price competitive following the legalization of direct shipment, we would expect the lowest-pricing bricks and mortar wine stores to set prices

more closely to Internet posted prices than prior to legalization, leading to a negative and statistically significant coefficient on the 2004 dummy.

Model 1 presents a bare-bone analysis, a regression of online percentage discount on the 2004 dummy. The constant is positive and significant, indicating that for the combined 2002 and 2004 samples, the average bottle purchased offline is nearly 16 percent more expensive than its online counterpart. The coefficient on the 2004 dummy is negative and statistically significant, however, indicating that the online percentage discount is significantly less in 2004 (6.9 percentage points) than in 2002. This result is consistent with the theory that following the legalization of direct shipment, the market was indeed more competitive in 2004 than in 2002.

To investigate whether the results of Model 1 are artifacts of differences in the price distributions of the 2002 and 2004 samples, Model 2 controls for the average offline retail price of the bottle. Suppose, for example, that the 2002 sample had generally more expensive bottles, and these more expensive bottles were priced much higher in bricks-and-mortar stores than in online outlets. If true, our result for the 2004 dummy would be a natural consequence of the 2004 sample being slightly less expensive and having smaller online discounts in the right-hand tail of its price distribution. But, as revealed in the results for Model 2, although the coefficient on average retail bottle price is positive and statistically significant, *2004 Data* is still negative and statistically significant. Even controlling for average offline retail bottle price, the average online percentage discount is still positive (it was more expensive to purchase bottles offline), and is about 6 percentage points lower in 2004 than in 2002. In other words, the offline-online price

differential dropped nearly 40 percent following the legalization of direct shipment in Virginia.

Model 3 investigates whether the decrease in percentage discount in 2004 is uniform across the entire sample, or related to bottle price. As noted above, the largest price and percentage discounts occur on the more expensive bottles. Hence, it seems plausible that the most-expensive bottles have the greatest slack for retailers to cut as they try to become more competitive with online prices; and one might expect that the average percentage discount in 2004 to be less than in 2002, and the discount to be less for more expensive bottles in 2004. This pricing practice should manifest itself with a negative and significant interaction term, *2004 Data x Average Bottle Price*. As can be seen from the analysis of Model 3, however, *2004 Data x Average Bottle Price* is positive, and achieves marginal statistical significance. Contrary to our expectations, prices converged more for the less expensive bottles. Model 3's results imply that, for a bottle with an average offline price of \$22.07 (the median offline price in our sample), Virginia's law reduced the percentage price spread from 13.7 points in 2002 to 7.5 points in 2004 – a decrease of nearly 44 percent.

Finally, Model 4 investigates whether online discounts are related to bottle popularity, as measured by the bottle's rank in our "top 50" list. To the extent consumers perceive differences in quality between bottles, retailers might leverage this information in charging higher markups (Lynch and Ariely 2000), and a bottle's ranking might be correlated with perceived product qualities (based, e.g., on expert reviews) that retailers might advertise to consumers. Hence, one might expect more popular bottles to have lower online percentage discounts, leading to a negative coefficient on *Bottle*

Popularity.³² As can be seen in the analysis of Model 4, however, the results are inconsistent with this expectation—a bottle’s ranking in the *Wine and Spirits* poll is unrelated to the percentage discount available online.³³

Although these findings clearly demonstrate that the gap between the lowest online and offline prices diminished following the repeal of the ban, these results do not necessarily indicate a more competitive market. For example, if the lowest-pricing bricks-and-mortar retailers posted prices closer to the lowest online prices, but all other bricks-and-mortar retailers held their prices constant (or even increased them), it would be difficult to say that the repeal of the ban generally enhanced market competition. In other words, although a very price-conscious consumer clearly benefited from the repeal of the ban, the results, thus far, provide little about how the average retailer changed its pricing policies following the change in the law. Models 5-8 address this issue by replicating the analyses in Models 1-4, with the dependent variable being the percentage difference between the *average* offline price and the lowest online price. This specification allows us to identify whether and how average offline prices varied in response to the lowest online bottle prices, before and after the ban’s repeal.

Taken together, the results in models 5-8 are consistent with the earlier findings on lowest bricks-and-mortar prices; there is a statistically significant percentage difference in the prices posted by the average bricks-and-mortar wine seller and the lowest-pricing online merchant, but the difference decreased following the repeal of the direct shipment ban. The positive constant in Model 5 indicates that the average bottle purchased from the average offline wine seller is about 22 percent more expensive than the lowest-pricing online winestore. The negative and statistically significant 2004

dummy, implies that the online discount was 5-6 percentage points less in 2004 than in 2002—a 26 percent decrease. Hence, the average retailer, and not just the lowest-pricing bricks-and-mortar retailer, lowered its prices to meet the online competition following the repeal of the direct shipment ban. This result is robust to the inclusion of controls for the average offline bottle price (Model 6), although the statistical significance of the finding decreases modestly. Finally, Models 7 and 8 demonstrate that these percentage price differences are generally uniform across the entire sample, regardless of bottle price, and that they were unresponsive to a bottle's popularity.³⁴

In light of these findings, one might ask: “what is the natural baseline for price convergence?” Even with the increase in legalized competition from out-of-state firms, bricks and mortar prices are unlikely to completely converge to the lowest online prices—perhaps because purchasing from out-of-state winesellers comes with shipping charges, which would presumably be incorporated into Virginia retailers' pricing decisions. Models 1 and 2 in Table 5 investigate this question by replicating our earlier analysis while controlling for an approximation of per-bottle shipping costs. Per-bottle shipping costs are calculated based on the assumption that a consumer purchased a case of the bottle in question, and had it shipped to his/her residence in McLean, Virginia from an online retailer via UPS 2nd Day air service.³⁵ For example, if it cost \$36.00 to ship a case of wine to McLean via UPS 2nd Day Air service, the per-bottle shipping charge would be \$3.00. While this estimate potentially understates the true costs imposed by online firms, it reasonably captures how shipping costs are increasing in distance shipped; and our measure of shipping costs varies dramatically across bottles, given the geographic dispersion of online sellers in our sample.

As demonstrated in Equation 1, Virginia retail prices for the entire sample are approximately 6.9% higher than the lowest online price, controlling for per-bottle shipping costs. Consistent with our earlier findings, the coefficient on the 2004 dummy is negative and statistically significant, indicating that the online percentage discount is significantly less in 2004 (6.0 percentage points) than in 2002. Furthermore, we are unable to reject the null hypothesis that $\alpha + \beta_{2004\ Data}$ ($0.069 - 0.060$) is equal to zero (p-value = 0.84), which implies that controlling for any variance due to shipping costs, online and offline posted prices were effectively the same in 2004. In other words, following the repeal of Virginia's direct shipment ban, Virginia merchants reduced their prices to meet online competition, and any remaining variance in the percentage differential is directly attributable to factors such as shipping costs. Model 2 demonstrates that this result holds even when controlling for average offline bottle price and other variables of interest.

A final point to consider is whether Virginia retailers' responsiveness to shipping costs was the same before and after legalization of direct shipment. For our general argument to have merit, the shipment ban should have curtailed interstate wine shipments prior to its repeal, and hence, Virginia retailers should not have been responsive to interstate shipping costs in 2002, yet quite responsive in 2004. To test whether this relationship holds, Models 3 and 4 in Table 5 replicate our earlier analysis with the interaction variable *Per-Bottle Shipping Costs x 2004 Data*, which captures the marginal impact of interstate shipping costs on percentage differential following the shipping ban's repeal (2004), in comparison to 2002. Consistent with our argument, we see that the marginal impact of *Per-Bottle Shipping Costs* on the percentage differential is negligible

and not statistically significant, yet the interaction variable is *positive* and *significant*.³⁶ In other words, prior to the legalization of direct shipment, Virginia retail prices were completely unresponsive to interstate shipping costs, and markups were largely attributable to the average bottle price. When direct shipment was legalized, however, Virginia retailers responded to out-of-state competition, by lowering their prices from where they had been in 2002, and by effectively pegging their markups to out-of-state shipping costs.³⁷ Consistent with the intentions of the dormant commerce clause, removal of Virginia's direct shipment ban increased competition in local markets.

Section 5. Interest Group Competition and Wine Wars in the States

The intention of the dormant commerce clause is to prevent trade restrictions between the states, and the history of alcohol policy suggests that in the absence of the dormant commerce clause, state legislatures are responsive to political pressures, leading to the establishment of such trade barriers. The analysis thus far demonstrates that removing these trade restrictions has significant market consequences; and more specifically, that repealing direct shipment bans will clearly benefit consumers with respect to prices, cause retailers to be generally more responsive to a broader range of competition, and potentially harm distributors and wholesalers. Taken these findings for granted, the natural question arises: "what's next?"

The Supreme Court's 2005 decision is clearly relevant to more than 20 states, including those with patently discriminatory laws (e.g., New York, Ohio) as well as those states with the most liberal alcohol laws, the reciprocity states. As these states revise their laws, the distributive implications of the Court's ruling will likely generate intense interest group activity, as groups that benefited under the previous regime (e.g.,

distributors) will find themselves having to defend their policy prescriptions against a wide range of opponents advocating for changes in the status quo (e.g., widespread legalization of direct shipment). This realignment of coalitions and interest group influence makes the political consequences of the Court's ruling difficult to predict.

Concerns about predictability aside, these recent developments provide scholars with a novel opportunity analyze the political impacts of the Dormant Commerce Clause, as well as generally studying the roles of interest group competition in policy formulation. Given the wide range of policies under consideration in various states, one could, for example, qualitatively assess the claims that competing interest groups engage in various types of informational (e.g., Austen-Smith and Wright 1992) and distributive lobbying strategies (e.g., Baron 1999, Groseclose and Snyder 1996). Given that many of the affected interests are relatively diffuse (i.e., consumers) analysis of the wine wars can also provide us with insight about different types of grass-roots lobbying techniques (e.g., Cigler and Loomis 1995, Nownes and Freeman 1988, Wright 2003, 89-92) and the role of policy entrepreneurs (Wilson 1980) in the creation of regulatory policy.

As just one example of how these different factors can combine to influence policy, consider Illinois (a reciprocity state), where, prior to the Supreme Court decision, it recognized two-way direct shipping rights between itself and the 12 other reciprocity states. Under Illinois law out-of-state winesellers (wineries and retailers) could ship up to 2 cases per year directly to Illinois consumers; in-state wineries were allowed unlimited direct shipment to Illinois consumers, and to retailers and restaurants. The Illinois law conflicted with the Court's decision because the law discriminated against out-of-state winesellers from reciprocity states in its two-case limit and its prohibitions on direct

shipment to Illinois retailers and restaurants. By barring direct shipment altogether, Illinois law also discriminated against out-of-state winesellers from non-reciprocal states.

In an effort to comport with the Court's ruling, legislation (strongly supported by Illinois beer wholesalers) was introduced in the Illinois House and Senate in January 2006 that would have prohibited direct shipment of wine to Illinois consumers from both in-state and out-of-state wineries unless a consumer had first consummated an on-site purchase at the winery.³⁸ After an initial on-site purchase, a consumer would be limited to receiving 2 cases per year, and wineries would be barred from shipping directly to restaurants and/or retailers without going through a distributor. Although the proposed legislation clearly afforded significant economic benefits to wholesalers and distributors, advocates of the legislation downplayed these aspects. Instead, they argued that the legislation was necessary to provide for appropriate excise tax collection, and more important, to prevent underage consumers from acquiring wine through direct shipment.

The proposed legislation met significant opposition from consumers and wineries. Organized by "Free the Grapes!", a Napa Valley-based pro-direct shipment interest group, Illinois consumers sent more than 5,300 letters to state legislators stating their opposition to the measures. Illinois wineries and vineyards were organized by the Illinois Grape Growers and Vintners Association (IGGVA) to back an alternative proposal, whereby wineries would be able to ship up to 3 cases per month to Illinois consumers with no on-site visit requirement. The IGGVA proposal also allowed Illinois wineries to expand their retail sales efforts, permitting each winery to open as many as 10 retail facilities that would be independent of distributors.

These proposals led to compromise legislation that permitted wineries to ship up to 12 cases per year to each Illinois consumer, even if a consumer did not first purchase wine on site. Illinois wineries would only be able to have at most 2 retail outlets from which to sell wine, however, and they would no longer be permitted to sell directly to retailers and restaurants. Thus, all winesellers--in-state and out-of-state--would have to sell their products through an Illinois distributor as parts of the existing three-tier system. Despite the strong endorsement of the IGGVA and a unanimous 52-0 vote in the Senate, the compromise ran into trouble in the House.

Claiming that the IGGVA had acted without consulting its winery members, several wineries spoke out against the compromise legislation, arguing that revoking their distribution privileges would severely harm their business. More problematic for the legislation, however, was retailers' opposition, organized by the 20,000 member Illinois Retail Merchants Association, who realized that retailers would be unable to ship directly to Illinois consumers under the proposed law. This opposition was joined by the efforts of the newly-formed Specialty Wine Retailers Association, a Sacramento-based pro-retailer-direct shipment interest group which mobilized 50,000 consumers to oppose the compromise.³⁹ Consequently, the legislative compromise was stalled in the House Rules committee, when the Illinois General Assembly adjourned in summer 2006.

While changes in Illinois's law were stalled, the broader consequences of the Court's ruling point to obvious places for comparative research among the states (i.e., Teske 2003). Why in light of the Court's ruling did certain reciprocity states such as California and Oregon decide to legalize widespread, unlimited direct shipment (subject to attaining a permit), and others such as Minnesota legalize direct shipment, but limit

winery shipments to 2 cases per year for each consumer? What caused Ohio to legalize widespread direct shipment, but also consider legislation to mandate out-of-state winesellers to charge Ohio-determined minimum price markups before wine is delivered to Ohio consumers (effectively eliminating viable price competition)? By analyzing these different responses to a common shock (the Court's mandate), scholars might develop a greater understanding of interest group politics, and the causes of policy diffusion across the states (e.g., Walker 1969). In addition, by comparing these policymaking dynamics to policy diffusions in areas for which interstate trade is not relevant (e.g., Child Welfare Programs (Volden 2006)), scholars can glean new insights regarding how the political impacts of the dormant commerce clause.

Section 6. Conclusion

The commerce clause has been widely embraced as the touchstone of an efficient national economy in a federal system. The fundamental concept that subnational units should not be allowed to interfere with each others' trade has been advocated by a wide range of political theorists, public law scholars, and economists, despite the fact that practically no contemporary evidence exists to support such an argument. Until recently, state alcohol policy was in the unique position of apparently being immune from judicial oversight under the dormant commerce clause; and, as a result, for the past 70 years states engaged in practices that resembled trade wars among foreign nations. Recent legal developments, however, provide us with an opportunity to identify how reductions in these trade barriers affect the alcohol market. Hence, we can assess the empirical effects of the dormant commerce clause on the American economy, and its impacts on interest group politics, and coalition and policy formation in the states.

Our analysis indicates that, even for a sample of highly popular wines, consumers in Northern Virginia can find greater product selection and more competitive prices online than in their neighborhood stores, regardless of whether or not interstate direct shipment is legal. More specifically, the lowest online prices were, on average, about 9 percent lower than the lowest offline prices in 2004. Following the legalization of direct shipment, the online-offline price differential decreased nearly 40 percent between 2002 and 2004. Legalization also reduced the spread between the lowest online and average offline prices by nearly 26 percent, between 2002 and 2004. Finally, Virginia winesellers' prices became responsive to interstate shipping costs once direct shipment was legalized.

Although these results are both statistically significant and substantively meaningful we raise two caveats. First, might our results be specific to the relatively wealthy and cosmopolitan Northern Virginia suburbs of Washington, DC, and hence not reflective of the market dynamics in other wine-consuming states subject to direct shipment bans? We are sympathetic to this concern, but we argue, Northern Virginia is similar to many affluent suburban areas in the United States, in income, demographics and consumer tastes. Furthermore, Virginia's wine consumption is not disproportionate to its population size; it was ranked 12th among states in wine consumption and population in 2003.⁴⁰ To the extent wine consumption correlates with population size, the implications of our findings should not be limited to this one community.

Second, although our relatively small sample might limit this study's applicability to the broader market, we offer two defenses. First, Wiseman and Ellig's (2004) study confined its analysis to an analogous sample of wines, and hence, we must consider a

similar sample if we seek to identify how changes in the law corresponded to changes in the market. In addition, because we seek to analyze a sample of popular products, the *Wine and Spirits* sample is particularly attractive for our purposes because it was generated by surveying actual consumption patterns.

These caveats aside, our results suggest that direct shipment bans are *indeed* barriers to market competition, and consistent with the purposes of the dormant commerce clause, their removal will contribute to more efficient state wine markets. Legalizing direct shipment will also have substantial redistributive effects among consumers, wholesalers, and retailers. As we illustrate with our discussion of Illinois, it is not clear that interests with a privileged position in the earlier regime (e.g., distributors) will realize their policy goals in the future, given the changing nature of interest group competition. As policymakers decide how best to revise their laws to comport with the Court's ruling and domestic (state) political pressures, this paper has shown what kind of market response state governments might expect if they remove direct shipment bans. Policymakers might learn from Virginia's experiment and apply its results to their own states, as would be expected in the "laboratory of democracy" that is the American states.

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Table 1: Summary Statistics for 2004 Price Data

Variable	Mean	Std. Dev.	Min	Max	N
Lowest Offline Price	24.214	15.882	7.99	89.99	63
Lowest Online Price	21.996	15.115	7.69	99.99	72

Table 2: 2004 Lowest Online and Lowest Offline Price Differences

Category	Mean	Std. Dev.	Min.	Max.	N
All Bottles	3.048**	5.608	-11.00	25.99	63
Avg. Price < \$20.00	1.183**	2.150	-3.00	6.00	29
Avg. Price ≥ \$20.00	4.639**	7.035	-11.00	25.99	34
Avg. Price ≥ \$40.00	12.260**	6.290	5.00	25.99	8

**Indicates p-value < .05 (two-tailed test).

Table 3: 2004 Lowest Online and Lowest Offline Percentage Differences

Category	Mean	Std. Dev.	Min.	Max.	N
All Bottles	8.97**	17.34	-50.02	40.02	63
Avg. Price < \$20.00	7.60**	14.16	-15.01	40.02	29
Avg. Price ≥ \$20.00	10.15**	19.80	-50.02	40.02	34
Avg. Price ≥ \$40.00	21.00**	6.84	10.02	32.49	8

**Indicates p-value < .05 (two-tailed test).

Table 4: Determinants of Percentage Differences in Online and Offline Prices

Variable	Dependent Variable: Percentage Differences in Lowest Online and Lowest Offline Prices				Dependent Variable: Percentage Differences in Lowest Online and Average Offline Prices			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2004 Data	-0.069 (2.55)	-0.057 (2.27)	-0.106 (2.42)	-0.107 (2.42)	-0.058 (1.83)	-0.049 (1.55)	-0.063 (1.30)	-0.064 (1.30)
Avg. Bottle Price (offline)		0.003 (5.21)	0.002 (4.00)	0.002 (4.01)		0.002 (4.15)	0.002 (4.26)	0.002 (4.12)
2004 Data x Avg. Bottle Price			0.002 (1.68)	0.002 (1.70)			0.001 (0.33)	0.001 (0.38)
Bottle Popularity				0.000 (0.40)				0.001 (0.51)
Constant	0.158 (10.00)	0.080 (3.78)	0.093 (4.08)	0.083 (2.49)	0.219 (13.06)	0.153 (6.64)	0.157 (6.94)	0.141 (3.98)
N	130	130	130	130	130	130	130	130
Adjusted-R ²	0.04	0.16	0.16	0.16	0.02	0.07	0.07	0.06

Ordinary Least Squares coefficients with t-statistics in parentheses, based on Huber-White standard errors.

Table 5: Relationship between Percentage Differences in Online and Offline Prices and Shipping Costs

Dependent Variable: Percentage
Differences in Lowest Online and Lowest
Offline Prices

Variable	(1)	(2)	(3)	(4)
2004 Data	-0.060 (2.26)	-0.096 (2.20)	-0.188 (2.32)	-0.212 (2.64)
Per-Bottle Shipping Costs	0.015 (2.07)	0.012 (1.77)	0.002 (0.19)	-0.000 (0.000)
Per-Bottle Shipping Costs x 2004 Data			0.022 (1.63)	0.021 (1.55)
Avg. Bottle Price (offline)		0.002 (4.13)		0.002 (3.87)
2004 Data x Avg. Bottle Price		0.002 (1.61)		0.002 (1.41)
Bottle Popularity		0.000 (0.37)		0.000 (0.51)
Constant	0.069 (1.54)	0.011 (0.22)	0.148 (2.83)	0.081 (1.51)
N	130	130	130	130
Adjusted-R ²	0.07	0.17	0.07	0.18

Ordinary Least Squares coefficients with t-statistics in parentheses, based on Huber-White standard errors.

Appendix Table A1: Determinants of Percentage Differences in Online and Offline Prices (drawing on data from identical stores in 2002 and 2004)

Variable	Dependent Variable: Percentage Differences in Lowest Online and Lowest Offline Prices				Dependent Variable: Percentage Differences in Lowest Online and Average Offline Prices			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2004 Data	-0.059 (2.32)	-0.048 (2.03)	-0.093 (2.21)	-0.093 (2.21)	-0.052 (1.79)	-0.043 (1.50)	-0.059 (1.33)	-0.060 (1.33)
Avg. Bottle Price (offline)		0.003 (5.23)	0.002 (3.97)	0.002 (3.95)		0.002 (3.98)	0.002 (4.03)	0.002 (3.86)
2004 Data x Avg. Bottle Price			0.002 (1.55)	0.002 (1.55)			0.001 (0.40)	0.001 (0.42)
Bottle Popularity				0.000 (0.21)				0.000 (0.23)
Constant	0.158 (10.00)	0.082 (3.88)	0.094 (4.10)	0.089 (2.69)	0.221 (15.83)	0.159 (7.61)	0.164 (8.00)	0.157 (4.54)
N	129	129	129	129	129	129	129	129
Adjusted-R ²	0.03	0.16	0.17	0.16	0.02	0.08	0.07	0.07

Ordinary Least Squares coefficients with t-statistics in parentheses, based on Huber-White standard errors.

Endnotes

¹ Letter from James Madison to James Monroe (Kurland and Lerner (1987, Vol 2. 481-482)).

² The scholarly work on the development and plausible impacts of the commerce clause is voluminous. For a seminal legal perspective, see Chemerinsky (1997, chs. 3, 5)

³ The Court generally rules state law that burden interstate commerce unconstitutional unless the law provides for benefits that are clearly greater than their consequent costs (to out-of-state interests). Carrubba and Rogers (2003, 558-562) discuss the evolution of the dormant commerce clause, and Rogers (1999) identifies why the Court is especially suspicious of laws discriminating against out-of-state interests.

⁴ Likewise, the dormant commerce clause has effectively existed since *Gibbons v. Ogden* (1824).

⁵ For more detailed discussions of the history of direct shipment and alcohol distribution, see Anderson (2004), Riekhof and Sykuta (2005), Whitman (2003), and Wiseman and Ellig (2004).

⁶ Meier (1994, 135-155) provides an extensive treatment of the politics surrounding prohibition.

⁷ Between 1937 and 1938, Green (1940, 725) argues that these interstate trade barriers led to a 3 million gallon net decrease of California wine consumed, and a corresponding 2.7 million gallon increase in the consumption of other states' wine.

⁸ Fellman (1948, 162-163) notes that the Court was "firmly committed" to the principle that states' rights to regulate the distribution of liquor into their borders were "not limited by the commerce clause".

⁹ The three-tier system was an extension of earlier federal laws passed under the Federal Alcohol Act of 1935 mandating barriers between the production and retail sides of the alcohol industry, to presumably reduce the market and political power of brewers and distillers (O’Neil 1940, 571-572).

¹⁰ Riekoff and Sykuta (2005) identify how various public and private sector interests influenced the reciprocity decisions in state legislatures. Similar to Skalaban’s (1992, 1993) analysis of interstate banking deregulation, they find that in-state industry competitiveness significantly influenced states’ decisions to grant reciprocity status to other states.

¹¹ See *Heald v. Engler*, No. 00-CV-71438-DT (E.D. Mich. Sept. 28, 2001); *Dickerson v. Bailey*, 336 F.3d 388 (5th Cir. 2003); *Beskind v. Easley*, 325 F.3d 506 (4th Cir. 2003), *Bolick v. Danielson*, 330 F.3d 274 (4th Cir. 2003); *Swedenburg v. Kelly*, 358 F.3d 223 (2nd Cir. 2003).

¹² Britton, Ford, and Gay (2001) demonstrate that states with the most restrictive direct wine shipping laws were those with the highest percentages of conservative Protestants, and Johnson and Meier (1990) also find that interesting relations between concentrations of religious affiliations and state alcohol policies.

¹³ The Illinois Alcohol and Drug Dependence Association (2004: 4), for example, charged, “The parties opposing direct shipping laws make no attempt to hide the fact that they seek to promote and protect their ability to make liquor as widely and cheaply available as possible.” Internet alcohol sales would “make a high tax/lower consumption strategy for liquor control virtually a dead letter.”

¹⁴ Brickley (2002: 513) notes how good cause restrictions require franchisors (analogous to a winery) must also engage in costly activities such as extensive recordkeeping “to correct performance deficiencies” with franchisees (analogous to a wholesaler), which can also lead to higher retail prices.

¹⁵ Alternatively, other scholars (e.g., Lynch and Ariely 2000, Smith Bailey, and Brynjolffson (1999, 109)) have argued that online prices could also be higher than offline prices, due to the value of consumers’ time and reduced search costs for quality attributes. The literature on price competition in electronic commerce is voluminous, and has focused on markets ranging from automobiles (e.g., Scott-Morton et al 2001) to contact lenses (Cooper 2005). Wiseman (2000) provides a detailed discussion of this literature.

¹⁶ Relatedly, Ellig and Wiseman (2004) demonstrate that the lowest-priced bottles online were generally located at California retailers, suggesting that the Internet might facilitate regulatory competition between the states if trade barriers are removed.

¹⁷ See Meyer (1995) for a description of the method.

¹⁸ Wiseman and Ellig (2004) drew data from the 13th annual restaurant poll, published in April 2002.

¹⁹ 350 restaurants responded with completed polls by the requested deadline for 2004.

²⁰ *Wine and Spirits*’ “Top 50” list is determined by how many mentions per 100 responses a winery receives from restaurants in the polls (where points only come into play in case of ties).

²¹ The highest ranked wine in the 2004 sample was the Sonoma-Cutrer Vineyards Chardonnay, with 360 points. The 50th-most popular wine was a six-way tie between

Pinot Noirs produced by Byron and Chehalem Wineries, Chardonnays produced by Chateau St. Michelle and Ferrari-Carano Wineries, and Merlots produced by Chateau St. Michelle and Frog's Leap Wineries, with 34 points each.

²² For example, Kendall-Jackson Vineyards' Chardonnay received 226 points, making it the second most popular wine overall, but Wine and Spirits recognized two bottles, the "California Grand Reserve" and the "California Vintners Reserve," and hence both were included in our sample.

²³ All of the wine retailers identified in 2002 are included in this sample, with the exception of Sutton Place Gourmet, which is no longer listed in Yahoo as a "wine retailer." Analyzing data drawn only from the stores that were in both the 2002 and 2004 samples influences the sample size and the average offline bottle price variable, but it does not substantively change our results (which are presented in the Appendix).

²⁴ The figures on the number of wine sellers were provided by a Winesearcher.com representative in May 2005. This is a considerable increase from the 2002 capabilities of Winesearcher.com, which was employed by Wiseman and Ellig (2004), and had access to less than 800 retail outlets. The increase in online stores searched might bias our results in favor of finding larger online-offline price differentials in 2004 than in 2002, if the larger sample size increases our odds of finding some better prices online. The possibility of this bias increases our confidence that the results we report below are, if anything, conservative estimates of the effect of repealing Virginia's law.

²⁵ Since Virginia law mandates out-of-state merchants to remit the relevant sales and excise taxes from interstate alcohol sales, it is plausible that these taxes are being passed onto Virginia consumers, and there is no chance for effective tax evasion from shopping

online, which could influence our results. Whether all out-of-state retailers pass these taxes onto consumers is an open question which deserves further study. Even if tax evasion were a motive, however, Virginia's excise tax on wine (30 cents/750ml bottle) and sales tax (4 percent) are quite modest, and they are certainly not large enough to drive our results.

²⁶ Representing the Wine and Spirits Wholesalers of America (WSWA) at a 2002 FTC workshop on potential barriers to electronic commerce, Boyden Gray argued that "no wholesaler worth his salt would fail to market any quality product for which a demand can be demonstrated."

²⁷ Probit analysis reveals that the probability of finding a bottle in a bricks-and-mortar store in Northern Virginia has not changed, statistically speaking, between 2002 and 2004.

²⁸ Similarly, multi-year contract arrangements with wholesalers might limit retailers' ability to change product selections in response to online competition following the legalization of direct shipment.

²⁹ Probit analysis reveals that a bottle's popularity, as measured by its *Wine and Spirits* ranking, is entirely unrelated to whether it was found in a bricks-and-mortar Virginia store in either 2002 or 2004.

³⁰ The correlation between these variables is strongly positive (0.73, p-value < .01).

³¹ Tests indicate that the data suffer from heteroskedasticity (Cook-Weisberg χ^2 test-statistic = 19.84, p-value < .001), and hence, Huber-White standard errors are employed in our analysis.

³² Bottle rank ranges from one to 50, with one being the most popular bottle.

³³ Separate analysis indicates that this result holds when analyzing the 2002 and 2004 data separately.

³⁴ Although the inclusion of average offline bottle price on the right-hand side in models (6-8) introduces the potential for bias due to its relationship with the dependent variable, the robustness of our results in Table 4 and model 5 gives us confidence that our estimate of *2004 Data* is substantively appropriate.

³⁵ Our data for 2002 shipping costs is drawn from Wiseman and Ellig (2004), and 2004 shipping cost data was collected at the time price data was collected from online retailers, using identical procedures to those described in Wiseman and Ellig (2004, 16-18). For each bottle available online, data was collected from United Parcel Service on the cost of shipping boxes of the appropriate size and weight to represent a single bottle, a half case, and a case of wine to McLean, Virginia from the zip code where the online vendor offering the lowest price was located via standard ground, 2nd day air, and 3rd day air shipping services. The results reported here are substantively similar to other analyses wherein we control for shipping by ground service or 3rd day air, rather than 2nd day air.

³⁶ Excluding *Per-Bottle Shipping Costs* from the analysis enhances the statistical significance of the interaction term.

³⁷ Ellig and Wiseman (Forthcoming) analyzes whether consumers could experience notable savings following the legalization of direct shipment, accounting for shipping costs.

³⁸ It was later revealed that beer distributors contributed a total of \$335,000 to Illinois legislators in the first half of 2006--significantly more than any contribution they made

over a six month period in the previous 10 years. Source: “Beer Lobby Pours Money.”

St. Louis Post Dispatch. Metro; Pg. B1. August 1, 2006.

³⁹ Details on the Specialty Wine Retailers Association come from *Free the Grapes!*

Action Alert accessed online at

<<http://www.capwiz.com/freegrapes/issues/alert/?alertid=8392201>> on August 31, 2006.

⁴⁰ Source: Adams Beverage Group, Adams Handbook Advance. 2004.