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THE OPPORTUNITY OF REGULATION AND CANNA-STIGMA:

A SYNOPTIC OVERVIEW OF ENTREPRENEURSHIP AND INNOVATION IN THE CANNABIS MARKET

Since 1996, a variety of US states have decriminalized and legalized the use of cannabis for medical and recreational purposes. Today there are only 11 states with total cannabis prohibition (see Figure 1). Each state has developed its own system and standard of legalization/decriminalization, and its own form of regulation and oversight of both psychoactive and non-psychoactive cannabis production, processing, sale, and distribution.

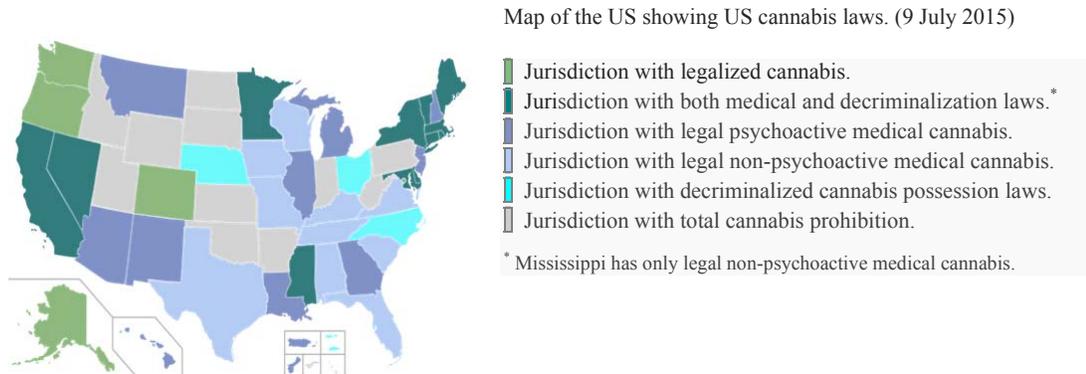


Figure 1: US cannabis laws (photo credit: Lokal_Profil)

This market creation activity at the state level has been deeply affected by the status of cannabis at the federal level as a Schedule 1 controlled substance. This classification has required states to enact stringent regulations and complex rules governing every aspect of cannabis production and distribution ‘from seed to sale.’ This classification has also helped to maintain a stigma of illegality around the cannabis industry—what is referred to as ‘canna-stigma.’

Both the regulatory environment and the stigma associated with cannabis powerfully shape the development of cannabis markets. They preclude many established firms from operating in the market, create new costs of business and barriers to entry, enforce a state-by-state market segmentation, and effectively exclude market participants from the banking industry and access to some forms of capital.

These market dynamics, however, do not necessarily stifle innovation and entrepreneurship. Drawing from market research and interviews and observations undertaken at the *Cannabis Business Summit Expo* in Denver in July, 2015, we argue the contrary: that the regulatory environment and canna-stigma create unique opportunities for distinctive forms of innovation and entrepreneurship to be pursued. Understanding this relationship between market constraints and regulation, and entrepreneurship and innovation, allows market participants to ask ‘smart questions’ about their competitive positioning and encourages regulators and policy-makers to craft more effective market interventions.

Innovation in cannabis markets

As market participants will already be well aware, canna-stigma and the unique regulatory environment dominate decision making within cannabis industry firms. However, the precise effect of these factors on entrepreneurship and innovation are highly variable. One way to think about this variability and one's position in it is to model regulation and canna-stigma in relation to the Innovation Ambition Matrix (Figure 2).

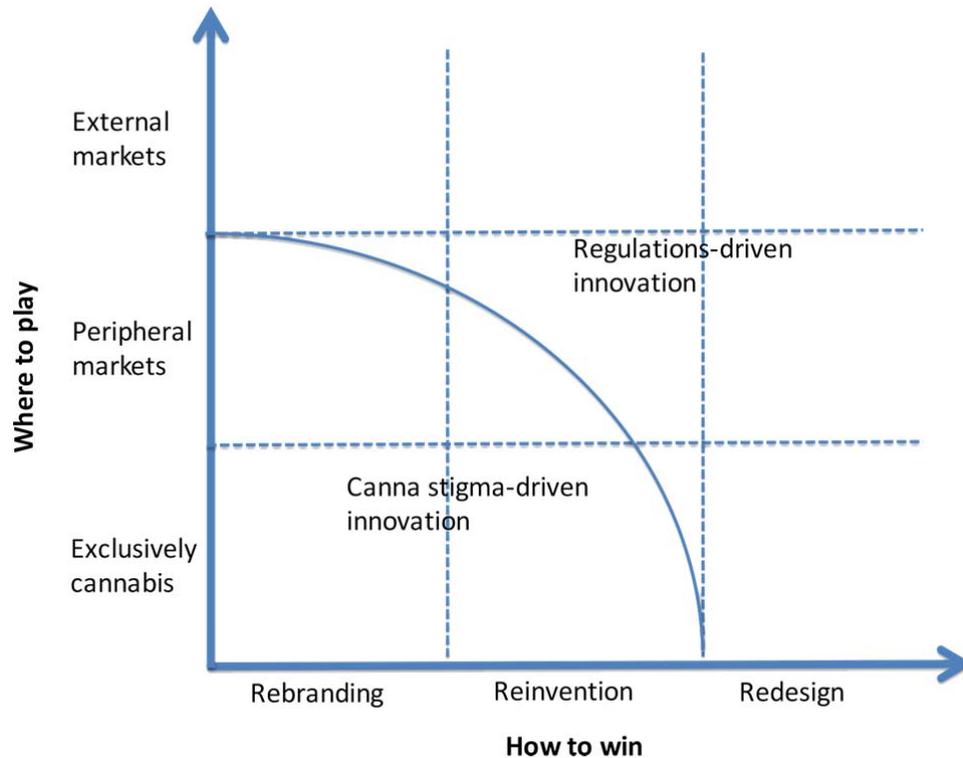


Figure 2: The Innovation Ambition Matrix

The matrix presents two key variables that characterize innovation strategies: *where to play*—what markets to operate within—and *how to win*—the level of product customization (Nagji and Tuff, 2012). It demonstrates a variety of possibilities for firms to operate and to engage in innovation. Firms located at the top-left quadrant of the matrix seek to operate in markets far beyond cannabis, and aim to do so through low levels of product redevelopment—by seeking to provide a pre-existing and standardized good at low cost, for instance. By contrast, firms located at the bottom-right seek to operate exclusively in the cannabis market, and aim to do this through radical product redevelopment—through creating a product or service, for instance, that did not exist before. The other quadrants represent all the other possibilities in which different degrees of redesign are employed and different markets are pursued.

As we will see in the sections that follow, regulations and canna-stigma each create different spaces and possibilities for innovation and entrepreneurship.

Canna-stigma driven innovation

Canna-stigma establishes a particular space for innovation, and structures the types of innovations available within this space. Canna-stigma precludes many established businesses (such as Facebook and Google in advertising, or ADT and Brinks in security) from operating in cannabis markets. This creates a large and lucrative space for businesses to emerge to fill basic business functions such as advertising, security, banking, insurance, legal and tax advice, and payroll, almost exclusively for the cannabis industry.

The firms that emerge in this space innovate practices to overcome barriers to entry—practices for handing cash or acquiring insurance, for instance—but they typically do not transform the products or services they offer. Because the products and services are already available in most other industries, they typically only need to be rebranded or reinvented to operate successfully in the space created by canna-stigma. Cannabis security firms provide a good example of this kind of innovation; these firms typically replicate the best practice in existing firms but rebrand their services as specific to the cannabis industry, and perhaps some of the ancillary industries.

Box 1: Shifting the canna-stigma innovation frontier

Weedmaps is an example of a business shifting the canna-stigma frontier. It seeks to provide user-generated reviews about cannabis products and dispensaries. To do this it has largely reinvented the peer-to-peer platform provided by companies such as TripAdvisor. In developing its product, however Weedmaps has innovated new features such as an extensive production and education network, Weedmaps TV. This has significantly broadened its market applicability from the core cannabis market to a number of ancillary markets, such as events and advertising.

Firms operating in the space created by canna-stigma, however, also sometimes begin to expand the canna-stigma innovation frontier. They do not just overcome the barriers to entry but in doing so generate innovations that more fundamentally customize and reinvent the products and services they deliver. These products, as a result, are sometimes found to have new applications and are able to compete in peripheral markets (see Box 1).

While canna-stigma opens one space for innovation, the extraordinary regulatory constraints within and around the cannabis industry open another. The

public anxiety about legalization and the need to prevent diversion, cross-border transportation, overuse and misuse, and access to minors has led to the continual development of new and far-reaching regulatory demands. These demands include rigorous licensing processes, seed-to-sale tracking systems, product testing and labelling restrictions, and extensive documentation and verification of operating procedures.

Regulation-driven innovation

These regulatory requirements open up and structure another significant space for innovation. They create unique problems and challenges for businesses that existing products and services are not equipped to solve. The solutions that emerge sometimes only involve minor modifications to products and services—the development, for instance, of a training program for staff. But in some cases the solutions to regulatory challenges in the cannabis markets encourage more radical innovations that allow the entrepreneurs to target wider markets.

Box 2: From re-invention to re-design

One Denver-based company innovated a child resistant exist bag that met Colorado’s new regulatory demands and also minimized the smell. As a result the company found it had a product with demand in the tobacco and other ancillary markets where no such regulations applied.

Seed-to-sale tracking system requirements, new product packaging and labeling rules, and other such regulations are increasingly prompting the innovation of products and services that have a much wide market appeal (see Box 2).

Merit-based application processes for manufacturing and retail facility licenses are also spurring the development of radical innovations that have applications in ancillary and other markets. The application processes are perhaps the most restrictive barriers to entry for market participants in most states. Indeed, they can cost the applicant hundreds of thousands of dollars and involve thousands of working-hours. However, by requiring participants to assemble a team of qualified professionals and to discuss and demonstrate their unique value proposition, they are encouraging the development of radical but realistic innovations that might not otherwise take place (see Box 3).

Merit-based application processes for manufacturing and retail facility li-

Box 3: Licensing processes and creative redesign

One applicant for a growing license developed an innovative means of reducing energy and smell at the same time. The premise was situated on a cattle ranch, and the noxious methane that they produced was harnessed, using an innovative technology, to generate energy and camouflage the smell at the same time.

Finding the clean grower

Licensing requirements prohibit those who are criminally charged for their associations with the illegal market from participating in the legal medical and recreational ones. This may encourage breeders and agricultural scientists without a prior involvement with cannabis to enter the market. These new actors can foster radical product innovations, for instance bringing into the market plants with low THC but rich in compounds that may help to treat disorders such as multiple sclerosis, post-traumatic stress disorder, dementia, etc. (see Sides, 2015).

Extensive and novel forms of regulation are typically understood within the cannabis community as barriers to innovation and industry development. We suggest the opposite: that the most radical innovations are likely to emerge from the specific regulatory constraints of the cannabis industry. Not despite but because these constraints are so extensive and far reaching, they create the opportunities for innovations that reach beyond rebranding and reinvention, and in doing so encourage the creation of novel products and services capable of turning the cannabis market from a niche into an innovation leader.

This finding parallels recent research on innovation and creativity that show constraints—be they tight budgets, demanding clients or invasive regulation—to be responsible for some of the most extensive innovations in other domains (Elster, 2000).

Asking Smart Questions

Cannabis markets are transforming quickly, and organizations tend to model themselves after similar organizations that are perceived successful or legitimate, especially when they operate with complex technologies and ambiguous regulatory contexts (Dimaggio and Powell, 1983). We may therefore expect increased standardization within and between cannabis markets. This standardization is likely to take several related forms: One, new entrants will imitate the apparently successful practices of first movers; two, ‘standard’ operating procedures will be developed and imposed by regulators; three, professional networks and business associations will emerge that span across organizations and markets and allow new business practices to diffuse rapidly. In fact, based on our initial observations of the case of Colorado, we expect that a relatively small set of actors based principally in that state are likely to determine the overall shape and form of markets in other states and the cannabis industry overall.

The implications are that entrepreneurs, and those aiming to encourage innovation in the industry, would benefit from reflecting on the interaction between regulations and constraints and the innovations that they encourage. Rather than focus exclusively on how regulation can be made less burdensome, there are other ‘smart questions’ that also deserve attention. We offer a set of questions (see Box 4) as a prompt for reflection on the innovation opportunities and the means of structuring opportunities in the cannabis field. These early innovations are likelier to become industry norms.

Box 4: ‘Smart’ questions to ask about your innovation strategy:

- Where do we, and our competitors, fit in the innovation ambition matrix?
- Can we turn canna-stigma or regulation specific expenses into revenue streams?
- What are we doing to ensure that our product or business practice becomes an industry norm?
- Would redesigning our product to meet industry demands result in a product with applications in new markets?

As suggested in this article, what can be seen as major limitations (e.g. canna-stigma and especially regulatory requirements) may in fact become major factors in developing innovative products and services. By answering these ‘smart’ questions, current and aspiring market actors may realize how far or close they are to turning those limitations into business opportunities.

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