1. Introduction

Government is one of the most crucial, but complex, stakeholders in the entrepreneurial atmosphere. With both power and opportunity, government is uniquely positioned to make systemic changes which impact entrepreneurial equity. Understanding government activity is imperative to learning how to best champion entrepreneurial equity to legislators. In the first two years of the Venture Equity Project, Penn State and the NASDAQ Entrepreneurial Center explored state-level legislative and policy indicators of a positive entrepreneurial landscape. These factors included early-stage entrepreneurship, entrepreneurial job indicators, new employer business (as collected by the Ewing Marion Kauffman Foundation), and legislation considering entrepreneurship and various dimensions of entrepreneurial intersectionality (race, gender, geography, etc.).

We found that as the legislation that considered the race or ethnicity of an entrepreneur increased, so did the time it took to become a new employer (and hire at least one employee). This could indicate that legislation supportive of entrepreneurs of color supports growth into employment. However, more investigation is needed into these individual factors to determine the explanatory power of this correlation. To do so, the Penn State team conducted an up-to-date analysis of entrepreneurial legislation of the past decade and the past year. Also, based on analyses by Heartland Forward, we anecdotally evaluated the entrepreneurial legislation that high-performing states introduced in the last year.

Our goal in the upcoming year is to work with Venture Equity Project collaborating partners to build a clearer picture of the conditions across all stakeholder groups, and where non-profits and government/industry partners are best positioned to advocate for entrepreneurial equity.

2. Methodology

2.1 Quantitative legislative analysis

Quorum is a public affairs software system that tracks multiple levels of legislative activity – including official legislation and unofficial statements (including press releases and social media), searchable at the federal, state, committee, and individual legislator level.

Our team observed official and unofficial activity from the past decade (2013-2023). Official activity includes bills introduced, and unofficial activity includes social media activity (YouTube, videos, Tweets, and Facebook posts).

The platform operates on Boolean search terms that pulls any piece of data in the software. Our study team created multiple search terms to pull legislation, and all other statements related to a certain content area or target population. Those search terms are as follows:

1. "entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness" to pull legislation/social media that considers entrepreneurs.

1. ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("Black" OR "Hispanic" OR "Latinx" OR "Pacific Islander" OR "Asian" OR "Middle Eastern" OR "race and ethnicity") to pull legislation/social media that considers entrepreneurs of color.

1. ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("gender" OR "gender identity" OR "female") to pull legislation/social media that considers female entrepreneurs.

1. ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("access to capital" OR "capital access") to pull legislation that considers access to capital for entrepreneurs.

1. ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("rural") to pull legislation that considers rural entrepreneurs.

1. ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("angel investor" OR "seed investor" OR "private investor") + ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("grants" OR "grant") + ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("venture capital" OR "venture dollars") + ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("investor crowdfunding" OR "crowdfunding") to pull legislation that considers entrepreneurial funding.

1. ("entrepreneur" OR "entrepreneurship" OR "small business" OR "microbusiness") WITHIN 10 OF ("tax credit") to pull legislation that considers entrepreneurial tax credits.

2.2 Qualitative legislative analysis

Our team first pulled all entrepreneurship-related legislation that our selected states introduced in 2023 from the Quorum database, using the first listed search term. Using ChatGPT4o we converted seven spreadsheets containing legislation from these various states into a json file using the following prompt:

“*Here is a csv or xlsx file. First fix the potential font issues by converting the font to UTF-8. Then remove any blank rows. Then, I would like you to prepare it for creating embeddings for RAG by converting it to a json document that I can download. For each row in the file, combine the columns to form the value of the json key/value pair. When you combine the columns, make sentences by combining the column header with the content in the column. So, if the column header is "Title" and the content in the row is "Certified Public Accountants", the sentence could be, "The Title is Certified Public Accountants." By doing this for every column in each row, you will create the value for the key/value pair*.”

We then used OpenAI API with GPT-4o to create an NEC Entrepreneur Legislation Assistant. Using the File search feature, we uploaded the json documents we created to the vector store, and we set the max number results to 40. We provided the following instructions to the assistant:

“*You are a qualitative research analyst that will help analyze state legislation from seven different states: Florida, Georgia, Illinois, Maryland, Michigan, North Carolina, Texas. One file for each state has been uploaded to File search. You will be asked questions about the content of the legislation. To answer, go through the provided text from the files to find the answers. Each piece of legislation is legislation that impacts entrepreneurs in some way.*”

We then asked the following questions to the assistant:

1. What are the key issues that are being addressed by the legislation in Florida? And what solutions are they proposing?
2. What are the key issues that are being addressed by the legislation in Georgia? And what solutions are they proposing?
3. What are the key issues that are being addressed by the legislation in Maryland? And what solutions are they proposing?
4. What are the key issues that are being addressed by the legislation in Michigan? And what solutions are they proposing?
5. What are the key issues that are being addressed by the legislation in Illinois? And what solutions are they proposing?
6. What are the key issues that are being addressed by the legislation in North Carolina? And what solutions are they proposing?
7. What are the key issues that are being addressed by the legislation in Texas? And what solutions are they proposing?
8. Using the conversation above, provide a broad summary of how the states are addressing issues that entrepreneurs face.
9. Considering that all the legislation in the provided files impacts entrepreneurs, which solutions have the greatest potential to benefit entrepreneurs?

3. Results

3.1 Quantitative results – Legislation

In the last ten years (2013-2023), there have been 1.4 million pieces of legislation introduced. 1.6% of legislation over the last decade considered entrepreneurship (just over 20,000 pieces of legislation). In 2023, entrepreneurship bills were still 1.6% of all legislation introduced that year. While this indicates that consideration for entrepreneurs has not decreased, it does not match what is to be expected when considering the attention entrepreneurship has received since 2020. Over the last decade, both Republican and Democratic parties produced a relatively similar volume of overall bills, but the Democratic party did introduce 1.2 times the volume of entrepreneurship related bills compared to the Republican party. However, this gap has closed in 2023, suggesting that entrepreneurship has increased in saliency as a critical bi-partisan issue. Only twenty-three states and the District of Columbia (D.C.) introduced legislation related to entrepreneurship and race/ethnicity between 2013 and 2023. In 2023, there were twenty-nine pieces of legislation introduced that considered entrepreneurship and race/ethnicity. Washington, South Carolina, Minnesota, and Alabama introduced the most entrepreneurship legislation, relative to the total volume of bills introduced.

3.2 - Quantitative results – Social Media

Over the last decade (2013-2023), mention of entrepreneurship in legislators’ social media has doubled (0.3% of all posts in 2013 to 0.6% of all posts in 2023), however it still represents a small proportion of the overall content. Between the Democratic and Republican parties, there is not much difference between how entrepreneurship is discussed on social media. Delaware and Illinois were the two states that had the most relative entrepreneurship posts both across the decade and in 2023.

3.3 Qualitative results

There were multiple common themes that entrepreneurship legislation from 2023 shared across our states of interest (Florida, Georgia, Illinois, Maryland, Michigan, North Carolina, and Texas). Most legislation from the last year related to one of the following themes - (1) labor laws and employment, (2) tax incentives and financial support, (3) education and workforce development, (4) small business and economic development, (5) healthcare and social support, (6) environmental protection and sustainability, (7) consumer and business protections, and (8) technological and digital regulation.

4. Implications and Future Research

The data presented offers valuable insights into the legislative landscape surrounding entrepreneurship and its intersection with various contextual factors. The states' legislative initiatives encompass a broad range of issues pertinent to entrepreneurs, indicative of the complexity of entrepreneurship but also potentially the enhanced sophistication of policymakers to grasp that complexity and the holistic demands, challenges, and impediments of the entrepreneurial endeavor and its practitioners. Thus, legislative themes such as healthcare and social support in the entrepreneurial context indicate a greater awareness of the entrepreneur as an individual with potentially unmet needs. These include programs like the statewide paid family leave insurance program enacted in Illinois and the Healthy Maryland Program, to provide comprehensive universal single-payer healthcare for all residents by 2026. Other direct interventions aimed at entrepreneurial growth being tested include tax credit schemes, like Georgia’s $9,600 tax credit for small business employers in Georgia hiring certified workforce-ready graduates in high-tech full-time jobs, and the extension of research and development tax credits in Illinois.

The rise in entrepreneurship-related legislation as well as the social discourse indicates increasing legislative attention and a growing awareness of its importance as a major economic driver. Some of this greater awareness could be attributed to better organized and articulated advocacy campaigns, however, the gap between this attention and actual impact on entrepreneurial equity requires further exploration. In terms of political party differences, while both parties show increasing interest in entrepreneurship, the focus areas and proposed solutions differ, and the activity is highly variable from state to state. Additionally, our analysis indicates geographic variation in entrepreneurial legislation across states regardless of party, which highlights the need for tailored strategies appropriate to particular contextual environments.

This analysis lays a strong foundation for further exploration. Continued efforts to expand this work most logically point to Longitudinal Analysis which could permit the tracking of legislative trends over time to identify emerging issues and policy shifts. These trends could also be overlaid with particular developments in the legislative community as well as newsworthy moments in time in the broader societal context to explore how legislative behavior has been affected by socio-cultural exigencies. There are opportunities to employ additional and more refined data resources to further enrich the analysis such as more region or state-specific economic and labor market data to understand the impact of different types of entrepreneurial legislation on various outcomes (e.g., job creation, business survival, access to capital). Additionally, other opportunities for future analysis include a more comprehensive exploration informed and stratified by sectoral, industry, or business categorical data and characteristics, geographic differences within state boundaries and moderated by urbanicity and rurality. Furthermore, comparative analyses could explore and contrast entrepreneurial policy landscapes across different countries as a means to identify potential best practices. Lastly, this analysis does not embark on a review of policy implementation across the polities discussed, an extremely complex task that poses significant risks for fidelity to the model and overall program effectiveness.