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DII US Quarterly Review Executive Summary-- Q1 2022

DII US Q1 2022 Key Takeaways

- 1. Bigger is not always better.
 - Smaller states such as South Dakota (4th), Wyoming (5th), and Alaska (10th) all finished in the DII-US's overall top ten. South Dakota scored highly in both Overall and Small Business Health while Wyoming owes its particularly strong performance to its crypto-friendly regulations.
- 2. State-level business climates can have strong positives and negatives.
 California, which finished 11th overall in the balanced scenario, had the nation's best IT Infrastructure and Economic and Entrepreneur/Start-up rankings but also finished 49th in both Small Business Policy and Tax Environment. Wyoming ranks as the nation's best Tax Environment but the lowest in terms of IT and Economic Infrastructure.
- 3. States need to be aware of their business- and crypto-friendliness.
 The DII-US makes state-level business, economic and cryptocurrency policy much more transparent, which in turn makes these policies even more of an advantage or disadvantage. Policymakers need to keep a close eye on how their regulations measure up to those of peers, neighbors and rivals, especially in rapidly developing fields such as cryptocurrency.
- 4. The DII-US can be a powerful part of a state's talent/investment attraction and retention campaign.
 - It is an especially important way to highlight promising business climates outside of Silicon Valley, Boston, Seattle, Research Triangle, and other traditional tech hotspots.
- 5. High taxes and high costs of living and post-COVID uncertainty are fueling migration
 California saw a net population loss in 2020 for the first time in its history, due to high housing
 costs as well as the mainstreaming of remote work. State and local governments as well as
 investors and entrepreneurs need to pay attention to when Americans vote with their feet in
 this way.



Florida and Texas Overtake Washington for the Top Spots, California Falls out of the Top 10 Idaho, West Virginia and Oregon See Improvement in the DII US Rankings; Maryland, North Carolina, North Dakota and Vermont Fall

San Mateo, California, July 13, 2022 – The Draper Hero Index (DHI) announces the commencement of quarterly review executive summaries to its United States Draper Innovation Index (DII US), which evaluates each state's environment for innovation and entrepreneurship. The DII US now includes Dun & Bradstreet (DNB) data, the leading provider of location-based business data and analytical tools.

"While the real estate mantra is "location, location, location," the innovation mantra is "trust, trust," where states with the most freedom and human trust allow for the most innovation, and those with the strictest regulations smother innovation. Regulation kills innovation, while trust allows innovation to flourish. The DII US is the best, most up to date map of the current American economic, regulatory and entrepreneurship landscape and will become even more important as Bitcoin, Blockchain and other emerging technologies continue to transform and drive the economy forward," said Tim Draper, founder of the Draper Hero Institute.

The DII US Top 10 States saw significant movement between January and May 2022, especially at the top, with **Florida** and **Texas** leapfrogging **Washington** for the Top 2 spots; they were buoyed by their performance in both the OBHI and SBHI metrics as well as considerable improvements in overall capital investments and in cryptocurrency/blockchain-related sectors and businesses. **California** fell out of the overall DII US Top Ten and was surpassed by **Massachusetts** as the nation's #1 tech innovation environment. The table below highlights the change in ranks for the Top 10 countries in the DII-US from January 2022 to May 2022:

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|----------------------|----|------------------|----|-------|
| January 2022 Top Ten | | May 2022 Top Ten | | е |
| Washington | 1 | Florida | 1 | |
| Florida | 2 | Texas | 2 | |
| Texas | 3 | Washington | 3 | |
| Wyoming | 4 | South Dakota | 4 | 1 |
| South Dakota | 5 | Wyoming | 5 | 1 |
| Massachusetts | 6 | Massachusetts | 6 | |
| Utah | 7 | Utah | 7 | - |
| Colorado | 8 | Colorado | 8 | - |
| Alaska | 9 | Virginia | 9 | 1 |
| California | 10 | Alaska | 10 | - |

Virginia and Alaska rounded out the Top 10 ranks and pushed California out of the top 10, where it had been in early 2022 due to its overall performance and cryptocurrency/blockchain investments in particular. California's fall was due to softness in its OBHI and SBHI rankings. Other movements in the Top



10 included **South Dakota** and **Wyoming** trading 4th and 5th places while **Massachusetts, Utah and Colorado** remained steady at 6th, 7th, and 8th.

Idaho saw by far the most significant jump in the rankings overall, increasing by eight (8) places from January 2022 to May 2022; **Indiana, Ohio, Oregon, South Carolina, Virginia, West Virginia**, and **Wisconsin** all rose by two ranks during the same time period. **Idaho's** dramatic improvement stemmed from relative strengths in its Overall Business Health Index (OBHI) and Small Business Health Index (SBHI) as well as considerable improvements in both overall capital investments and investments into cryptocurrency/blockchain related sectors.

States declining in the rankings included:

- Maryland (-4),
- North Dakota (-4),
- Vermont (-3),
- lowa (-2),
- Nebraska (-2),
- Washington (-2).

Maryland's decline was largely attributable to comparative weakness in overall capital and cryptocurrency/blockchain investments as well as poor performance on the OBHI and SBHI. **North Dakota** has yet to register any cryptocurrency/blockchain investments for the year suggesting it will continue to underperform when compared against more innovative states. In **Vermont**, cryptocurrency/blockchain investments began to slow in the latter half of the quarter, dragging down the state's overall ranking.

Despite California being home to some of the nation's most successful tech companies, traditionally the nation's tech leader — and the destination for more venture capital funding and Bitcoin/blockchain investment than any other state — dropped to 11th in the overall rankings, primarily due to its performance on the Small Business Policy Environment and Tax Environment sub-indices. It has consistently finished at or near the bottom of these indices since the first publication of the DII US. Additionally, Massachusetts surpassed the state in DII's Tech Environment scenario.

"High cost of living states, in addition to relatively unfriendly small business and tax policies and regulations, could create significant economic repercussions in the long term," Dr. Wallace Walrod, DHI's Chief Economic Advisor. "Non-traditional tech powers such as Wyoming, South Dakota and Utah, on the other hand, are leveraging small business policy and in some cases cryptocurrency policy as powerful ways to attract new entrepreneurs and investors."

The DII US will continue to be updated each month and can be accessed here.

About the Monthly DII-US Data Methodology

The DII US aggregates six sub-indices that reflect key aspects of state-level business and innovation environments:



- Technology R&D and Workforce Environment;
- Global Economic and IT Infrastructure;
- Entrepreneurs/Startup Environment;
- Small Business Policy Environment;
- Tax Environment; and
- Social Environment.

As of January 2022, the DII-US includes Dun & Bradstreet (DNB) data, incorporating two key indices: the Overall Business Health Index (OBHI) and the US Small Business Health Index (SBHI). The former surveys currently open U.S. businesses, evaluating their:

- likelihood of continued survival
- likelihood of delinquency,
- and likelihood of defaulting on a payment.

The SBHI evaluates businesses with less than a hundred employees based on the following criteria:

- credit card utilization;
- credit card delinquency;
- total number of business failures compared to the previous year;
- and past-due dollar delinquency.

The SBHI strongly correlates with other key indices of economic activity, such as GDP growth, which makes it a particularly important addition.

About Draper Hero Institute

Founded by legendary Silicon Valley venture capitalist and entrepreneur Timothy C. Draper, Draper Hero Institute (DHI) provides applicable and modern resources for future entrepreneurs globally and ensures inclusiveness and opportunities for all. As an action-based research institution, DHI focuses its efforts on non-traditional pathways to guide future entrepreneurs in the new economy. Through programs that ignite innovative research; united through connectivity and networking; and mentoring efforts through applied education, DHI provides a portal for creative thinking and ultimately driving change to better prepare future entrepreneurs to take on heroic endeavors.

https://www.draperhero.org/

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DII US METHODOLOGY

Data Sources and Metric Definitions

A more complete listing and description of DII US's data inputs is available on the DHI/DII website, along with weightings for each factor in the 3 DII US scenarios.

1) Bloomberg Annual State Innovation Index

The Bloomberg Annual State Innovation Index measures 6 equally weighted categories representing innovation concentration and potential: R&D Intensity, Productivity, Tech Company Density, STEM Professional Concentration, Science and Engineering Degree Holders and Patent Activity. This ranking gives the highest scores to states with established technology sectors, strong university systems and a large number of high-tech employers, such as California, Massachusetts and Washington.

- a. Metrics Included:
 - i. R&D Intensity
 - ii. Productivity
 - iii. Tech Company Density
 - iv. STEM Professional Concentration
 - v. Science and Engineering Degree Holders
 - vi. Patent Activity
- 2) Information Technology & Innovation Foundation: New State Economy Index
 The Information Technology and Innovation Foundation's New State Economy Index aggregates 25
 indicators across five categories in order to determine each state's ability to successfully manage an
 economy driven by technological innovation. These metrics provide a snapshot of each state's
 knowledge base, globalization, entrepreneurship, IT, and innovation efforts.
 - a. Metrics included:
 - i. Knowledge Jobs: Indicators measure employment of IT professionals outside the IT industry; jobs held by managers, professionals, and technicians; the educational attainment of the entire workforce; immigration of knowledge workers; migration of domestic knowledge workers; worker productivity in the manufacturing sector; and employment in high-wage traded services.
 - ii. Globalization: Foreign Direct Investment (FDI), export orientation of manufacturing, and the share of each state's output that goes to high-tech goods and services exports.
 - iii. Economic Dynamism: Indicators measure the degree of business churn (i.e., the percentage of new business start-ups and failures); the number of fast-growing firms (businesses listed in the "Inc. 5000" index); the number and value of initial public stock offerings (IPOs) by companies; and the number of individual inventor



patents granted.

iv. The Digital Economy: Indicators measure Internet and computer use by farmers; the degree to which state governments use information technologies to deliver services; adoption rates and speed of broadband telecommunications; and use of IT in the health care system.

v. Innovation Capacity: Indicators measure the number of jobs in high-tech industries such as electronics manufacturing, telecommunications, and biomedical industries; the number of scientists and engineers in the workforce; the number of patents granted; industry investment in research and development (R&D); non-industry investment in R&D; movement toward a clean energy economy; and venture capital (VC) investment.

3) Kauffman Indicators of Entrepreneurship – Kauffman Early-Stage Entrepreneurship (KESE) Index

- a. Kauffman's Early-Stage Entrepreneurship Index measures entrepreneurship in each state through four primary categories: rate of new entrepreneurs, opportunity share of new entrepreneurs, startup early job creation, and startup early survival rate. This provides crucial information on early-stage entrepreneurial efforts and activity. Metrics Included:
 - i. Rate of New Entrepreneurs Percent of population that starts a new business
 - ii. Opportunity Share of New Entrepreneurs Percent of new entrepreneurs who created a business by choice instead of necessity
 - iii. Startup Early Job Creation Average Number of Jobs created by startups in their first year (normalized by population)
 - iv. Startup Early Survival Rate Percent of startups that are still active after one year

4) Milken Institute State Technology and Science Index

This index compares each individual state's capacity for success through technological advancements and innovation. The index itself is composed of five sub-categories: research and development (R&D inputs), risk capital and entrepreneurial infrastructure, human capital investment, technology and science workforce, and technology concentration and dynamism. The STSI is intended to provide an understanding of the different forces currently impacting US states and their ability to successfully innovate using the latest available data from both government and private sector sources. It is a snapshot of how state-level science and technology economies compare to one another at a specific point in time rather than a long-term study of how individual states are changing and evolving over time.

a. Metrics included:

- i. Research and Development Inputs -
- ii. Risk Capital and Entrepreneurial Infrastructure -
- iii. Human Capital Investment
- iv. Tech and Science Workforce



v. Technology Concentration and Dynamism

5) Small Business and Entrepreneurship Council – Small Business Policy Index

The Small Business Policy Index ranks the 50 states according to 62 different policy measures, including assessments of various tax rates and regulatory and government spending. It is intended to highlight which states have made positive decisions in regard to legislation impacting small businesses, investments, entrepreneurship and economic growth and activity. In order to better attract and retain businesses into their regions, US states must have healthy regulatory environments which do not create severe headwinds for those looking to start new businesses but rather support and encourage their growth and expansion.

6) Tax Foundation – State Business Tax Climate Index

The Tax Foundation's State Business Tax Climate index provides business leaders, government policymakers and taxpayers with a better understanding of how various state tax systems compare to one another. Its five primary categories include measures of corporate taxes, individual income taxes, sale taxes, property taxes, and unemployment insurance taxes. This index is intended to show how well states structure their tax systems while providing a roadmap for improvement since states with the best tax systems can be extremely competitive in attracting new businesses and generating significant economic activity.

7) Opportunity Nation – Opportunity Index

The Opportunity Index was created to provide insight into the potential "opportunity" for residents, businesses and the community in each of the 50 US states and is based on four main pillars: economy, education, health and community. It includes measurements of gender, race, ethnicity, income, health and safety. By comparing these indicators, states can gain a better understanding of how their demographics s are changing and evolving, allowing them to better anticipate and react to the needs of their residents and business communities. The level of 'opportunity' in a state can serve to attract and retain entrepreneurs and new businesses as well as impact population migration levels further impacting a region's ability to generate meaningful economic development and activity.

- a. Metrics included:
 - i. Economy -
 - ii. Education -
 - iii. Health -
 - iv. Community Volunteering

8) CompTIA Cyber States - Cyber States Index

The CompTIA Cyber States Index was created to serve as a reference tool for business leaders and policymakers, a way to understand the scope of a state tech industry and tech workforce. This index provides a deep dive into the various tech industries of the 50 US states including measures of total



employment, employment change and number of tech businesses and job postings. Considering high-tech employment serves to drive economic activity and innovation, the Cyber States Index provides a snapshot into which states are likely to see continued technological growth and evolution.

- a. Metrics included:
 - i. Net Tech Employment
 - ii. Net Tech Job Gains
 - iii. Net Tech Jobs Gain Decade in Review
 - iv. Net Employment as a Percent of Overall Workforce
 - v. Tech Business Establishments
 - vi. Tech Occupation Job Postings
 - vii. Emerging Tech Job Postings as Percent of Tech Occupations