Maximizing Social Equity as a Pillar of Public Administration: An Examination of Cannabis Dispensary Licensing in Pennsylvania

Conditionally Accepted at *Public Administration Review*

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Replication Files: **https://dataverse.harvard.edu/dataverse/LeeHannah**

Acknowledgements

This research was supported by the Drug Enforcement and Policy Center at the Ohio State Moritz College of Law. The authors would like to thank Erin Fisher and Eli Levine for excellent research assistance. They thank the three anonymous reviewers, editors, Katie Baker, and Mitch Sellers for their helpful feedback and guidance.

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Abstract

Public administration upholds four pillars of administrative practice: economy, efficiency, effectiveness, and social equity. The question arises, however, how do administrators balance effectiveness and social equity when implementing policy? Can the values contributing to administrative decisions be measured? This study leverages the expansion of medical cannabis programs in the states to interrogate these questions. The awarding of dispensary licenses in Pennsylvania affords the ability to determine the effect of social equity scoring on license award decisions, relative to criteria that represent the other pillars. The results show that safety and business acumen were the most important determining factors in the awarding of licenses, both effectiveness concerns. Social equity does not emerge as a significant determinant until the second round of licensing. This study then discusses the future of social equity provisions for cannabis policy, as well as what the findings mean for social equity in public administration.

Evidence for Practice

1. It can be difficult for practitioners to maximize all four pillars of public administration when making administrative decisions but having more than one decision making opportunity allows administrators to be strategic in advancing all four pillars.
2. Social equity is a core value of public administration that, along with effectiveness, systemically impacts cannabis license distributions.

3. Representative bureaucracy, rulemaking, and choice points provide ways for marginalized voices to be added to debates in various policy arenas including cannabis license distributions.
4. Passive actions, like awarding points on dispensary license applications for diversity, do not necessarily increase equity in medical marijuana dispensary licensing.

Four pillars undergird the profession of public administration: economy, effectiveness, efficiency, and social equity. Each are aims to which public sector professionals should strive. Alas, it is nearly impossible to maximize all these policy goals at one time (Stone 2012). This creates a fundamental dilemma for administrators implementing policies. A question for researchers is whether such conflicts can be measured and compared to the goals established by legislation. This study provides a test of the competing priorities of effectiveness and social equity through the implementation of medical cannabis policy in the American states.

Even though founding principles of American democracy embrace freedom and equality, there is a long history of laws and policies that have systematically excluded and harmed marginalized communities. American drug policy and mass incarceration are emblematic of this history (Alexander 2010). The War on Drugs has disproportionately impacted people of color, including racial disparities in arrests and sentencing of nonviolent crimes (Koch, Lee, and Lee 2016, Warde 2013). But the tide of drug policy in the United States began to change in the 1990s with the early adoption, and ongoing expansion, of medical marijuana by the states. To date, 38 states have acted in defiance of federal marijuana prohibition to adopt comprehensive medical cannabis programs, and 19 have adopted adult-use recreational programs. As the cannabis industry expands and legalization becomes more popular there has been a growing call for social equity in cannabis policies (Kilmer 2019, Kilmer and Neel 2020). Social equity was not formalized in cannabis policy until late in the spread of medical cannabis (2014), but it has become a core point of contention in debates over adult-use recreational programs.

This study leverages the history of social equity in medical cannabis policies to examine how administrators are affected by competing priorities when implementing public policy. Specifically, it examines the social equity process included in Pennsylvania's 2016 medical

cannabis law and the subsequent awarding of dispensary licenses. The aim is to better understand to what extent effectiveness and equity were influential when administrators awarded dispensary licenses. Ultimately, administrators appeared to be strategic in their balancing of these goals across the first and second waves of license awarding. Effectiveness was the clear goal in the first round, with the aim of rapidly standing up this brand-new industry. In the second round, social equity concerns made an impact in choosing which applications received licenses. These findings provide implications for the field of public administration in practice and theory, specifically in terms of measuring social equity in policy design.

This article begins by considering all four pillars of public administration, before narrowing into the more recent addition of the social equity pillar. It then provides a broad overview of social equity debates and provisions in state cannabis policy, as well as a specific description of Pennsylvania's process. All Phase 1 and Phase 2 dispensary application scorecards are used to determine which factors were most important for awarding licenses in Pennsylvania. The discussion of the results considers not only the implications for cannabis policy, but also for our understanding of the four pillars and the competing pressures they place on administrators.

The Four Pillars of Public Administration

Public administration has long upheld values such as the effective, efficient, and economical management of public services (Bryson, Crosby, and Bloomberg 2014). Before the 1960s, administrators were typically viewed as neutral arbiters of public programs who were to be kept away from partisan political influences (Wilson 1887). Professionals who are experts in their field should make neutral decisions (Rutgers and van der Meer 2010). The first three pillars of public administration: economy, efficiency, and effectiveness reflect this conceptualization of public servants seeking to implement maximally effective public programs while minimizing the

costs of service. The Minnowbrook Conference in 1968, however, recognized that public administration is not neutral. Attendants called for a "New Public Administration" that recognized the need for public administrators to be responsive to public demands, allow the public to participate in governmental decision making, seek social equity instead of perpetuating inequalities through bureaucratic neutrality, and more (Wooldridge and Gooden 2009). H. George Fredrickson became the most vocal advocate of the need for public administration to advance social equity. In his words, "Administrators are not neutral. They should be committed to both good management and social equity as values, things to be achieved, or rationales" (Frederickson 2017, 283). Further, racial bias has long been an undercurrent in the "neutral" administrative state (House-Niamke and Eckerd 2021, Alexander and Stivers 2020).

It took over three decades for the National Academy of Public Administration to formally add social equity as the fourth pillar, and it is argued that the pillar has not yet been treated equally (Norman-Major 2011). Some have suggested that social equity is too underdeveloped to be a pillar (Durant and Rosenbloom 2017), and falls far behind effectiveness and efficiency in terms of performance management (Blessett, Fudge, and Gaynor 2017, Charbonneau et al. 2009). It is undoubtedly the case, however, that attention to social equity in public administration has surged in the last two decades (Svara and Brunet 2020, Cepiku and Mastrodascio 2021). Shifting demographic trends and political landscapes in the US, in addition to calls for fair access to programs, are not the only reasons for the focus on social equity in public administration. Increased political polarization has made it more difficult to arrive at a common agenda and thus pushes the responsibility for social equity to government agencies providing critical services, creating an urgency for its use as a governance tool (Guy and McCandless 2012, McCarty, Poole, and Rosenthal 2016). Inequity in the delivery of public goods and services can no longer

be ignored, as recent racial justice movements have illustrated (Thompson and Thurston 2018). Social equity, however, is not only a mindset of administrators, but also a key facet of policy design and implementation.

Social Equity for Policy Analysis

Frederickson (Frederickson 1974, 1990, 2017) highlights the importance of social equity as a pillar or critical value of public administration. According to Frederickson (2017), "the procedures of representative democracy presently operate in a way that either fails or only very gradually attempts to reverse systematic discrimination against disadvantaged minorities. Social equity, then, includes activities designed to enhance the political power and economic well-being of these minorities" (311). Thus, equity has to do with organizational fairness, management, and public service delivery that addresses discrimination against underrepresented groups (Frederickson 2015, Riccucci 2009). In public policy, equity can be examined by understanding who receives what and under what rules decisions are made.

Policy analysts have long evaluated issues of equity and fairness in different policy arenas (Blanchard 1986). Criteria required in pursuit of social equity includes procedural fairness, access, quality, and outcome (Guy and McCandless 2020). Equity can be a complicated term, as it does not necessarily mean equal but could instead be a distribution of goods and services based on need, ability to pay, or results achieved, among other indicators (Blanchard 1986). Further, its conceptualization in the literature varies substantially (Cepiku and Mastrodascio 2021). While social equity has evolved to include different definitions and implications, Frederickson's (2017) work highlighting its importance for society, in addition to more recent social equity work by Gooden (2014), Gooden and Portillo (2011), and Svara and

Brunet (2020) suggest that equity centers on fair treatment, justice, and an equitable distribution of goods or services (Riccucci and Van Ryzin 2017).

According to the National Academy of Public Administration (NAPA), social equity can be operationalized in terms of 1) procedural fairness, involving due process, equal protections, and equal rights; 2) access, involving a review to assess access to policies, services, and practice or examine why there may be unequal access; 3) quality, ensuring consistency in existing services; and 4) outcomes, confirming policies and programs have the same impact for every group or individual in a variety of public contexts, including, but not limited to policing, welfare, and transportation (NAPA 2022, Svara and Brunet 2005). Gaps in these areas between groups constitutes inequity (Johnson and Svara 2011). Working towards achieving equity means acknowledging unequal starting places and developing or refining initiatives to correct imbalances. In sum, social equity is a measurable administrative goal (Guy and McCandless 2012) and thus, scholars should be able to assess whether this goal motivates bureaucratic behavior.

Advancing Social Equity

One way to enhance social equity is through representative bureaucracy (Riccucci and Van Ryzin 2017). Representative bureaucracy theory suggests that including diverse representation in a public agency will ensure diverse voices are heard during decision-making (Bradbury and Kellough 2011, Mosher 1968, Bishu and Kennedy 2020, Liang, Park, and Zhao 2020). Representative bureaucracy has three commonly considered forms: active, passive, and symbolic representation. Mosher (1968) suggests the first way a bureaucracy can be representative is through passive representation, or when an agency has employees who represent certain underrepresented groups. The second way an organization can be representative

is through active representation which assumes bureaucrats will make decisions in the best interest of their constituents because their decisions are representative of the constituents' social backgrounds (Krislov and Rosenbloom 1981, Meier 1993). More recent research has suggested that symbolic representation promotes certain policy outcomes through legitimacy and can provide further benefits to citizens by building trust (Riccucci and Van Ryzin 2017). A robust public administration literature on representative bureaucracy highlights the importance of representation and positive outcomes in different contexts and shows how it can promote diversity, build trust in government, influence government cooperation, and promote bureaucratic accountability (Bradbury and Kellough 2011, Keiser et al. 2002). However, significant gaps exist in understanding representation and its impact on outcomes is not always clear (Andrews, Ashworth, and Meier 2014, Ding, Lu, and Riccucci 2021, Bishu and Kennedy 2020, Headley, Wright II, and Meier 2021).

Another way to advance social equity is using rulemaking as a governance tool (Guy and McCandless 2020, Trochmann 2020). Rulemaking is the process of translating legislative intent to action and offers an avenue to provide procedural fairness that can lead to desirable social outcomes (Trochmann 2020). According to Trochmann (2020), "Rulemaking processes foster deliberative democracy and values in deliberative democracy align with concepts of equity" (163). This tool may be used to increase citizen participation and buy-in to enhance or increase social equity outcomes.

Like rulemaking, a third way to advance social equity is using choice points in a decision-making framework (Blessett and Gaynor 2017). Defined as "decision-making opportunities that influence outcomes" (Keleher 2014), choice points can promote equity by dissecting decisions looking at impacts, focusing on what obstructs or fosters equity. For

example, administrative decisions in police enforcement (such as stop and frisk) have historically been linked to instances of discrimination (Hetey and Eberhardt 2018). Choice points in policing instances - or each administrative decision that impacts the decision to stop and pat down a person, arrest, or issue summons - should be examined for reinforcing implicit bias and inequity, alternate options that advance equity and inclusion, and adding accountability structures into routine stops (Blessett and Gaynor 2017). Choice points can counteract biases that may be present in decision-making and offer a way to operationalize social equity in practice (Blessett and Gaynor 2017).

Representative bureaucracy, rulemaking, and choice points provide ways for marginalized voices and organizational values to be added to policy debates and decisions to ensure equitable programs and outcomes. In addition, they allow leaders to help mitigate implicit and explicit biases that may exist due to administrative decisions. In the case of Pennsylvania's medical cannabis program, architects of the law built in rulemaking procedures to include historically underrepresented groups in various choice points, including the ownership of cannabis growers, processors, and dispensaries and the communities where the facilities will be located. Before narrowing to the case of Pennsylvania, it is useful to first describe the broader landscape of social equity and legal cannabis.

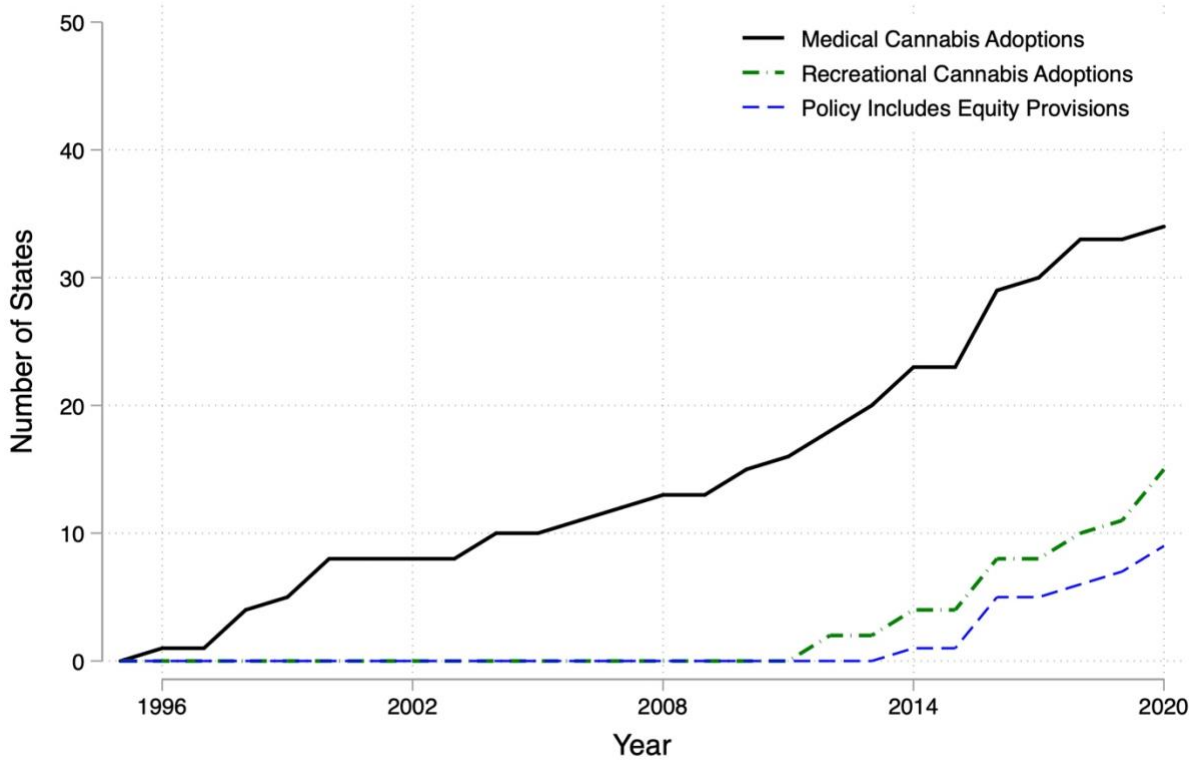
Social Equity and Legal Cannabis

With the expansion of medical and adult-use marijuana laws, lawmakers and activists have pushed for incorporating social equity into policies. The issue became more pressing as states started to adopt adult-use programs and studies of the industry revealed that 81% of founders and owners in the industry were white (Marijuana Business Daily 2017). This statistic is particularly galling considering the legacy of the War on Drugs and racial disparities in the

criminal justice system. This “economic bait and switch” occurs with marijuana policy when “white folks change the rules, change the language, and change the perception in order to bring about a change in ownership” (Jones 2019). Cannabis social equity efforts broadly fall into three categories: 1) criminal justice reform including expungements for past cannabis offenses; 2) reinvestment of tax revenue into communities most impacted by prohibition; and 3) a licensing process that aims to include people most harmed by the War on Drugs in the industry (Title 2021).

The cannabis companies, state regulators, and interest groups were slow to address the lack of diversity in the cannabis industry. Figure 1 illustrates the cumulative number of medical and recreational cannabis adoptions from 1996 to 2020. The blue line depicts the number of policies that include provisions for social equity, highlighting that early medical and recreational cannabis laws were silent on social equity. Maryland became the first state to add social equity to their medical cannabis law in 2014 and by 2016, four of the eight adopters (CA, MA, OH, and PA) incorporated social equity provisions (McVey 2019).

Figure 1: Cumulative Adoptions of Medical and Recreational Cannabis Laws (1996-2020)



Note: 2020 data compiled by authors. Data from 1996 to 2019 from McVey (2019) of *Marijuana Business Daily*.

The delay in social equity is explained by several factors. First, prior to the Obama Administration's issuance of the Ogden Memo in 2009, states were wary to regulate cannabis beyond public safety concerns (Mallinson, Hannah, and Cunningham 2020). Thus, states were reluctant to "pick winners" when awarding licenses beyond ensuring safety and security. Second, the up-front cash required to succeed in the industry disproportionately favored white applicants (Harris and Martin 2021). Moreover, the pressures to get the programs off the ground pushed equity off the agenda. As Ashley Kilroy, direct of Denver's Office of Marijuana Policy stated in an interview on PBS Newshour, "People didn't know what they didn't know at the time. I think [they] were just trying to get this passed and . . . up and running" (quoted in Harris and Martin (2021, 11)). Third, addressing race in public administration has historically been "a nervous area

of government" (Gooden 2014, 4). The rise of racial justice social movements like Black Lives Matter profoundly affected the public sphere and put the spotlight on issues connected to legal cannabis like racial injustices in policing and the larger judicial system.

The delay in including equity in legal cannabis bills contributes to an industry that is overwhelmingly white and wealthy. One of the most common provisions in early cannabis laws prohibited anyone convicted of marijuana offenses from being involved in the industry (or even being a patient in some states). This decision-making choice point excluded people of color from capitalizing on the nascent industry, given that underrepresented communities are disproportionately policed for nonviolent drug offenses (Baumgartner, Epp, and Shoub 2018, Alexander 2010). Restrictions in access to capital due to federal banking regulations and rulemaking serves as another barrier (Mallinson, Hannah, and Cunningham 2020). Many states included substantial capital requirements for dispensary and grower/processor license applicants. These requirements mean that applicants must have access to several hundred thousand dollars in liquid assets to qualify for a license (Harris and Martin 2021), disadvantaging underrepresented communities that have substantially smaller wealth and access to capital (Weller and Hanks 2018).

Social equity in cannabis policy includes both individual and structural barriers that can create unfair engagement or unjust outcomes and emphasizes inclusion of underrepresented groups in all aspects of the cannabis industry. Social equity can be constructed in terms of fairness and equality in distributing cannabis licenses across race, gender, and ethnic lines. More specifically, it can be examined through the degree to which licenses are fulfilled equally and fairly across groups. It can also be captured in which communities are benefited by the location of new cannabis dispensaries. Benefits and burdens of policies are not equally distributed

geographically and, thus, regulators can consider the local community impact of dispensary siting as an aspect of ensuring social equity. "Colorblind" policies that do not recognize local context and power structures will fall short of achieving greater equity (Nickels and Clark 2019). Competing administrative priorities are part of the failure of efforts to include social equity in the administrative procedures designed to award dispensary licenses. Specifically, even when applicants are evaluated on social equity, administrators may place more value on effectiveness (both business and safety). We turn now to discussing the specific case of Pennsylvania and how we test the relative impact of these priorities on dispensary licensing there.

Social Equity in Pennsylvania's Medical Cannabis Program

Pennsylvania adopted a comprehensive medical cannabis program (Act 16) in 2016 after years of largely partisan debate and stalemate were broken by key Republican political entrepreneurs in the General Assembly. Act 16 was novel in several respects. Most notably Pennsylvania became the first state to initiate a large-scale cannabis research enterprise across all its medical schools. Pennsylvania also joined Maryland in including social equity concerns in its statute, only the second state to do so. In Section 615 of Act 16, the General Assembly established its diversity goals and aims:

> "It is the intent and goal of the General Assembly that the [Department of Health] promote diversity and the participation by diverse groups in the activities authorized under this act. In order to further this goal, the department shall adopt and implement policies ensuring the following: (1) That diverse groups are accorded equal opportunity in the permitting process. (2) That permittees promote the participation of diverse groups in their operations by affording equal access to employment opportunities." (Act 16 of 2016, Section 615(a)(1-2)).

Additionally, the law directed the Department of Health (PADOH) to conduct outreach to diverse communities as it established the program. The law states that the department will consider factors like "areas with recognized need for economic development" (47 Pa.B. 199 § 1141.24).[1] The application simply asks the applicant to include a summary of how their

operation will have a positive impact on the community. Of the publicly available applications from Phase 1, the average community impact statement was 8 pages long and 75% referred to serving specific groups like veterans, seniors, and the terminally ill. Nearly 20% of community impact statements referenced the opioid epidemic. In many ways, PADOH was handed a new, and complex, implementation task without an accompanying expansion of its administrative capacity, which creates an environment for deficient policy implementation (Knill, Steinbacher, and Steinebach 2021).

Pennsylvania sought to achieve its equity goals through its application scoring system. First, 100 of the total 1,000 points were available for an applicant's diversity plan. Diversity points were based on diversity ownership, employment, and contracting. Applicants described diversity goals, outreach events, mentoring and training, workforce percentages of diversity, and the utilization of contracts with small groups. Pennsylvania defines diverse groups as disadvantaged businesses, minority-owned businesses, women-owned businesses, and service-disabled veteran-owned or veteran-owned small businesses (Pennsylvania: Section 615(a-c)). Second, 100 points were allocated for an applicant's community plan; evaluated on the following criteria: 1) regional population; 2) number of patients suffering from a serious medical condition; 3) types of serious medical conditions in the area; 4) access to public transportation; 5) the health care needs of rural and urban areas and 6) areas with a recognized need for economic development (PA Act 16, 35 P.S. § § 10231.1141).

PADOH issued guidance for Phase 1 of medical marijuana permits. During this phase, the department was set to issue up to 12 grower/processor permits and up to 27 dispensary permits. Within this number, companies could apply for one of five vertical integration permits, which would allow companies to control production, processing, and distribution (Twedt 2018).

Applicants had to pay a $5,000 nonrefundable fee in the initial application and would pay an additional $30,000 per dispensary location if they won a certificate. PADOH divided the state into six regions and only made some counties eligible in the initial round. Table 1 summarizes each of the six regions and which counties were eligible in Phase 1. Applications in Phase 1 were due on March 20, 2017.

Table 1. Pennsylvania Medical Marijuana Regions

	Region 1 (Southeast)	Region 2 (Northeast)	Region 3 (Southcentral)	Region 4 (Northcentral)	Region 5 (Southwest)	Region 6 (Northwest)
	Berks (1)	Carbon	Adams	Bradford	*Allegheny (2)*	Cameron
	Bucks (1)	*Lackawanna (1)*	Bedford	*Centre (1)*	Armstrong	Clarion
	Chester (1)	*Lehigh (1)*	*Blair (1)*	Clinton	Beaver	Clearfield
	Delaware (1)	*Luzerne (1)*	*Cumberland (1)*	Columbia	*Butler (1)*	Crawford
	Lancaster (1)	Monroe	*Dauphin (1)*	Montour	Cambria	Elk
	Montgomery (2)	*Northampton (1)*	Franklin	Northumberland	Fayette	*Erie (1)*
	Philadelphia (3)	Pike	Fulton	Sullivan	Greene	Forest
	Schuykill	Susquehanna	Huntingdon	Snyder	Indiana	Jefferson
		Wayne	Juniata	Tioga	Somerset	Lawrence
		Wyoming	Lebanon	Union	*Washington (1)*	*McKean (1)*
			Mifflin	*Lycoming (1)*	*Westmoreland (1)*	Mercer
			Perry	*Potter*		Venango
			York (1)			Warren
Total Permits Phase I	10	4	4	2	5	2
Total Permits Phase II	9	3	3	2	4	2

NOTE: Italicized counties indicate those in which an applicant for a dispensary permit is eligible in Phase 1. The numbers in parentheses indicate the maximum number of dispensary locations for Phase I. In Phase II, the Department of Health established quotas per region, but not per county.

PADOH made some changes to the scoring method for Phase 2. Phase 2 applications were due on May 17, 2018. Phase 2 included applicants from Phase 1. Winning owners could still acquire additional licenses and many of the candidates who were not selected had taken advantage of an opportunity to debrief with the Department of Health (Twedt 2018).

The scoring process of Phase 1 was heavily criticized. Thirty-three percent (140) of the 418 unsuccessful grower and dispensary applicants filed administrative appeals in the wake of the decisions. The complaints fall into three broad categories: 1) the form submission process, 2) inconsistent scoring of applications, and 3) opacity around the behind-the-scenes decision making and appeals process (Wagaman 2017). The application process required forms and documentation that could total hundreds of pages. In a few documented instances, applications were ruled incomplete and not scored even though the law required that the department "shall notify" applicants if further documentation was required, as well as provide an additional 30 days for the applicants to complete the forms (Wagaman 2017).

Scoring was criticized for inconsistency and ambiguity. For example, the capital requirements section required dispensaries to document at least $150,000 in financial backing. It was unclear whether more backing would lead to higher scores or if dispensaries just needed to meet the threshold. Ultimately, the committee scored on a sliding scale based on how much cash the dispensaries reported. Meanwhile, applicants were required to file the personal identification (photo IDs and resumes) of each financial backer, operator, and employee. This section was scored based on the *quality* of resumes and photos. There were also examples of companies filing multiple and identical applications, only to have sections scored differently with no explanation. PADOH responded that compliance with the Medical Marijuana Act is solely their responsibility and "is accomplished in the sole exercise of the discretion of the Office" (Wagaman 2017).

PADOH also refused to disclose the names or level of expertise of the twelve state employees that scored the applications (Couloumbis 2017). In 2017, the state's Office of Open Records ordered PADOH to release the identities of these employees and the Commonwealth

Court upheld this decision. “The committee represented a cross-section of middle managers from various departments with insight into agriculture, business, economic development and law enforcement.” (McKelvey 2019). The scoring committee likely had to make trade-offs in considering effectiveness and social equity in the awarding of dispensary licenses. Given the multi-stage process of awarding licenses, bureaucrats may have been strategic in how they weighed each of the pillars. Social equity is difficult to measure (Svara and Brunet 2005) and confusion in measuring and comparing criteria linked to the pillars creates an opening for bureaucrats to be strategic in how they weigh competing goals (Gooden and Myers 2004). In the case of Pennsylvania’s policy, the state incorporated equity in terms of ownership diversity and community impact. Given the scrutiny over marijuana legalization in the United States, it is likely that effectiveness was the most important pillar in Phase 1 awarding, because implementors wanted to stand up a fully functional program as quickly as possible. Phase 2 awarding allowed for other dimensions like social equity to play a greater role in awarding. This leads to two hypotheses:

Hypothesis 1: Effectiveness will be a key component of dispensary license awarding in Phase 1.

Hypothesis 2: Social equity will be a key component of dispensary license awarding in Phase 2.

Data and Methods

The primary data for this study is drawn from the universe of Pennsylvania’s Phase 1 and Phase 2 dispensary application report cards from PADOH.[2] Parts B, D, E, F, and Attachments D

and E of the state's dispensary application were each assigned points for PADOH evaluation totaling 1,000 points. Part B evaluated the applicant's diversity plan, with a maximum of 100 points. Part D pertained to the applicant's plan of operation and represents 550 total points in Phase 1 and 675 points in Phase 2. Part E includes the applicant's organization, ownership, capital, and tax status, for 150 total points in Phase 1 and 75 points in Phase 2. Part F assigns 100 points for the licensee's expected community impact. Attachment D includes the applicant's site and facility plan (50 points), and Attachment E included the applicant's personal identification, worth 50 points in Phase 1, and not included in Phase 2. Table 2 presents a copy of the scorecard and its components for each phase. A fuller description of each category is in the Appendix (Table A1). PADOH scored 251 applications and awarded 27 licenses in Phase 1 and scored an additional 225 applications and awarded 23 licenses in Phase 2. Applicants could apply for permits for up to three dispensaries under one application in Phase 1 and up to two dispensaries per application in Phase 2.

Table 2. Example Pennsylvania Department of Health Medical Marijuana Dispensary Application Scorecard

Dispensary Application Scoring	Maximum Points Phase 1	Maximum Points Phase 2
Part B – Diversity Plan		
3 – Diversity Plan	100	100
Part D – Plan of Operation		
8 – Operational Timetable	100	100
9 – Employee Qualifications, Description of Duties and Training	50	50
10 – Security and Surveillance	100	100
11 – Transportation of Medical Marijuana	25	50
12 – Storage of Medical Marijuana	50	75
13 – Labeling of Medical Marijuana	25	--
14 – Inventory Management	50	75
15 – Diversion Prevention	50	100
16 – Sanitation and Safety	50	50
17 – Recordkeeping	50	75
Part E – Applicant Organization, Ownership, Capital and Tax Status		
19 – Business History and Capacity to Operate	75	75
22 – Capital Requirements	75	--
Part F – Community Impact		
23 – Community Impact	100	100
Attachments		
Attachment D: Site and Facility Plan	50	50
Attachment E: Personal Identification	50	--
Total	1,000	1,000

The analysis of the scorecards begins descriptively, with examining the distribution of scores for dispensary applications across each of the five major scored components in Phases 1 and 2. Winning applications are highlighted within each. After visualizing these distributions, the analysis proceeds in a multi-step fashion to identify which factors correlate most strongly with the awarding of licenses. This begins with a series of bivariate logistic regression models that use the awarding of a license as the dependent variable. Not only are odds ratios calculated, but

pseudo-R^2 values are compared to give a first impression at which components of the application explain the most variance in the awarding of licenses.

Multivariate logistic regressions are then estimated to compare the relative effects of each scoring component, in particular social equity, in Phases 1 and 2 licensing. Parts D and E were collapsed into additive indices for Phase 2 and Part D was so collapsed for Phase 2. Part B (diversity plan), Part F (community impact), and the site plan remained a single item in Phase 1 and Part E (applicant organization) was also a single scored item in Phase 2. This allows for a comparison of each major component and its relative weight in the awarding of licenses. Again, the multivariate models are estimated separately for Phases 1 and 2 to account for changes in the scorecards and to see how competing values may have changed from one phase to the other. Finally, predicted probabilities plots demonstrate how the probability of license awarding in Phases 1 and 2 changes across each of the components, giving a sense of the non-linear relationship between scores and the probability of being awarded a license, as well as a comparison of the effects of each component in Phases 1 and 2.

Results

PADOH's scorecards and assigned scores for each component reveal the key values behind the licensing process. According to the maximum possible scores, a dispensary applicant's diversity plan and community impact each account for 10% of the application, respectively, whereas the plan of operation accounts for 55% of the points in Phase 1 and 67.5% in Phase 2. To an extent, this already over-weights awarding towards concerns of effectiveness over social equity, however the distributions of the actual scores offer initial insight into which factors are most important for the winning applications. PADOH awarded licenses to the top scoring candidates after limiting by region and county.

Figures 2 and 3 show the distributions of each score. In Figure 2, the 27 dispensaries that were awarded licenses are marked in blue and in Figure 3 the 23 awarded licenses are marked in red. Additionally, Table 3 provides the average awarded points per section of the scorecards for each phase. For Phase I (Figure 2 and Table 3) the diversity plans (Part C) of the winning applicants averaged 51 points compared to an average score of 40 for the losing applicants (11 percent difference). The plan of operations (Part D) averaged 362 points out of 550 for the winning applicants compared to 295 for the losing applicants (12 percent difference). The applicant organization (Part E) scores ranged from 101 out of 150 for the losing candidates to 124 for the winning candidates (a 15 percent difference). Finally, the community impact plans (Part F) of the winning applicants averaged 51 points compared to 43 points for the losing applicants (8 percent difference).

Figure 2. Distribution of Scores for Pennsylvania Dispensary Applications (Phase 1)

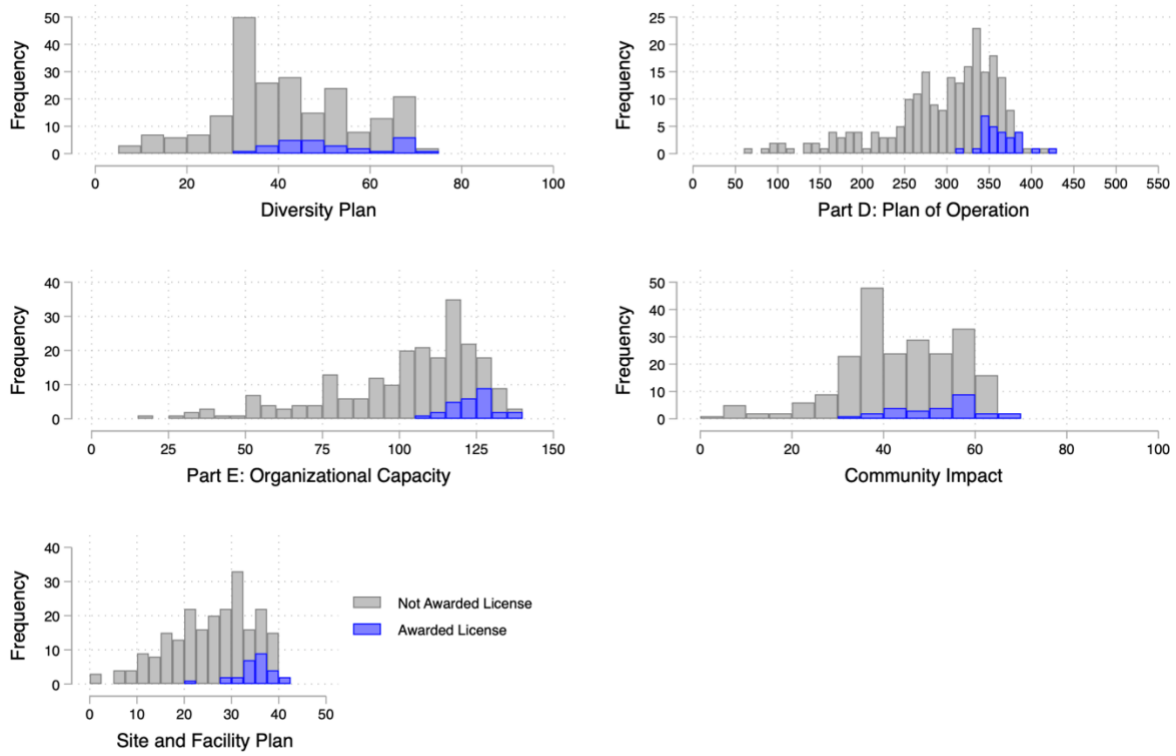


Figure 3. Distribution of Scores for Pennsylvania Dispensary Applications (Phase 2)

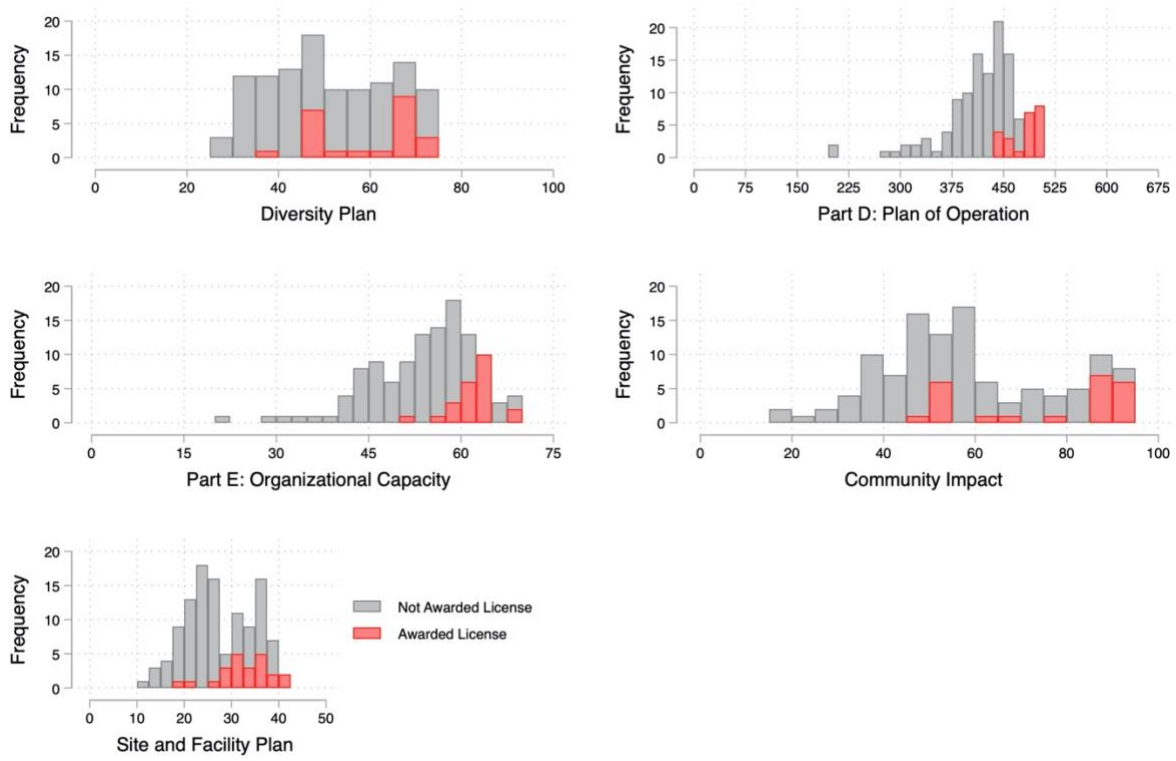


Table 3. PA Dept. of Health Medical Marijuana Dispensary Application Scorecard - Average Scores in Each Category (Red text denotes changes in scoring from Phase I to Phase II)

Dispensary Application Scoring	Average Points per Section (Phase 1)	Average Points per Section (Phase 2)
Part B – Diversity Plan		
3 – Diversity Plan	41/100 [NP:40, P:51]	51/100 [NP:50, P:59]
Part D – Plan of Operation	302/550 [NP:295, P:362]	427/675 [NP:417, P:480]
8 – Operational Timetable	51/100 [NP:49, P:64]	58/100 [NP:56, P:68]
9 – Employee Qualifications, Description of Duties and Training	31/50 [NP:30, P:36]	31/50 [NP:31, P:34]
10 – Security and Surveillance	58/100 [NP:56, P:68]	62/100 [NP:61, P:69]
11 – Transportation of Medical Marijuana	15/25 [NP:15, P:18]	31/50 [NP:30, P:35]
12 – Storage of Medical Marijuana	28/50 [NP:27, P:34]	48/75 [NP:47, P:55]
13 – Labeling of Medical Marijuana	15/25 [NP:15, P:18]	--
14 – Inventory Management	30/50 [NP:29, P:35]	50/75 [NP:49, P:55]
15 – Diversion Prevention	29/50 [NP:29, P:35]	64/100 [NP:62, P:71]
16 – Sanitation and Safety	29/50 [NP:28, P:35]	32/50 [NP:31, P:36]
17 – Recordkeeping	16/50 [NP:16, P:19]	52/75 [NP:51, P:56]
Part E – Applicant Organization, Ownership, Capital and Tax Status	104/150 [NP:101, P:124]	55/75 [NP:54, P:62]
19 – Business History and Capacity to Operate	50/75 [NP:49, P:61]	55/75 [NP:54, P:62]
22 – Capital Requirements	53/75 [NP:52, P:62]	--
Part F – Community Impact		
23 – Community Impact	44/100 [NP:43, P:51]	60/100 [NP:57, P:75]
Attachments		
Attachment D: Site and Facility Plan	27/50 [NP:26, P:35]	28/50 [NP:27, P:32]
Attachment E: Personal Identification	33/50 [NP:33, P:38]	--
Total	551/1,000 [NP:538, P:662]	622/1,000 [NP:605, P:708]
Number of Applications Scored	251	136

Number of Licenses Awarded	26	23

*NP = No Permit; P = Permitted

For Phase 2 (Figure 3 and Table 3) the diversity plans of the winning applicants improved to 68 points compared to 56 points for losing applicants (12 percent difference). The plan of operations averaged 480 out of 675 total points for winning applicants compared to 417 for losing applicants (nine percent difference). The applicant organization scores ranged from 54 out of 75 for the losing applicants to 62 for the winning applicants (11 percent difference). Finally, the community impact plans increased the most from Phase I to Phase II, with winning applicants scoring 75 points on average compared to losing applicants scoring 57 points (higher than the average winning applicant in Phase I). The 18 percent gap between the average winning and average losing community plan was also the widest within the categories for either phase.

Bivariate Analysis

To begin assessing the relative weight of each component of the scorecards in license awarding, the results of the series of bivariate logistic regressions are presented in Table 4. In Phase 1, business history and the dispensary's proposed site and facility plan explain the most variance in the awarding of licenses (pseudo-R^2 = 0.22). Both concern the potential effectiveness of a dispensary applicant. Conversely, an applicant's diversity plan and community impact, each tied to social equity, explain the lowest variance (pseudo-R^2 = 0.07 and 0.08, respectively). In Phase 2, considerations regarding transportation, security and surveillance, storage, and diversion prevention, are the strongest predictors of dispensary awarding. Each are components of effectiveness, but of a different kind. Namely, they capture concerns about safety and security instead of business acumen. Diversity plans have a similarly low predictive power, but the pseudo-R^2 for community impact does increase in Phase 2 (0.12).

Table 4 Bivariate Logistic Regressions Predicting Odds of Being Awarded a Dispensary License (Phases 1 and 2)

	PHASE 1		PHASE 2	
Application	Odds Ratio [Confidence Intervals in Brackets]	Pseudo R^2	Odds Ratio [Confidence Intervals in Brackets]	Pseudo R^2
3 – Diversity Plan	1.05 [1.02-1.08]	0.07	1.05 [1.02-1.10]	0.07
Part D – Plan of Operation				
8 – Operational Timetable	1.08 [1.04-1.12]	0.14	1.12 [1.05-1.19]	0.17
9 – Employee Qualifications,	1.25 [1.12-1.39]	0.15	1.17 [1.04-1.32]	0.07
10 – Security and Surveillance	1.17 [1.09-1.26]	0.18	1.31 [1.16-1.47]	0.28
11 – Transportation	1.57 [1.26-1.96]	0.15	1.77 [1.37-2.29]	0.33
12 – Storage	1.30 [1.15-1.46]	0.18	1.34 [1.18-1.53]	0.28
13 – Labeling	1.48 [1.22-1.79]	0.14	--	--
14 – Inventory Management	1.27 [1.13-1.44]	0.15	1.28 [1.14-1.44]	0.21
15 – Diversion Prevention	1.27 [1.13-1.43]	0.16	1.27 [1.14-1.40]	0.26
16 – Sanitation and Safety	1.25 [1.12-1.39]	0.15	1.29 [1.11-1.51]	0.14
17 – Recordkeeping	1.45 [1.18-1.77]	0.12	1.21 [1.07-1.37]	0.12
Part E – Applicant Organization, Ownership, Capital and Tax Status				
19 – Business History	1.23 [1.12-1.36]	0.22	1.23 [1.11-1.36]	0.20
22 – Capital Requirements	1.15 [1.07-1.23]	0.15	--	--
Part F – Community Impact				
23 – Community Impact	1.07 [1.03-1.12]	0.08	1.05 [1.02-1.07]	0.12
Attachments				
Site and Facility Plan	1.25 [1.13-1.38]	0.22	1.12 [1.04-1.21]	0.09
Personal Identification	1.42 [1.21-1.67]	0.19	--	--
N	251		136	

Multivariate Analysis

Table 5 presents the results of two multivariate logistic regression models, one each for Phases 1 and 2. We collapse the measures into the five broader categories due to high correlation between individual measures.[3] Odds ratios are reported for easier interpretation of the results. An odds ratio over 1 represents a component that increases the odds of being awarded a license. In Phase 1, the applicant's plan of operation (Part D) and site plan were the only two statistically significant predictors of receiving a license. For each additional point awarded for a site plan, the model indicates that the odds of receiving a license increase by an average of 14 percent. The odds increase by 2 percent, on average, for each additional point on the plan of operations, but recall that this section of the scorecard represents over half of the total points. Turning to Phase 2, the plan of operations is still a significant predictor of awarding, but both diversity plans (Part C) and community impacts (Part F) are statistically significant. For each additional point on the diversity plan score, the odds of receiving a license increase by 9 percent, on average. For community impact it is six percent.

Table 5: Multivariate Logistic Regressions Predicting Odds of Being Awarded a Dispensary License (Phases I and II)

	Phase 1	Phase 2
	Odds Ratio [Confidence Intervals in Brackets]	Odds Ratio [Confidence Intervals in Brackets]
Part C - Diversity Plan	1.02 [0.98-1.06]	**1.09** **[1.01-1.17]**
Part D – Plan of Operation	**1.02** **[1.00-1.05]**	**1.06** **[1.03-1.09]**
Part E – Applicant Organization	1.05 [0.98-1.12]	1.05 [0.90-1.24]
Part F - Community Impact	0.99 [0.94-1.04]	**1.06** **[1.02-1.10]**
Site Plan	**1.14** **[1.03-1.12]**	1.00 [0.89-1.12]
N	251	136
Pseudo R^2	0.31	0.51
X^2	53.92	63.39

To better interpret these results, as well as draw comparisons between the licensing phases. Figures 4 and 5 present the changes in predicted probabilities for each scorecard component in Phases 1 and 2. In Figures 4a and 4b, it is evident that the probability of awarding increases rapidly for additional diversity plan and community impact points in Phase 2, but not Phase 1. Granted, even when receiving the maximum points for each, the probability of receiving a license increases to only 0.5 and 0.3, respectively. For an applicant's plan of operations, however, achieving the highest scores nearly guarantees a license in Phase 2 (Figure 5a). Though Part E (business history) is not statistically significant in either model, the predicted probabilities do show a substantial non-linear change in probabilities in Phase 1 awarding (Figure 5b). It is only when awarded points reach 75 and higher that this component begins to help an applicant. Finally, Figure 4c confirms the positive effect of site and facility plans in Phase 1, but not Phase 2 awarding.

Figure 4: Predicted Probabilities of Winning Dispensary License based on Diversity and Community Plans

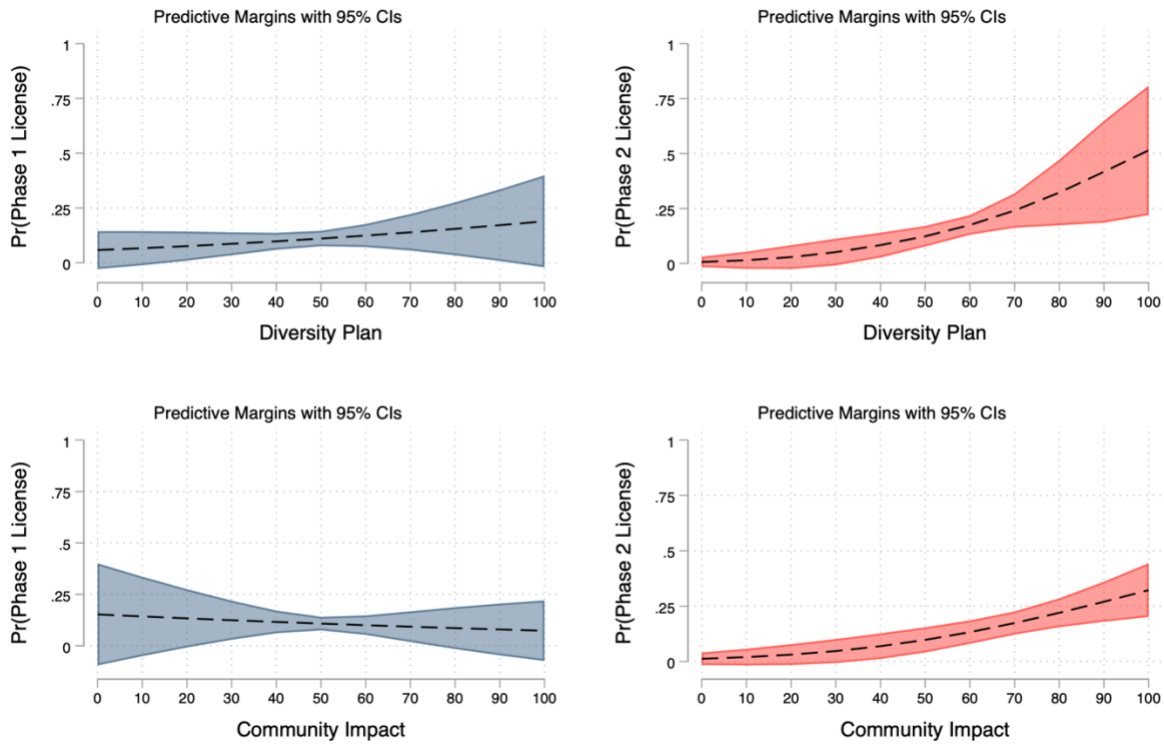
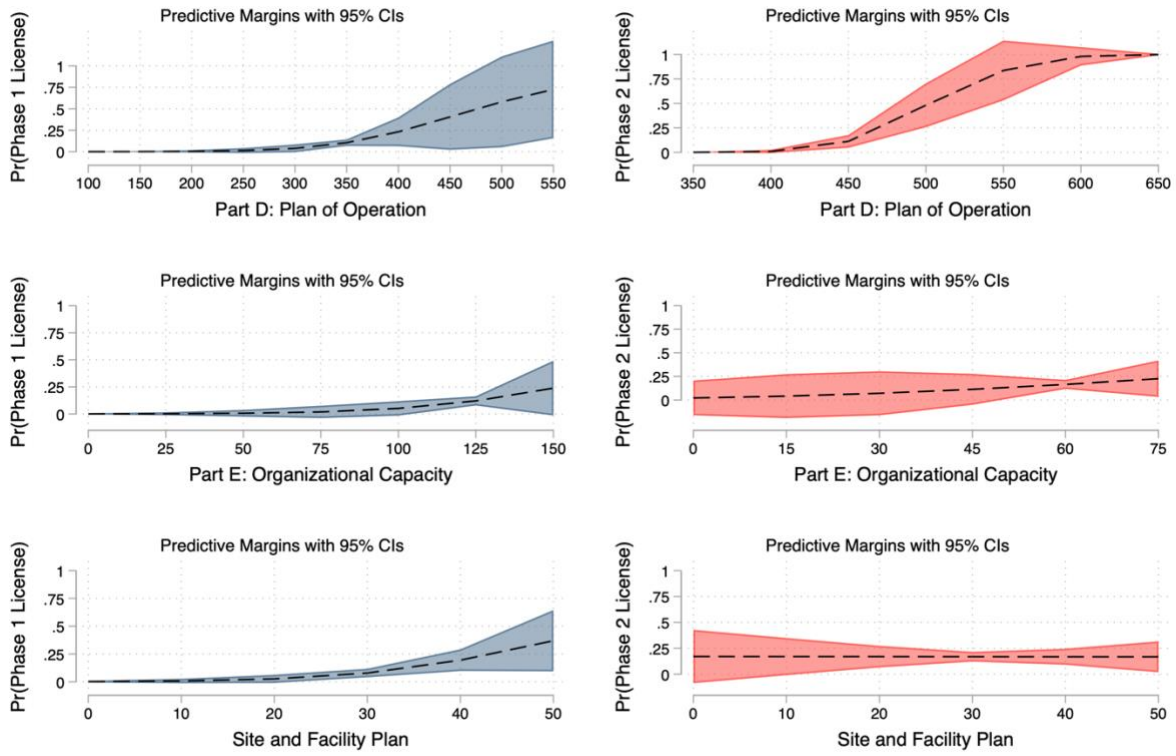


Figure 5: Predicted Probabilities of Winning Dispensary License based on Operations and Business Plans



Discussion

How do administrators weigh the pillars of public administration when implementing public policy and how can scholars measure and assess the impact of social equity as a core pillar? This study offers insight into both questions. In terms of measurement, the scoring of medical cannabis dispensary license applications in Pennsylvania affords an opportunity to examine how administrators weighed effectiveness and equity in the awarding of those licenses by reviewing the administrators' scores and awarding decisions. The scorecards explicitly allow for measuring the importance of social equity plans in license awarding. This approach offers a possible method for evaluating the relative weight of social equity provisions when included in scoring. Other policy arenas, such as higher education and health, have also used equity

scorecards to examine the degree to which disparities may exist (Griffin, 2013, Park, Watson, and Galloway-Gilliam 2008). Thus, scorecards can be useful for examining social equity in other policy initiatives.

Regarding dispensary licensing under Pennsylvania's medical cannabis program, administrators at PADOH appeared to be strategic in their balancing of effectiveness and social equity. In Phase 1 of awarding, effectiveness was the clear criterion for awarding licenses. This is likely due to the necessity of standing up a brand-new program and industry quickly. Applicants with strong business plans and high marks for security and safety were the most likely to receive licenses. In Phase 2, applicants were stronger in nearly every metric, on average, than those that applied in Phase 1 (see Table 2), including for their diversity plans. The fact that effectiveness was so important in the first round, combined with criticisms over the lack of diversity in awarding, may have both weeded out lower-scoring applicants and encouraged stronger diversity applications. On the other hand, given the critique in Phase 1 scoring, administrators may have approached scores in Phase 2 differently due to external criticism. Ultimately, diversity plans and community impact were significant factors in Phase 2 awarding, however, the effects were still modest, and they did not supplant effectiveness. Those applicants with the highest scores on Part D: Operations were nearly guaranteed licenses (see Figure 5a), but diversity and community impact still have significant effects on the probability of receiving a license.

The way Pennsylvania narrowly defines diversity and treats equity in cannabis policy also offers important points for discussion. Most notably, Pennsylvania's definition of diversity measures (disadvantaged businesses, minority-owned businesses, women-owned businesses, and

service-disabled veteran-owned or veteran-owned small businesses) do not necessarily promote equitable outcomes for all historically underrepresented groups. Additionally, these drug reform measures certainly do not erase the effects of the War on Drugs, which intentionally harmed communities of color. That said, Pennsylvania's equity efforts are a starting point for an emerging industry to become fairer and more equitable and provide a policy mechanism to explore social equity measurement.

Moving forward there are ample diversity, equity, and inclusion efforts that cannabis policies should consider, including broadening the definition of equity both in policy design (including decision-making), equitable access to dispensaries, and expungements (Crawford 2021, Title 2021). The medical marijuana rollout in Pennsylvania has been heavily critiqued on their transparency regarding who was on the committee and involved in decision-making to review and score applications, though it is noted that all members were current and former middle managers (McKelvey 2019). Avenues to advance social equity through representative bureaucracy, rulemaking, and choice points offer untapped potential that may be considered in the next phase of awards for clinical registrants. For instance, including more diverse community representation (passive representation) and ensuring action within public agencies is taken in the best interest of underrepresented groups that have been harmed by cannabis policies in the past (active representation) can lead to symbolic representation. It can also influence perceptions, judgements, and behaviors of decision-making groups in developing criteria and assessing scorecards and other documents (Theobald and Haider-Markel 2008). Installing and recognizing active decision-making choice points in rulemaking during the evaluation process that check for implicit bias, equity, inclusion, and reaffirm accountability structures, is a simple way to advance equity in the next phase. Still, a clear conception of what social equity means is necessary for

bureaucrats to achieve desired social outcomes (Cepiku and Mastrodascio 2021). The findings in this study are consistent with previous literature suggesting that equity remains difficult to measure in totality (Svara and Brunet 2005) and administrators are still navigating its capacity in policy design.

While practical concerns about standing up an effective industry are one feasible explanation for the dominance of effectiveness in Phase 1 awarding, it is also possible that confusion existed among the measurement criteria between the pillars (Gooden and Myers 2004). In practice, there is a lack of standardization for cannabis license distributions. Not only was this a brand-new policy area for Pennsylvania, but cannabis regulations also differ vastly across state-legal programs (Klieger et al. 2017, Pacula, Hunt, and Boustead 2014). Policy learning most certainly occurs between states when they are establishing and updating their cannabis programs (Mallinson and Hannah 2020), but effectively ensuring equity in the cannabis industry has been elusive for many states. Take New Jersey's recent legalization of recreational marijuana and 10 years of experience with medical marijuana. New Jersey Congressman Donald M. Payne, Jr., (2022) criticized the program for issuing no licenses to black-owned businesses in either program. Best practices have been recommended (Title 2021), but states are still struggling to implement them. Increasing social equity will require an active approach to overcome structural exclusion of minoritized communities from the cannabis industry, as it does in numerous other domains that affect vulnerable populations (Gaynor and Wilson 2020). Though, as examples from Pennsylvania to Illinois illustrate, public pressure is also a tool to advance social equity aims in cannabis policy.

There are limitations in this research. First, we do not directly measure two of the pillars of public administration: efficiency or economy. Future research may examine these measures compared to social equity and effectiveness. Second, the use of scorecards for equity measurement has limitations. Scorecards tend to focus on policy outcomes and do not adequately gauge decision-making processes, assist with decision-making choice points to address inequity proactively, or include all aspects of social equity measurements. In this case, cultural competence acknowledgement and trainings and decision-making processes on the side of policy makers were not examined. While the empirical analysis shows that diversity and community impact carried greater weight in Phase 2, it does not determine whether the questionnaires and scoring were normatively good. Therefore, future work may expand scorecards used here to include dimensions of decision-making and resource inputs that can contribute to equitable outcomes. Finally, we cannot account for the possibility that applicants learned how to better prepare their diversity plans between Phases 1 and 2. PADOH did offer feedback after Phase 1, which may lead to learning. It is notable that we did find the scores on diversity plans to be much higher in Phase 2, suggesting that such learning did occur.

Future research on social equity provisions in state cannabis programs should both deepen and broaden what we have begun here. Focusing on Pennsylvania, the public posting of full dispensary applications offers a deeper assessment of what made for a "good" equity plan. Future research can assess what specific components set apart the plans of winning dispensaries. It can also tackle the question of whether Phase 2 applicants learned from Phase 1 in terms of how they presented their social equity plans. In terms of broadening the research, many additional states have adopted social equity provisions in their medical and adult-use cannabis programs. For example, of the 19 states with legal adult-use cannabis, 13 (68%) have social

equity programs (Perkins 2021). Research must expand to these states to determine the generalizability of our findings.

Nonetheless, this study offers several implications for theory and practice in public administration. A tangible measure of social equity in cannabis policies adds to the current research on social equity measurement. This is particularly important as more states begin to address cannabis policies for license distributions. Through examination of Pennsylvania's medical cannabis policies and distributions, we can better understand the impact of a policy on socially vulnerable groups that have been harmed by laws in the past, contribute to industry diversity, and provide a clear method for measuring social equity against other public administration pillars.

Conclusion

Social equity is growing in its centrality to public administration as a profession (Guy and McCandless 2012), and across society more broadly. This is certainly the case for cannabis legalization in the United States. As some form of state-legal cannabis has reached nearly all the states, demands for restorative justice continue to grow louder. As one cannabis small business owner stated, "State and local governments had no problem finding the funds to carry out the war on drugs, and now they need to find the funds from day one to support social equity in the cannabis industry and restorative justice in the most impacted communities" (Worthy 2021). Though social equity continues to fall short in many state-legal cannabis programs, more is needed to value diversity in cannabis license applications to counteract the damage of the war on drugs. (Crawford 2021). Thus, cannabis policy is a domain where public administrators, and scholars, can consider how to weigh oft competing goals. It is rare that policymakers and

administrators can maximize all policy goals (Stone 2012). Measuring and assessing how administrators balance competing priorities is vital for maximizing attainment of our four pillars.

Endnotes

[1] http://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol47/47-2/60.html.

[2] PADOH made the scores and licensing decisions publicly available. They have also posted complete applications for Phase 1, although many applications are heavily redacted. Phase I: https://www.health.pa.gov/topics/programs/Medical%20Marijuana/Pages/Phase-I.aspx; and Phase 2: https://www.health.pa.gov/topics/programs/Medical%20Marijuana/Pages/Phase-II.aspx. Replication files available at https://dataverse.harvard.edu/dataverse/LeeHannah

[3] The Cronbach's *a* for the items in the collapsed measure is 0.97 for Phase 1 and 0.93 for Phase

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Appendix

Table A1: PA Dept. of Health Medical Marijuana Dispensary Application Scorecard – Details about each category

Dispensary Application Scoring	Description
Part B – Diversity Plan	
3 – Diversity Plan	In narrative form below, describe a plan that establishes a goal of diversity in ownership, management, employment, and contracting to ensure that diverse participants and diverse groups are accorded equality of opportunity
Part D – Plan of Operation	
8 – Operational Timetable	Describes the steps and time frames for becoming fully operational as a dispensary within six months from date of issuance. Describe steps taken to process for the handling, storing, and transporting of marijuana and products
9 – Employee Qualifications, Description of Duties and Training	Description of the duties, responsibilities, and roles of each principal, financial backer, operator, and employee
10 – Security and Surveillance	Summary of proposed security and surveillance equipment and measures that will be in place - overview of equipment, alarm systems, surveillance system, storage, recording capability, records retention, premises accessibility, and inspection/servicing/alteration protocols
11 – Transportation of Medical Marijuana	Detailed plan for transporting marijuana (GPS systems, diversion plans, no signs that car or driver are affiliated with medical cannabis, etc.)
12 – Storage of Medical Marijuana	Mainly related to protocols spoiled, expired, damaged, or contaminated products. Separate, locked storage and destruction plan. And some language about cleanliness and efforts to reduce pests.
13 – Labeling of Medical Marijuana	Products must be labeled plainly (nothing about contents or ingredients needing to be on the package)
14 – Inventory Management	Electronic Tracking System to monitor, log, and verify medical marijuana from a grower/processor. Verification of identification cards and records of any marijuana that is disposed or recalled.
15 – Diversion Prevention	Process in place that will implement at each proposed facility for the prevention of the unlawful diversion of medical marijuana and products along with the process that will be followed when evidence of theft/diversion is identified.
16 – Sanitation and Safety	Written process for contamination prevention, pest protection procedures, medical marijuana product handler restrictions, and handwashing facilities.
17 – Recordkeeping	Summary of recordkeeping at each facility that should cover records of inventory and all dispensing transactions.
Part E – Applicant Organization, Ownership, Capital and Tax Status	
19 – Business History and Capacity to Operate	Applicants Describe their business history and ability to maintain a successful and financially stable operation
22 – Capital Requirements	Summary of your available capital and an estimated spending plan to be used for dispensary to become operational within six months from the date of issuance of the permit
Part F – Community Impact	

23 – Community Impact	Provides a summary of how the applicant intends to have a positive impact on the community where operations are proposed to be located. NOTE: Evidence of support from public officials will *not* be considered when evaluating this section.	
Attachments		
Attachment D: Site and Facility Plan		
Attachment E: Personal Identification		