April 17, 2023

Committee on Energy and Commerce
Subcommittee on Innovation, Data, and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

VIA EMAIL

Re: Hearing titled "Fiscal Year 2024 Federal Trade Commission Budget."

Honorable Members of the Subcommittee on Innovation, Data, and Commerce:

Engine is a non-profit technology policy, research, and advocacy organization that bridges the gap between policymakers and startups. Engine works with government and a community of thousands of high-technology, growth-oriented startups across the nation to support the development of technology entrepreneurship. The Federal Trade Commission impacts several issues important to startups and technology entrepreneurship, including, e.g., data privacy and competition and we accordingly appreciate the subcommittee holding a hearing to review the agency.

The FTC needs direction from Congress on data privacy. In Fall 2022, the FTC issued an advanced notice of proposed rulemaking on "commercial surveillance." From the title to the framing of the questions, the ANPR started on a skewed foundation rather than representing a nuanced inquiry from which to build a balanced solution. As we told the Commission, startups need clarity and consistency from a federal privacy framework, and an overly burdensome privacy framework will make it more difficult for startups to compete against large and incumbent companies.[1] Startups are already experiencing significant burdens as they navigate the growing patchwork of state privacy laws—with some experiencing costs of $300,000 or more and an additional $60,000 for each state added to the patchwork.[2]

On privacy, there is a clear role for the FTC to play in enforcing the law and protecting consumers, but pursuing its own privacy rules would be counterproductive for startups and consumers, and merely add another layer to the patchwork of privacy rules. Instead, Congress should pass a uniform, comprehensive privacy law to create certainty and clarity, and the FTC should have a role in consistently enforcing that law.

---

[1] *Comments of Engine Advocacy in response to Commercial Surveillance ANPR, R111004*, Engine (Nov. 21, 2022), https://engine.is/s/Engine-FTC-Privacy-ANPRMComments.pdf.
[2] *Privacy Patchwork Problem: Costs, Burdens, and Barriers Encountered by Startups*, 4 Engine (Mar. 2023), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/6414a45f5001941e519492ff/1679074400513/Privacy+Patchwork+Problem+Report.pdf.

The FTC should facilitate real opportunities for public input. Under the leadership of Chair Khan, the Commission has emphasized transparency and opportunity for public input. But these commitments have often been fraught. The agency prohibited public staff engagements for nearly a year[3] and has fought requests to share public records.[4] FTC open meetings include dedicated time for public input, which thankfully has been allocated to the beginning of most recent meetings, but during meetings with critical business for startups, like around M&A for example, this input opportunity came after Commissioners had already voted.[5] Likewise, at pre-planned agency "listening sessions," chosen speakers that the agency coordinates with ahead of time speak for the majority of time, while others queue for the chance to speak for one-, sometimes two-minute timeslots. No matter how important the issue, startup founders do not have hours to wait in a queue for the possibility they may get to speak for one minute.

The FTC must avoid unintended consequences that harm startups. The FTC works on several key issues important to startups, including data privacy and merger enforcement, and missteps on either of those issues could be very costly for startups. The FTC's increased skepticism toward legitimate M&A activity is alarming for startups because the overwhelming majority of successful startup exits are via acquisition—and in many places outside of major startup hubs like Silicon Valley and New York, acquisition is the only available successful exit.[6] These acquisitions promote the flow of capital and talent in the startup ecosystem and lead to investment in new startups. The FTC's actions in these areas will make it harder for startups to experience a successful exit, something startup founders have asked policymakers to avoid making more difficult.[7] And as highlighted above, unique FTC rules for privacy would add another costly layer for startups and not solve the patchwork problem.

We hope the subcommittee takes into account the experiences of startups as it reviews the FTC. To that end, we've attached resources on data privacy and startups, and acquisitions and startups.

---

[3] *See, e.g.*, Leah Nylen and Betsy Woodruff Swan, FTC staffers told to back out of public appearances (July 6, 2021), https://www.politico.com/news/2021/07/06/ftc-staffers-public-appearances-498386; Josh Cisco, *To Combat Declining Staff Morale, FTC Chair Khan Lifts Public Speaking Ban as Deputy Issues Apology*, The Information (May 26, 2022), https://www.theinformation.com/articles/to-combat-declining-staff-morale-ftc-chair-khan-lifts-public-speaking-ban-as-deputy-issues-apology.

[4] *See e.g.*, Jan Wolfe, *U.S. Chamber of Commerce Sues FTC, Saying Agency Operates in Secret*, Wall Street Journal (July 14, 2022), https://www.wsj.com/articles/u-s-chamber-of-commerce-sues-ftc-saying-agency-operates-in-secret-11657811414.

[5] *See e.g.*, Open Commission Meeting - July 21, https://www.ftc.gov/news-events/events/2021/07/open-commission-meeting-july-21-2021; Open Commission Meeting - September 15, https://www.ftc.gov/news-events/events/2021/09/open-commission-meeting-september-15-2021.

[6] *Exits, Investment, and the Startup Experience: the role of acquisitions in the startup ecosystem*, Engine (Oct. 2022), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/6356f5ccf33a6d5962bc7fd8/1666643406527/Exits_Investment_Startup_Experience_role_of_acquisitions_Report_Engine_Startup_Genome.pdf.

[7] *Id.* (especially startup founders discussing their acquisition experiences, including, e.g.: "The acquisition of 21 by Perforce was a success and the right move for us, and I hope policymakers don't make these sorts of transactions more difficult." ~ Shani Shoham, CEO, 21 Labs (acquired by Perforce); "Being acquired is a desirable startup exit path, and restricting it will lead to less capital and less startup competition." ~ Steven Cox, Founder & CEO, TakeLessons (acquired by Microsoft)).

Engine is committed to being a resource for the subcommittee on these and other issues impacting technology entrepreneurship.

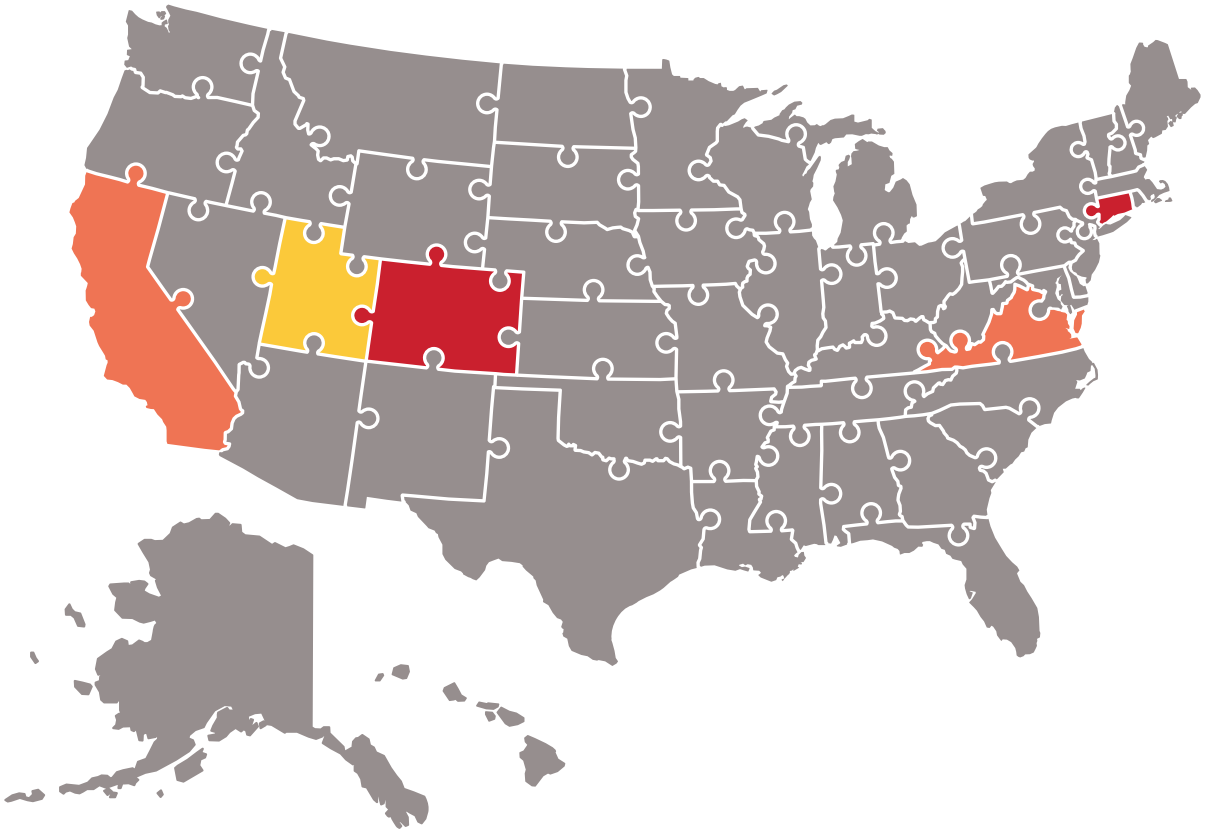
Sincerely,

Engine
700 Penn Ave SE
Washington D.C. 20003

Engine

Privacy Patchwork Problem:

Costs, Burdens, and Barriers Encountered by Startups



March 2023

ABOUT ENGINE

Engine was created in 2011 by a collection of startup CEOs, early-stage venture investors, and technology policy experts who believe that innovation and entrepreneurship are driven by small startups, competing in open, competitive markets where they can challenge dominant incumbents. We believe that entrepreneurship and innovation have stood at the core of what helps build great societies and economies, and such entrepreneurship and invention has historically been driven by small startups. Working with our ever-growing network of entrepreneurs, startups, venture capitalists, technologists, and technology policy experts across the United States, Engine ensures that the voice of the startup community is heard by policymakers at all levels of government. When startups speak, policymakers listen.

Engine is grateful for the research assistance and contributions of Annie Eng and the University of Michigan Ford School of Public Policy Program in Practical Policy Engagement to this report.

CONTENTS

Startups need a federal privacy framework that works for them

Startups need a federal privacy framework that creates uniformity, promotes clarity, limits bad-faith litigation, accounts for the resources of startups, and recognizes the interconnectedness of the startup ecosystem.

Startups care about the privacy of their users and invest heavily in data privacy and security.

$100,000 – $300,000+

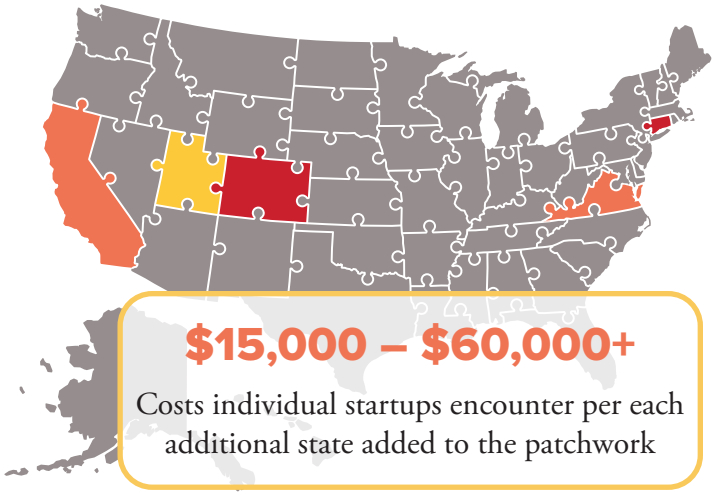
Amount individual startups invest in their data privacy infrastructure and compliance with current or soon effective privacy laws

"We care a great deal about privacy and we want to be compliant, but it can be very expensive and complex."

Ben Brooks, Founder & CEO, PILOT, New York, NY

"Working with children, our priority is protecting their data."

Katherine Grill, Co-Founder & CEO, Neolth, Walnut Creek, CA



$15,000 – $60,000+

Costs individual startups encounter per each additional state added to the patchwork

A patchwork of privacy laws creates confusion and duplicative costs for startups.

Five states have passed and enacted comprehensive data privacy legislation and already this year more than a dozen states have introduced at least three dozen privacy laws. The rapidly shifting landscape of state privacy laws makes compliance difficult for startups and leads them to spend considerable time and resources navigating these disparate, complex frameworks.

"The rules can vary significantly on a state-by-state level. On top of that, our attorneys keep telling us that they're still changing fast, which means it's hard to have a stable, up-to-date privacy policy you feel confident is fully compliant."

Camila Lopez, Co-Founder, People Clerk, Miami, FL

"In the U.S., many states have their own rules—or no rules—and we have to approach compliance in every state on a case-by-case basis...trying to figure out how to build a business in an environment with differing rules about the same issue becomes hard and expensive."

Aditya Vishwanath, Co-Founder & CEO, Inspirit VR, Palo Alto, CA

$55,000

Average monthly resources of a venture-backed, seed-stage startup

"As a high-growth and early-stage startup trying to grow fast, you're at a major competitive disadvantage...I would have to raise an entire second Series A to navigate many of these frameworks."

Sam Caucci, Founder & CEO, 1Huddle, Newark, NJ

Startups need Congress to act.

"It would be helpful to have a nationwide standard when it comes to data privacy policy, especially since we're looking to expand into new states."

Andrew Prystai, CEO & Co-Founder, EventVesta, Omaha, NE

"One uniform, consistently enforced federal policy framework could help make running RAVN easier."

Tani Chambers, Co-Founder & CEO, RAVN, New York, NY

Engine

INTRODUCTION

Data privacy has been top of mind for consumers, policymakers, regulators, companies, and entrepreneurs for the past several years, in the wake of broad privacy rules in the EU, and action in several U.S. states. The U.S., which has long had a sectoral approach to privacy, remains without a comprehensive privacy framework, and many states have reacted by proposing, passing, and implementing their own varying—and potentially conflicting—comprehensive privacy laws. The Internet does not stop at state borders, and as more and more states pass unique privacy laws, the volume of rules for startups to keep up with is growing, threatening to bury resource-strapped startups under duplicative compliance costs, limit their scalability, and burden their chances of success. This report seeks to enumerate those impacts of the growing patchwork of privacy laws upon the startup ecosystem.

Startups should be a key consideration as policymakers advance privacy rules. They have to navigate the same legal and regulatory framework without the resources of their larger counterparts—but much of the conversation focuses on the practices of large Internet companies. To adequately include startups' experiences in data privacy debates, policymakers need a window into startups' responses to privacy laws, the resources they devote toward compliance, and an understanding of costs—direct and indirect—imposed on startups. This report can provide these insights for policymakers in statehouses and Congress alike.

The findings of this report could not be more clear: the U.S. needs a consistently-enforced, uniform federal privacy framework to create privacy protections for all Americans and certainty for the startups that serve them. Startups vehemently endeavor to comply with the rules that apply to them, but an inconsistent state-by-state patchwork is unworkable and unnecessarily saps limited resources that startups need for activities essential to their growth and survival. Congress has faced calls for many years from many corners—from privacy advocates to the startup community—to create a federal privacy law. Last Congress saw momentum toward a federal privacy law, and that work looks poised to continue this Congress. The findings of this report, coupled with an explosion of privacy law-related activity in statehouses across the country should add to that momentum.

METHODOLOGY

To unpack the impacts of disparate state privacy laws, this report has three main components: an overview of the current state privacy patchwork, a breakdown of the compliance costs associated with those laws, and startups discussing the impact of the data privacy policy landscape in their own words.

To understand how startups are approaching compliance with the varying, growing, and likely to keep growing number of state privacy laws, we spoke with over a dozen startups, entrepreneur support organization leaders, outside legal counsel to startups, and data privacy and security consultants that work with startups. The conversations took place between October 2022 and February 2023. The startups quoted throughout the report are not necessarily the same startups that contributed cost figures to the findings section of this report. The startups we spoke with were less than two-years-old to over 14, with some having raised no outside investment and others having raised millions of dollars in venture capital. The startup counsel we spoke with worked with both early-stage and growth stage startups, from both top law firms and bespoke firms tailored to startups, located in top startup hubs and smaller startup ecosystems.

To help quantify the costs and other impacts of the state privacy patchwork, this report breaks down compliance costs into several component parts: legal, audit, and advisory costs; technology costs; business and operations costs; and opportunity costs. The activities and expenses associated with each of those categories are discussed in further detail where they appear. Startups offered both actual costs—those they had already incurred, contracted for, or committed to—and expected costs—those they had budgeted, sought estimates for, or otherwise knew to expect based on previous experiences. Segmenting costs in this way offers insight into the different types of impacts on startups, and delivers a concrete, startup-level view of compliance with disparate state privacy laws—offering a tangible addition to macro-level estimates of costs of the state privacy patchwork problem.

LEGISLATIVE LANDSCAPE

At the federal level, there are several sectoral privacy frameworks that cover, e.g., health, financial, or education data. The Children's Online Privacy Protection Act imposes specific requirements for Internet services directed toward those under age 13. There is no federal data privacy statute that governs data and personal information in a comprehensive way. In this absence, several states have proposed and passed legislation to provide this governance for their citizens. While the goals of each state law are similar, and purport to do similar things, they are not the same. This section briefly explores this landscape.

The privacy patchwork

Five states—California,[1] Virginia,[2] Colorado,[3] Connecticut,[4] and Utah[5] —have passed and enacted comprehensive data privacy legislation. Within the first few weeks of the 2023 state legislative calendar, more than a dozen states have introduced at least three dozen privacy laws, which have seen varying levels of movement toward passage. Each of the enacted laws are in effect or will take effect later this year, and startups are parsing and preparing for what that means for them. These activities and their costs are explored in the findings section.

Varying definitions

Even if they are oftentimes inspired by one another, the state laws are not the same, which is why the privacy landscape is often referred to as a "patchwork." This creates complexity and makes parsing the obligations for startups difficult. For example, the enacted state laws define sensitive personal information differently—from which certain consumer rights and obligations arise. The states consider many of the same types of information sensitive—e.g., race, ethnicity,

mental or physical health or diagnoses, sexual orientation, religious beliefs, citizenship status, genetic or biometric information—but have notable differences. Geolocation data is considered sensitive in most states but not Colorado. But that data becomes sensitive if used to infer other sensitive information like religion or health status through e.g., visits to a church or healthcare provider. And California considers additional information to be sensitive, like contents of email, financial data, or certain government ID information.

Consumer rights

The laws grant many of the same consumer rights, but not all of them. Rights to access, delete, port, and opt-out of sale are included in each state (but the application of those rights might vary). Most states also have rights to correct information but not Utah. The timeframe companies have to respond to requests is a relatively consistent 45 days across most states (and include the possibility of extensions), but some states require acknowledging and responding to certain requests on much shorter timelines. Facilitating these consumer rights is likely to take time and resources for startups, given they may not presently have the infrastructure in place to handle such requests or ensure that bad actors do not exploit the rights to gain access to customer information. Compounding these potential burdens, what constitutes a "sale" varies among the states, and California introduces the right to opt-out of sharing—which is a new concept.

Opt-in or opt-out?

The laws have different opt-in thresholds, some of which hinge on sensitive information definitions (that again, also vary). For example, in Virginia, Colorado, and Connecticut, consumer opt-in is required to process sensitive information. In Utah, consumers can opt-out, and California consumers can limit use of such information.

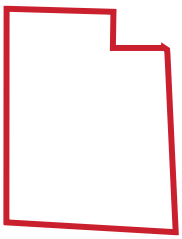
For startups, other noteworthy consumer opt-out rights found in the state laws include rights to opt-out of targeted advertising and rights to opt-out profiling or automated decisionmaking. Many startups leverage targeted advertising to reach new users and while others may generate revenue by selling ad space. Likewise, many startups have automated processes integrated into their products or, for some, it might even be their core service. Several states' laws contemplate such an opt-out right, while Utah's does not. And still others, like California, leave similar key questions to regulators.

Impact assessments

Most of the state laws require companies to conduct data impact assessments. At present, several startups are likely to be unfamiliar with the concept, which comes from the EU privacy rules, while larger startups and tech companies are more likely to be familiar. For smaller startups, preparing and submitting multiple, different assessments to the various states could create new costs.

Scope and enforcement

As outlined below, who the laws apply to vary by state, but several have adopted similar thresholds. For startups, the many disparities found in the laws have a lot of practical impacts and lead to increased compliance costs, confusion and uncertainty. Thankfully for startups, most of these laws allow companies to cure within a certain time period unintentional violations they are notified about. And most laws are enforced by the government or otherwise limit private rights of action.

State	Effective Date	Applicability thresholds	Right to cure violations, Cure period	Private Right of Action
California 	CCPA: Jan 1 2020 CPRA: Jan 1, 2023	Does business in CA and has $25 million+ in revenue or "buys, sells, or shares" personal information of 100,000+, or derives 50%+ of revenue from selling or sharing personal information, or certifies compliance to regulator regardless of above	Yes, at enforcers' discretion or 30 days for data breaches	Yes, limited
Virginia 	Jan 1, 2023	Conducts business in VA or produces products or services targeted to VA residents and "controls or processes" personal data of 100,000+, or 25,000+ and derives 50%+ of revenue from "sale of personal data"	Yes, 30 days	No
Colorado 	July 1, 2023	Conducts business in CO or delivers products or services intentionally targeted to CO residents and "controls or processes" personal data of 100,000+, or 25,000+ and derives revenue or receives discounted goods or services from "sale of personal data"	Expires Jan 1, 2025, 60 days	No
Connecticut 	July 1, 2023	Conducts business in CT or produces products or services targeted to CT residents and "controls or processes" personal data of 100,000+, or 25,000+ and derives 25%+ of revenue from "sale of personal data"	Yes, 30 days	No
Utah 	Dec 31, 2023	Conducts business in UT or produces products or services targeted to UT residents, has 25 million+ in revenue and "controls or processes" personal data of 100,000+, or 25,000+ and derives 50%+ of revenue from "sale of personal data"	Expires Dec 31, 2024, 60 days	No

FINDINGS

Startups we spoke with view data privacy and security as a business prerogative, and invest heavily—especially as a percentage of the few resources they have on hand—in doing right by their users, customers and clients. The careful thought given to data privacy by startup leaders is heartening but also underscores deep trade-offs they face when navigating the privacy landscape. The findings of this report reveal that complying with a growing patchwork of unique state privacy laws is an expensive, difficult task that must be solved with one uniform, consistently enforced federal privacy framework to support startup growth and ensure data privacy protections nationwide.

All of the startups we spoke with viewed securing user data and respecting the privacy of their users as priorities, but, despite taking significant steps to those ends, they often expressed confusion and uncertainty about their obligations under the law. Startups in industries falling within existing sectoral federal privacy regulations, like health, education, or finance, knew what they must do to be compliant with those rules, but they were not as confident in their ability to keep up with new and evolving state privacy rules.

> *"Working with children, our priority is protecting their data [...] we worked with our counsel at Latham and Watkins to create our terms of service and work with our school customers on any state-specific addendums. Having various laws makes this process a little harder, so it would definitely be nice if there was just one standardized privacy law."*[6]
>
> **- Katherine Grill, Co-Founder & CEO, Neolth, Walnut Creek, California**
>
> *Neolth leverages technology to equip students and schools with mental health resources.*

All startups we spoke with lamented the evolving patchwork of state privacy laws as confusing, hard to keep up with, costly, and burdensome. In some cases, startups avoided intentionally seeking to serve users or businesses in states with unique data privacy laws because they could not afford to evaluate if their current data privacy and security practices were sufficient for compliance. The reflex is similar to that of many startups following the European Union's General Data Protection Regulation—who used geoblocking technologies to avoid EU users.[7] Similar technologies to block traffic from various intra-country jurisdictions like states do not really exist. Instead, startups avoid advertising to users or forgo otherwise lucrative business contracts in certain states in the hopes of staying below the applicability thresholds of those states' data privacy laws.

> *"...a significant challenge for us has been data privacy. It would be helpful to have a nationwide standard when it comes to data privacy policy, especially since we're looking to expand into new states. Part of the reason that we have not expanded into certain states like California is because of the resources required to handle California Consumer Privacy Act (CCPA) compliance, which is something that we have to think about every time we look at entering a state that has its own, unique privacy compliance requirements."*[8]
>
> **- Andrew Prystai, CEO & Co-Founder, Event Vesta, Omaha, Nebraska**
>
> *Event Vesta is an event discovery and promotion platform that improves connectivity between event organizers and attendees.*

Similarly, attorneys and advisors find the quickly-changing legal landscape around privacy tough to keep up with. Several described the amount of time they had to spend researching and keeping up to date on the latest developments in state data privacy regulations, noting that it went far beyond anything they could reasonably bill a client for. As one attorney for early-stage startups added, "if it takes us that long with all these changes, I can't understand how [policymakers] expect a startup founder to know what to do."

Compliance costs

$100,000 – $300,000+
Compliance costs

$15,000 – $60,000+
Additional per-state costs

Startups took disparate approaches to compliance with varying data privacy and security regimes they are or might be subject to, but all shared common themes. Many compliance-associated activities could be done once because they are found in several laws—like reconfiguring data storage to create the ability to delete user data—while other activities needed to be done for each new law—like audits, impact assessments or evaluating and updating privacy policies. This report reflects these realities by reporting both one-time costs, and marginal, per-state costs of privacy law compliance faced by most startups. (A minority of startups—usually those later-stage or in regulated industries—reported spending more, sometimes much more, than these figures.)

To help break down the cost of compliance and lay out the types of compliance activities startups undertake, we separate them into component parts for discussion.

Legal, audit, and advisory costs

For a startup, legal, audit, and advisory costs associated with privacy law compliance primarily includes the cost to hire legal talent, retain outside counsel, engage privacy consultants, or commission auditors. Startups secure these services to understand obligations under varying data privacy laws; update their privacy policies and internal controls; verify legal compliance; or attain certifications like SOC 2. Outside of the associated pecuniary costs, these activities are time-consuming and potentially distracting for startup leadership teams, with startups reporting it taking from as little as two months to as long as two years to complete such activities.

Perhaps the most basic and outward-facing compliance task for a startup is creating and updating their privacy policy. To create or update a privacy policy, startup attorneys said they typically charge around $1,500 for very basic policies to around $6,000 for more tailored policies. Attorneys in smaller markets charged around $400 an hour for additional work, while attorneys in startup hubs or at larger firms billed at $1,000 or more an hour. These figures were confirmed by startups with legal bills for privacy policies and related activities ranging up to $15,000.

In parallel to legal counsel, many startups sought advisory services—perhaps also from an attorney, but usually from a privacy consultant or auditor—to evaluate their business, understand their obligations under the law, and perform risk assessments. Most startups reported these costs ranging between $20,000 and $50,000. In response to the recommendations of an advisor, startups usually found they may need to implement legal, technical, or business-model changes, adding additional expense on top of those costs. And while companies do not start from scratch with each new state or jurisdiction where the company encounters a new privacy law, it is still costly to (re)evaluate obligations and implement changes. For new, additional states, some startups reported identical advisory costs, while others said slightly less on a marginal basis, estimating it will cost them $10,000 per each additional state just to start reviewing and modifying policies for compliance. Finally, rather than a fee-for-service arrangement associated with a particular set of compliance activities, some startups had privacy consultants on retainer to be responsive to their needs—with those startups reporting this cost them $6,000 to $10,000 per month (up to $120,000 per year).

Of course, these ranges can vary significantly based on the startup and their industry subsector as well. One startup in a regulated industry estimated they had spent $5 million on legal and advisory services over the life of the company through developing and updating privacy policies for various state and federal regulatory regimes, performing quality controls and risk assessments, and regularly engaging with auditors and regulators.

Technology costs

As part of complying with new privacy laws, startups often must make changes to their existing systems, develop new technology, or acquire and integrate third-party software products. Generally, decisions to re-design, build, or integrate new technology are products of consultations or audits discussed above, meaning startups may have already spent tens of thousands of dollars before getting to the brass tacks of putting those recommendations into practice.

Many startups reported using third-party software solutions to help automate and manage compliance. These startups reported costs just for the software to be $8,000 to $20,000 per year, which must be integrated into their processes and managed by their staff.

And many startups dispatched their own engineers to redevelop systems where needed. Engineers are some of the most important hires startups make, and some founders report paying themselves minimum wage so that they effectively stretch their resources and pay competitive salaries to their engineers, which tend to range from about $75,000 all the way up to more than $300,000 annually. The average software engineer pay in smaller ecosystems is around $40 per hour, $75 per hour in top ecosystems, and could reach up to $150 an hour for more senior engineering talent.[9] One startup emphasized using at least four engineers to redevelop a system, while another estimated it took 1,000 engineering hours to complete an overhaul for compliance.

Software engineers are critical to developing, building, and growing startups, and how they spend their time is intimately tied with a startups' success and ability to make and market new products. Given the resource constraints of many startups, they may not have six months of engineering time to feasibly steer away from activities central to their existence. And insofar as additional state laws added to the privacy patchwork require engineers' time, they will have a direct impact on startups' core activities.

Business and operations costs

Complying with various state privacy laws implicates business and operational costs, for example around hiring, training, relationships with vendors, business practices, customer acquisition, and sales cycles.

Many startups described needing to reevaluate existing relationships and update contracts with vendors as a result of changes to privacy rules. Often this didn't carry a significant separate monetary cost unless legal counsel needed to be consulted for review. Instead the main cost startups described involved time to evaluate the contracts and implement technical or business changes to be in line with the updated terms.

Most startups emphasized that it takes time and costs money to train their employees with regard to data privacy and security. Some startups approached hiring differently as a result of the evolving legal landscape around data privacy, consciously seeking more senior software engineers and staff with deeper knowledge of privacy rules—and therefore paying higher salaries than otherwise. And these startups noted the pool of talent that is up-to-date on privacy rules is relatively small. With the privacy landscape in flux, it is likely to shrink smaller still.

Startups need to reach potential customers and evaluate their services, and many highlighted impacts or feared impacts of data privacy legislation on those critical business needs. Many startups said they use digital advertising and other marketing tools to find new customers and recognized that privacy laws may impact the effectiveness of those channels in the future. And startups use analytics to evaluate how well their service is performing and to pinpoint areas in need of improvement. Startups reported seeing privacy measures interfering with those basic business insights despite their belief that these insights don't come at the cost of user privacy because they needn't extend to the level of an identifiable individual user.

Other business costs included the additional barriers at the point of sale for startups entering into contracts with clients. This was true for all startups working with enterprise clients, but especially acute for those selling to large entities. For example, an enterprise software startup looking to contract with a Fortune 500 company must work with that company's legal department and certify their compliance with relevant privacy laws. Startups lamented the amount of time these sorts of reviews took—from two to six months, sometimes longer. This strikes at the very vitality of startups since many measure their runway (the amount of time until they run out of capital) in months, not years. In addition to the time that these processes take, they can be very costly, amounting to 10 percent to 15 percent of the value of the contract. Another startup in a more regulated industry emphasized that compliance costs amounted to 20 percent of their contract value.

These costs have impacts on startup competitiveness. Startups spend much more on compliance as a percentage of revenue than their larger competitors,[10] putting them at a resource disadvantage. These tens of thousands missed on a per-contract basis could go toward hiring, R&D, customer acquisition, and other activities to scale their startup. As another consequence of the many varying privacy laws, as large enterprises look to reduce their risk profile, they are looking to contract with fewer vendors, benefiting already large players while startups lose out.

Opportunity costs

All startups and advisors we spoke with unanimously agreed that the opportunity cost of expending effort and resources to meet compliance for multiple states was tremendous, underscoring that there were more productive, value-creating tasks that could be focused on with the time, capital, and other resources spent on compliance without sacrificing meaningful privacy protections for users. Several startups highlighted hiring more full-time employees, conducting research and development, and growing their sales teams to scale the business. And one startup attorney said there were "a hundred other things" that startups would rather do than have to pay their lawyer. Critically, many startups pointed out that these costs could be mitigated if there were one federal privacy framework instead of a shifting landscape to keep up with.

Several founders additionally highlighted major opportunity costs related to fundraising. Founders spend a significant amount of time fundraising, which is needed fuel to support their startups. Startups leaders said time spent on compliance could take away from that, but more pressing is that investors want to see their capital put toward growth rather than legal or other duplicative compliance costs.

STARTUPS AND A FEDERAL PRIVACY FRAMEWORK

Startups need a uniform, consistently-enforced federal privacy framework. Every startup and advisor we spoke with as a part of this project highlighted a federal framework as a solution to the problems they and their startup clients face. In 2022, Congress came closer than ever to passing a comprehensive federal privacy law, but it got hung up on many familiar sticking points. The findings of this report lend insight to startup perspectives on these pressing issues in today's privacy debates, which are discussed in this section.

Startups need clear, bright-line rules

Obligations in any federal privacy framework must create clarity to ensure startups know what they must do to comply. Provisions that e.g., require companies to evaluate on a case-by-case basis or infer the age of their users are the opposite of bright-line rules, and would create additional uncertainty and burdens for startups. In addition, such provisions, which may require companies to collect additional data for analysis and inference, abridge most startups' aversion to collecting and storing data they do not need because of the associated storage costs and heightened risk of breach.

> *"ChessUp came from the idea of making the learning experience of chess much more accessible and immediate, allowing kids to play a game right out of the gate...with their family and not have to worry about the skill differences."*[11] *... "Our experience is built around making chess easier and more approachable to learn. We want the experience to connect to our product to be brief and convenient as well. As a company, we don't want to be in the position of having to collect and retain information about our users' ages or implement age restrictions. That would create a burden for us and be privacy-invasive for our users."*[12]
>
> **- Jeff Wigh, Founder & CEO, Bryght Labs, Overland Park, Kansas**
>
> *Bryght Labs is a connected gaming startup dedicated to making STEM-based games more accessible and the maker of ChessUp.*

Startups need preemption of state laws

Most of the problems and costs encountered by startups are borne of the patchwork of state privacy laws—the variation and the uncertainty of future changes. Preempting state laws and creating a uniform federal framework will remove variation, create certainty, and alleviate tens of thousands in what startups felt were duplicative, unnecessary costs. If a federal framework does not preempt state privacy laws, then none of these benefits will accrue. It would instead merely create more variation by adding another layer to the existing patchwork, and not create any additional certainty as states could still implement unique or even conflicting privacy rules.

> *"We haven't had any issues with putting all necessary safeguards in place to protect our clients' information, but it is difficult navigating compliance with the different privacy laws out there. Currently, the rules can vary significantly on a state-by-state level. On top of that, our attorneys keep telling us that they're still changing fast, which means it's hard to have a stable, up-to-date privacy policy you feel confident is fully compliant. It's pretty frustrating."*[13]
>
> **- Camila Lopez, Co-Founder, People Clerk, Miami, Florida**
>
> *People Clerk is a legal technology platform that provides users with guidance through small claims court procedures.*

Startups are put at risk by private lawsuits

Startups encounter abusive rent-seeking litigation in many areas of the law, especially those with high defense costs and high potential damages.[14] Creating a private right of action in a federal privacy law would empower individuals to sue companies for alleged violations of the law. A private right of action would lead to uneven enforcement and additionally enable bad actors to exploit the high cost of privacy litigation to extract settlements from startups using meritless suits.[15] Instead, a federal privacy law must be consistently and exclusively enforced by expert agencies.

Startups have few resources and have many reasons to avoid long litigations—and bad actors know it and use it to their advantage. Startups can't afford the potentially millions of dollars in legal fees to litigate a case through and are better off paying the plaintiff to go away even if the startup knows they would otherwise win. And even if they did see the case through to defeat the plaintiff's claims—each party pays their own legal costs, making protracted litigation a lose-lose prospect. What's more, protracted litigation is distracting for startup leadership, and it is nearly impossible for startups involved in active litigation to pass diligence needed to raise capital or experience a successful exit.[16]

A federal privacy law must recognize the tools startups use to reach customers

Startups utilize dozens of services to find, engage, and communicate with their current and potential customers—from digital advertising infrastructure to social media to email to chat widgets and beyond. Some startups also sell advertising space on their sites to generate revenue, enabling startups to offer their services to their users for free. If policy frameworks draw stark divides between first and third parties, startups—and other new services—that are just launching and growing a user base, will be inherently at a disadvantage. And startups use tools to evaluate the effectiveness of those ads and the performance of their services. Recent research shows the volume of tools used for these functions and demonstrates their importance to startups.[17]

In addition to obligations for startups directly under data privacy laws, the key services they rely upon to reach customers and generate revenue are also impacted by those laws as well (usually under the higher-threshold, greater obligations parts of the law). As a result, startups experience increased costs and decreased quality of the tools they need. In formulating a federal privacy framework, policymakers must keep the impacts for startups in mind—including impacts felt through the tools they use.

> *"[Some]thing that is important for us to grow our company is the availability of user analytics, which helps us know how our product is performing and how to better serve our users. Measures designed to promote user privacy can pose challenges for basic business insights, like usage and retention. … a more nuanced approach to data collection … would allow us to better serve our customers while respecting their privacy preferences."*[18]
>
> **- Mandy Poston, Founder & CEO, Availyst, Philadelphia, Pennsylvania**
>
> *Availyst is a delivery platform for local grocery, takeout, convenience, and spirit options.*

A federal privacy law must account for the resources startups have on hand

Startups have limited resources. Most startups do not initially raise outside funding, instead rely on personal savings or bootstrapping—using revenue generated by the business. Even the average two-year-old startup that has started to attract outside investment is working with around $55,000 per month in resources, money meant to last for 18 months to two years.[19] Looking at the compliance costs startups are facing in the current privacy landscape, it's easy to see how the state privacy patchwork literally takes months off of the life of a startup.

> *"We care a great deal about privacy and we want to be compliant, but it can be very expensive and complex. ... Various states also have their own privacy laws. Harmonizing those laws nationally would make it much easier for business owners like me and those we work with. ... There's also very little guidance on how to set things up initially and how to have good security and privacy without the costly certifications. These are all issues that have hindered our business. Privacy law is built around sophisticated multinational large businesses, so as a startup we have to learn how to work within a system that isn't made for us."*[20]
>
> **- Ben Brooks, Founder & CEO, PILOT, New York, New York**
>
> *PILOT provides tech-driven virtual group coaching programs to companies that are easy to implement, affordable, and get good results.*

A federal law must also be careful not to impose obligations upon startups that they cannot afford to implement. Compliance thresholds—especially for the most burdensome or costly obligations—must be set sufficiently high to avoid scoping-in startups.

> *"...one uniform, consistently enforced federal policy framework could help make running RAVN easier, especially as a fintech startup. Compliance can be very costly and is one of the reasons we've delayed our technical product. However, if an overarching framework is developed, it would need to consider small businesses and startups and preferably segment the requirements accordingly. Creating a framework built around regulating large companies and big tech could be harmful to smaller companies and startups like RAVN."*[21]
>
> **- Tani Chambers, Founder & CEO, RAVN, New York, New York**
>
> *Ravn is a wealth-building platform tailored to Black women.*

ENDNOTES

1 Cal. Civ. Code § 1798 (2018) https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?division=3.&part=4.&lawCode=CIV&title=1.81.5; *see related FINAL REGULATIONS TEXT* California Privacy Protection Agency (Feb. 2, 2023), https://cppa.ca.gov/meetings/materials/20230203_item4_text.pdf.

2 Va. Code § 59.1-575 (2021) https://law.lis.virginia.gov/vacodefull/title59.1/chapter53/.

3 Colo. Rev. Stat. § 6-1-1301 (2021) https://leg.colorado.gov/sites/default/files/2021a_190_signed.pdf; *see related VERSION 3 OF PROPOSED DRAFT RULES*, Attorney General of Colorado (Jan. 27, 2023), https://coag.gov/app/uploads/2023/01/CPA_Version-3-Proposed-Draft-Regulations-1.27.2023.pdf.

4 Conn Pub. Acts 22-15 (2022) https://www.cga.ct.gov/2022/ACT/PA/PDF/2022PA-00015-R00SB-00006-PA.PDF.

5 Utah Code § 13-61 (2022) https://le.utah.gov/~2022/bills/static/SB0227.html.

6 *#StartupsEverywhere Profile Katherine Grill, Co-Founder & CEO, Neolth*, Engine (Mar. 18, 2022), https://www.engine.is/news/startupseverywhere-walnutcreek-ca-neolth.

7 *See, e.g.*, GDPR Shield, https://gdpr-shield.io/; *see generally Comments of Engine Advocacy in response to Commercial Surveillance ANPR, R111004*, §II Engine (Nov. 21, 2022), https://engine.is/s/Engine-FTC-Privacy-ANPRM-Comments.pdf

8 *#StartupsEverywhere Profile: Andrew Prystai, CEO & Co-Founder, Event Vesta*, Engine (Oct. 29, 2021), https://www.engine.is/news/startupseverywhere-omaha-ne-eventvesta

9 Per our conversations with startups for this research. These figures generally adhere to averages reported in robust data sources, *e.g.*, *Ecosystems*, Startup Genome, https://startupgenome.com/ecosystems (reporting average software engineer salaries for various ecosystems); and *the State of the Startup Ecosystem*, 15-16 Engine (Apr. 2021), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/60819983b7f8be1a2a99972d/1619106194054/The+State+of+the+Startup+Ecosystem.pdf (reporting average annual software engineer salaries for four select ecosystems of various sizes).

10 *See, e.g.*, *2022 Global Privacy Benchmarks Report*, TrustArc (2022), https://trustarc.com/pdf20/2022-global-privacy-benchmarks-report.pdf.

11 *#StartupsEverywhere Profile: Jeff Wigh, Founder & CEO, Bryght Labs*, Engine (Feb. 4, 2022), https://www.engine.is/news/startupseverywhere-overlandpark-ks-bryghtlabs.

12 *Comments of Engine Advocacy, supra* note 7, at §V.

13 *#StartupsEverywhere Profile: Camila Lopez, Co-Founder, People Clerk*, Engine (Nov. 4, 2022), https://www.engine.is/news/startupseverywhere-miami-fl-peopleclerk.

14 *See, e.g.*, *Startups, Content Moderation, & Section 230*, Engine (Dec. 2021), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/61b26e51cdb21375a31d312f/1639083602320/Startups%2C+Content+Moderation%2C+and+Section+230+2021.pdf; *Startups & the U.S. Patent System: Prioritizing Quality and Balance to Promote Innovation*, 9 Engine (July 2021), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/60f8579bae6a2d324b7440a2/1626888093336/Engine+Patent+Quality+Booklet+2021+7.21.pdf.

15 *The Coming "Privacy Troll" Problem*, Engine (May 31, 2019), https://engineadvocacyfoundation.medium.com/the-coming-privacy-troll-problem-4363695220d6.

16 *See related* Robin Feldman, *Patent Demands & Startup Companies: The View from the Venture Capital Community*, UC Hastings Research Paper (Oct. 28, 2013), http://dx.doi.org/10.2139/ssrn.2346338. ("100% of venture capitalists indicated that if a company had an existing patent demand against it, it could potentially be a major deterrent in deciding whether to invest." Similar deterrents to investment or M&A are present as the result of any pending litigation.); *See generally Exits, Investment and the Startup Experience: the role of acquisitions in the startup ecosystem*, 8-9 Engine (Oct. 2022), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/6356f5ccf33a6d5962bc7fd8/1666643406527/Exits_Investment_Startup_Experience_role_of_acquisitions_Report_Engine_Startup_Genome.pdf.

17 *Tools to Compete: Lower Costs, More Resources, and the Symbiosis of the Tech Ecosystem*, Engine and CCIA Research Center (Jan 2023). https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/63d2b8d-5bec96f502264fd1f/1674754266044/FINAL_CCIA-Engine_Tools-To-Compete.pdf.

18 *#StartupsEverywhere Profile: Mandy Poston, Founder & CEO, Availyst*, Engine (June 24, 2022), https://www.engine.is/news/startupseverywhere-philadelphia-pa-availyst.

19 *See, e.g.*, *State of the Startup Ecosystem*, *supra* note 16, at 19-20.

20 *#StartupsEverywhere Profile: Ben Brooks, Founder & CEO, PILOT*, Engine (July 29, 2022), https://www.engine.is/news/startupseverywhere-newyork-ny-pilot.

21 *#StartupsEverywhere Profile: Tani Chambers, Founder & CEO, RAVN*, Engine (Jan. 20, 2023), https://www.engine.is/news/startupseverywhere-newyork-ny-ravn.

Exits, Investment, *and the* **Startup Experience**: *the role of acquisitions in the startup ecosystem*

presented by

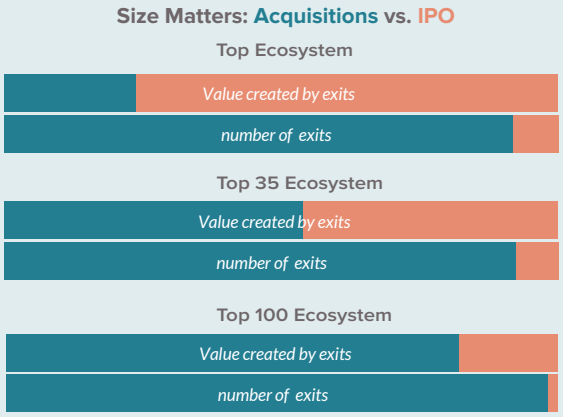
Engine Startup Genome

THE STARTUP ECOSYSTEM NEEDS ACQUISITION AS AN EXIT PATH.

Startup exits and investment are two intimately related and important drivers of the dynamism that is critical to economic growth and innovation in the startup ecosystem. But exits via acquisition are particularly important to startups—especially those located outside of hubs like Silicon Valley. Startup acquisitions promote the building of knowledge, recycling of talent, and flow of capital through the ecosystem. Each of those components are key to building new startups and stimulating the investment needed to grow them to scale.

The overwhelming majority of startup exits everywhere are via acquisition.

Acquisition is the most frequent startup exit in every ecosystem. In large ecosystems like Silicon Valley that have large IPOs, the majority of exit value comes from those IPOs. In smaller ecosystems, acquisitions create nearly all of the exit value. In most parts of the country, acquisition is the only meaningfully available exit path for startups.



Founders say acquisitions are a good thing, and policymakers shouldn't make it harder to be acquired.

> ***" The acquisition of 21 by Perforce was a success*** *and the right move for us, and I hope policymakers* ***don't make these sorts of transactions more difficult."***
> **~ Shani Shoham,** CEO, 21 Labs (acquired by Perforce)

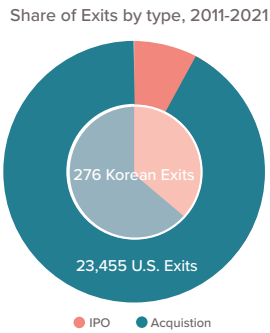
> ***"Being acquired is a desirable startup exit*** *path, and restricting it will lead to less capital and less startup competition."*
> **~ Steven Cox,** Founder & CEO, TakeLessons (acquired by Microsoft)

> *"being acquired was* ***a really good outcome*** *for Safaba"... and "****a transformational professional opportunity*** *and financial outcome for our entire team."*
> **~ Alon Lavie,** Cofounder & CTO, Safaba (acquired by Amazon)

> *"Founders should be able to pursue the pathway to* ***exit that is right for them..."***
> **~ Jewel Burks Solomon,** Founder & CEO, Partpic (acquired by Amazon)

ACQUISITIONS AND IPOS AREN'T INTERCHANGEABLE.

IPOs are out of reach for many companies, extremely rare in most parts of the country, and early IPO regimes in other countries suffer from issues with performance and often aren't true exits for startup founders or investors—the kind that provide returns and deliver dynamic benefits to their local startup ecosystems.



Engine Startup Genome

For more information, visit: engine.is

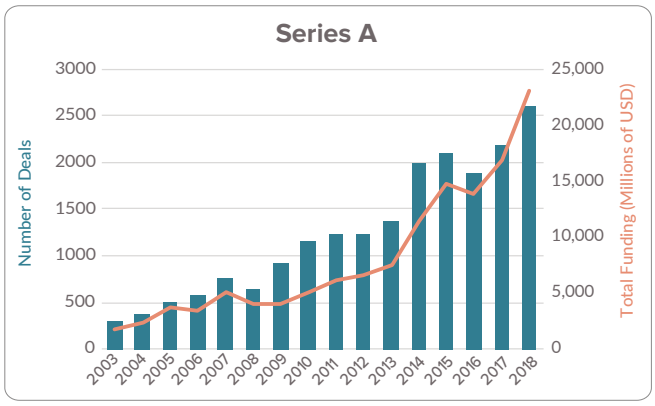
Engine

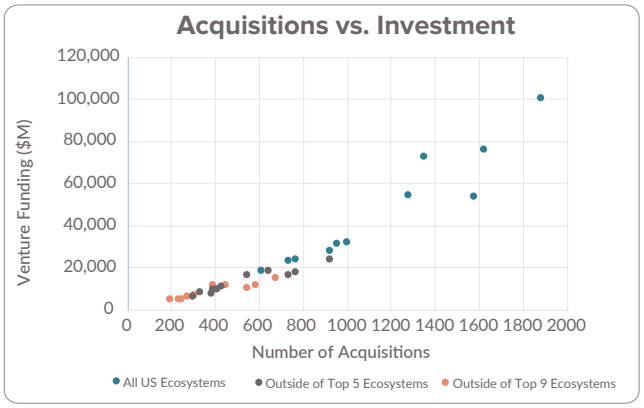
CONTENTS

INTRODUCTION

The U.S. startup ecosystem is defined by dynamism. Startups are constantly being founded, earning investment, growing, exiting, and—yes—failing in cities and towns all across the country. Startup exits and investment are two intimately related and important drivers of this dynamism critical to economic growth and innovation in the startup ecosystem. Startup exits—both those that are profitable and those that are not—promote the building of knowledge, recycling of talent, and flow of capital through the ecosystem. Each of those components are key to building new startups and stimulating the investment needed to grow them to scale.

Last April, we released a report on the State of the Startup Ecosystem intended to give policymakers an overview of the health of American startups and facilitate detailed benefit-cost analyses for individual policy proposals across a range of issues. Through that report, Engine, together with Startup Genome and the Charles Koch Institute, demonstrated the health and tremendous growth of the ecosystem, the relationship between exits and investment, the especially strong and positive relationship between acquisitions and startup investment, and the particular importance of exits via acquisition in more rural ecosystems.





Over the past year, policy conversations focused on the technology sector have turned into legislative proposals, and new leadership at the antitrust enforcement agencies have begun the process of rewriting the merger guidelines. Effective antitrust enforcement against truly anticompetitive mergers and acquisitions is necessary for a thriving startup ecosystem, but imbalanced competition policy that leads to too many "false positives" is likely to harm the startup ecosystem. Recent policy developments like these could lead to overzealous enforcement and threaten to restrict the ability of startups to exit, particularly if they want to be acquired by a larger firm.

Through this report, Engine and Startup Genome build upon the previous report by further demonstrating the relationship between startup exits, investment, and talent; the particular importance of startup acquisitions in the startup ecosystem; and how these relationships in the U.S. compare to non-U.S. ecosystems. This report also seeks to emphasize the startup experience with acquisitions with data and through a series of startup founders' firsthand experiences. Taken together, these reports should give policymakers the solid foundation they need to advance policies that will lift up startups and avoid potential pitfalls and unintended consequences.

GLOSSARY

Exit

Generally, an exit occurs when a startup investor or founder liquidates some or all of their shares/ownership in the company. This may come in the form of cash, debt, or equity in another company. Profitable exits return money to investors, founders, and other shareholders (like early employees). Unprofitable exits may return some funds to investors, provide a soft landing to founders and employees in the form of jobs (e.g., at the acquiring firm). Unprofitable exits can also simply involve failure and shutdown.

Acquisition

An event in which a company obtains a majority—if not all—of the assets of another company and is now in primary control.

Initial Public Offering (IPO)

The first case of selling shares to the public by a previously private company in order to generate capital. After an IPO, a company would generally no longer be considered a true startup.

Merger

An agreement between two separate companies to combine together into one entity.

Runway

Refers to the amount of time a startup can operate before they need to raise additional capital. Often measured in months, runway can be thought of as the amount of time before a startup runs out of money.

Funding Round

A distinct period where startups seek and receive investment from one or more investors. Usually, startup founders will pitch several dozen investors, generate interest from several, and receive investment from a few. Following pre-seed/seed investments, funding rounds are typically lettered—Series A, B, C, and so on. To reduce noise in the data, Startup Genome combines all seed, pre-seed, angel, and pre-Series A funding rounds to report as seed/angel funding, and removes those rounds that are less than $125,000.

Seed

Seed is the earliest round of formal investing, where money is exchanged for equity within the company or convertible debt. It primarily comes from the personal networks of the startup or angel investors, but some venture capital firms will invest at the seed stage as well.

Angel

Angel investors are individuals or small groups of investors that provide financial capital from their own personal funds.

GLOSSARY

Series A
A large scale investment round (usually in millions) that occurs after the seed stage of a startup. This financing generally comes from institutional investors like venture capital or private equity firms.

Series B+
After a startup has raised its Series A round, the next investment rounds continue with lettered rounds B, C, D, etc. which are usually successively larger. Series B+ referenced in this report refers to all venture capital rounds from Series B onward. Like Series A, this financing generally comes from either venture capital or private equity firms.

Startup
In this report, a startup is a U.S.-based technology and innovation company founded after 1995. Startups are tech-enabled, high-growth companies with scalable, repeatable business models.

Startup Ecosystem
A network of individuals, startups, and other community stakeholders that utilize their resources and interact with one another to promote innovation within their region. Startup Genome ranks ecosystems using a number of factors including: performance, funding, market reach, talent, connectedness, and knowledge.

Ecosystem Value
A measure of the economic impact of the ecosystem, calculated as the total exit valuation and startup valuations over a 30-month period.

Venture Capital
A form of institutional investment, venture capital is capital pooled together from investors and given to startup companies in exchange for equity within the company. Investors might be high-wealth individuals, foundations, pension funds, endowments, or other institutions, and they are known as limited partners. Their pool of capital constitutes a venture fund, which is managed by the venture capital firm. The general partners at the firm choose the startups to invest in, which are typically technology-based with high-growth potential.

METHODOLOGY

Data presented in the report were provided by Startup Genome, a world-leading innovation policy advisory and research firm. Through partnerships and extensive survey research, Startup Genome has access to a comprehensive picture of the startup ecosystem. The main datasets integrated and consulted for this report include those from Crunchbase, Dealroom, Pitchbook, and Orb Intelligence, in addition to Startup Genome's original research and data from Forbes 2000, GitHub API, International IP Index, Meetup.com, OECD R&D Spending, Salaries Data from Glassdoor, Salary.com and Pay-Scale; Shanghai Rankings; Times Higher Education Rankings; Top 800 R&D Hospitals, Webometrics; USPTO and WIPO; and World Bank Ease of Doing Business.

In the course of this research, Engine and Startup Genome have conducted several interviews with entrepreneurs, startup founders, venture capitalists, and other investors, both in the U.S. and abroad. These conversations help to provide additional context to the data presented in the report, reflect the local knowledge of individuals operating in startup ecosystems around the globe, and underscore key considerations for policymakers in related policy debates. A selection of these conversations are presented here as brief "startup stories."

Startups in this report are U.S.-based technology and innovation companies founded after 1995. Startup ecosystems tend to be grouped based upon a geographical location and defined radius. Startup ecosystems are a network of individuals, startups, and other community stakeholders that utilize their resources and interact with one another to promote innovation within their region. Startup Genome ranks ecosystems using a number of factors including performance, funding, market reach, talent, connectedness, and knowledge.

For clarity, individual analyses in the report that include statistical analyses, non-annual data, or adjustments based upon, e.g., growth rate are explained where they are presented rather than this section.

A note on the Macroeconomy

Macroeconomic factors like inflation, geopolitical conflict, and pandemics impact the startup ecosystem—the availability of capital, and the size, type, and frequency of exits are influenced by developments in the economy writ-large. Typically the largest companies in a sector are impacted first (for example, in the public markets), then late-stage startups before trickling down to early stage. From the beginning of 2022 through the end of May, Nasdaq 100 Technology Sector index and the S&P 500 have each lost about a quarter of their value. Large venture capital firms have published memos to guide their portfolio companies through uncertain, down markets.[1] Inflation remains at highs not seen in decades.[2]

Due to their recency, this report does not seek to further unpack these developments. Sometimes sharp pullbacks in startup investment based upon stock market performance quickly reverse and aren't felt at the earliest stages, which is what happened in 2016—but the present downturn is underpinned by additional factors not present then.[3] It is difficult to predict how the current situation will play out, and—because it is still unfolding—it is impossible to put in the context of the data presented in this report. Indeed, preparation of the data for this report began before conditions in the markets turned for the worse earlier this year.

Despite this, the conclusions of the report remain valid and instructive for policymakers. The well-established relationships between exits and investment, importance of acquisitions for the startup ecosystem, and prescient lived experiences of founders endure. With the macroeconomic situation uncertain and potentially threatening to the startup ecosystem, it is especially important to root policy proposals impacting startups in a sound understanding of the ecosystem and the relationship between startup exits—especially via acquisition—and investment in startups.

EXIT LIFECYCLE: ACQUISITION

Startups that come to be acquired follow many different paths to acquisition, depending on the unique details of their situation. Over half of startup exits via acquisition are profitable—providing return on investment for investors, founders, and other shareholders like early employees.[4] Some startup exits via acquisition are not profitable and typically come after such startups have tried, but were unsuccessful at raising additional capital.[5] These acquisitions return some of the initial investment back to investors, tend to offer a 'soft landing' for founders and key talent in the form of roles at the acquiring company, and are preferable to failing worthless. Each startup may have a unique road to acquisition, but startup acquisitions share common elements. Here are some of the key steps in the acquisition process.

LAUNCHING AND GROWING A COMPANY

As startup founders grow their companies, build their products, attract investment, and go to market, they have in mind long-term goals, or an exit strategy, for their company. Consistently, over half of founders say acquisition is their realistic long-term goal for their startup.[6] The average age at acquisition for startups has steadily been around five years, but a large standard deviation underscores the range of ages and stages at which startups are acquired.

STRATEGY AND PREPARATION

Startups can seek to be sold, or they can be approached by potential buyers. Some startups are acquired or merge with other startups that are just a bit farther along than they are. Other startups are acquired by large, established firms that might conduct several such transactions in a given time period. Each case presents differences in strategy and negotiating power, but in either case, a startup is well aware of their valuation. Startups looking to sell may also have prepared financial statements and documents outlining their business to share with potential buyers. Institutional investors in a startup—who often have a seat on the board of directors—are likely to have been through the acquisition process several times and can play a critical role in facilitating the transaction.

SOLICITATION AND NEGOTIATION

After a startup has received an offer, they may solicit others and will negotiate the valuation and potential earnouts based on expected future performance of the company. The startup and acquiring firm will iron out other details to be included in a letter of intent—like the purchase price, how the buyer is going to pay, what happens to employees, and other details depending on the situation.

LETTER OF INTENT

After the price and key terms of the transaction are sorted out, they will be enumerated in a letter of intent that is signed by both parties. Letters of intent are likely to have both legally binding and non-binding provisions. Almost every letter of intent will include exclusivity provisions—that the startup won't continue seeking other buyers for some enumerated period of time—and confidentiality ones—that the buyer won't disclose the confidential information they learn through the due diligence process to others.

DUE DILIGENCE

Ahead of the final purchase agreement and exchange of assets, the buyer conducts due diligence to ensure that the information they based their offer upon was accurate. The due diligence process is an especially critical period for startups. If there is a material discovery in due diligence that leads the acquirer to walk away from the transaction, that sends a signal to other potential acquirers, which may cause the other offers the startup initially received or could potentially receive to evaporate or be greatly reduced.

PURCHASE AGREEMENT AND SALE

After the due diligence process has concluded, the startup and acquirer enumerate the terms of the transaction in a purchase agreement, including any adjustments based upon discoveries in due diligence. The purchase agreement is the binding contract memorializing the transaction. Large deals exceeding certain thresholds have to be reported to antitrust authorities prior to consummation of the transaction. Sometimes these filings are submitted earlier in the process, once key terms of the deal have been enumerated in a letter of intent.

NEXT STEPS

Individual terms and characteristics of each transaction will determine what startup founders do next after their company is acquired. Startup founders are sometimes paid in stock of the acquiring firm which vests over a certain period of time. During this time, the founders often join and work at the acquiring firm. After the vesting period, many leave and join or begin new startups. Startup founders and key employees routinely stay in the startup ecosystem, founding new startups, becoming investors, and mentoring others.

EXIT LIFECYCLE: IPO

Startups looking to go public have a few avenues to access the public markets including direct listing, special purpose acquisition company (SPAC), or reverse merger. Traditional initial public offerings (IPOs) remain the most popular way for startups to go public, even if each of those options may have merits for individual companies. Key steps in the IPO process, which can take six to 12 months, are explored in this diagram.

BEGINNING AND GROWING A COMPANY

While startups may be acquired at many different stages and levels of (un)profitability, those going public via IPO are later-stage—older and larger. Indeed, there are substantial regulatory compliance burdens associated with being a public company and it can cost millions of dollars annually. A company also generally needs institutional backing to go public, as illustrated below. As such, startup IPOs are often concentrated in the largest ecosystems. Still, just under a fifth of startup founders say their long-term goal is to go public through an IPO, but few make it there—less than 10 percent of exits in a given year are via IPO.[7]

SELECT UNDERWRITER(S)

Once a startup has decided to go public, they will select an underwriter—usually an investment bank—to manage the IPO and sell the shares to investors. Startups select underwriters based on the underwriter's plan for the process, but also upon their existing institutional relationships, reputation, and ability to sell the shares. An IPO can involve one or more underwriters. Having more underwriters helps reach more investors, which is especially common in larger IPOs.

DUE DILIGENCE AND REGULATORY FILINGS

The startup and its underwriters will conduct due diligence examining every aspect of the company. Barring a material discovery in due diligence, the underwriters will then send the Registration Statement to the Securities and Exchange Commission (SEC). Some startups may be exempted from certain otherwise applicable requirements—if they meet the definition and file as an Emerging Growth Company as set out by the JOBS Act—including certain disclosures and the number of audited financial statements.

ROADSHOW AND PRICING

The underwriters are responsible for setting a planned price range for the IPO. This process can include distributing a preliminary prospectus which helps assess investor interest. Underwriters and company leaders often go on a "roadshow" (sometimes virtually) across the country (and globe) to market the company to and take orders from prospective investors. Based upon orders from the roadshow, the underwriters will revise the planned price range for the offering.

ALLOCATION AND TRADING

After the shares have been priced, the underwriters will allocate them to investors. Once allocated, the stock starts trading and the public can buy and sell the shares on a stock exchange. Existing shareholders' private shares (those held by, e.g., founders, employees and private investors like VCs) are also converted and become valued at the public share price.

POST-IPO

Companies choose to go public to raise capital that will help them further grow their business and to provide an exit for investors and others, who can decide to eventually sell their shares and earn a return. After the company is public, there is typically a lockup agreement that prevents company insiders—including founders, employees, existing (pre-IPO) investors, and others—from selling their shares for a period of time, usually 180 days. Companies that are publicly traded are subject to additional regulation designed for investor protection, and compliance can cost the company several million dollars annually.[8] Companies that have gone public as Emerging Growth Companies are also exempted from some of these requirements for as long as they have EGC status, which can be as long as five years. And there can be other costs to going public, for example additional public scrutiny, less founder control, and pressures from activist investors.

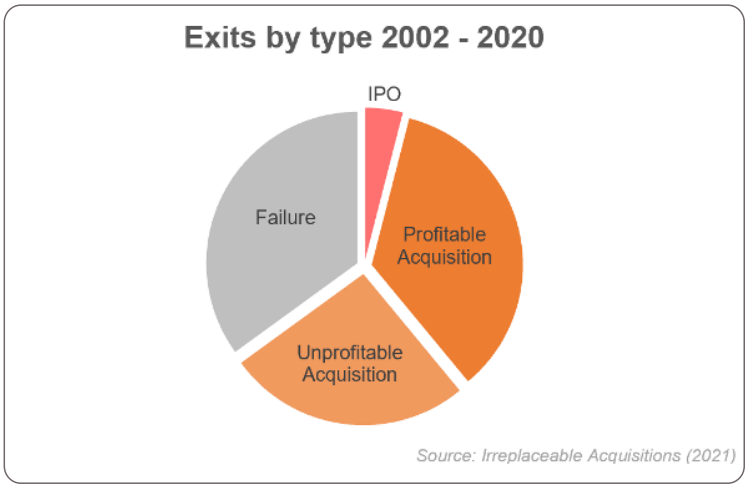
STARTUP EXITS

Overview

Broadly, there are three types of startup exits: going public, being acquired, or failing. Exits are a critical moment in the lifecycle of a startup—after an exit the company is likely to no longer be considered a startup: it will either be a public company, be part of the acquiring firm, or cease to exist.

In successful, profitable exits, founders are rewarded for the blood, sweat, and tears they have put into building the company, and investors earn a return. Both exits via acquisition and via IPO can be successful, profitable exits, but they vary in their frequency, relationship to new investment in startups, and accessibility to more-rural and smaller companies.

Overall, IPOs are much more rare than acquisitions. Our earlier report on the State of the Startup Ecosystem found just 10 percent of exits from 2008 to 2018 were via IPO (not including failures).[9] The remaining 90 percent were acquisitions. Another paper found that IPOs made up just four percent of all startup exits between 2002 and Q12020 (including failures and shutdowns). Acquisitions meanwhile accounted for 61 percent of exits. (And 35 percent of the startups in the dataset failed).[10] This (in)frequency of IPOs is consistent with founders' long-term expectations for their startups—in one survey, 58 percent said their long-term goal was to be acquired while 17 percent said IPO.[11]



In addition, IPOs are more concentrated in parts of the country that have larger, more established startup ecosystems and are more weakly associated with investment in new startups when compared to startup acquisitions. As a result, the availability of exit via acquisition is of greater importance to startups and investors outside of top ecosystems like Silicon Valley, New York, Boston, Los Angeles, and Seattle.

Unfortunately, not all exits are profitable—for example, if a startup is acquired for less than the company's previous valuation—but these unprofitable exits are preferable to failing worthless and similarly important to the startup ecosystem. These exits can provide a soft landing to founders and investors of companies that have run out of alternatives—they're out of runway, can't raise additional funds from investors, and are too small or unprofitable to raise funds by going public.[12] Through acquisition, investors are able to recoup some of the original investment, and founders and employees might be given a job at the acquiring firm, allowing them to build their resumes ahead of their next venture.

Building on this prior research, the rest of this report takes a deeper look at exits and investment in startups at an ecosystem level.

Exits and Investment

Examining exits and early stage investment at an ecosystem level shows, unsurprisingly, that exits fuel investment. The data should emphasize the obvious role exits play in investment, and additionally factor into global policy questions of how companies should be allowed to exit, and whether and to what extent the capital stays in an ecosystem after an exit.[18]

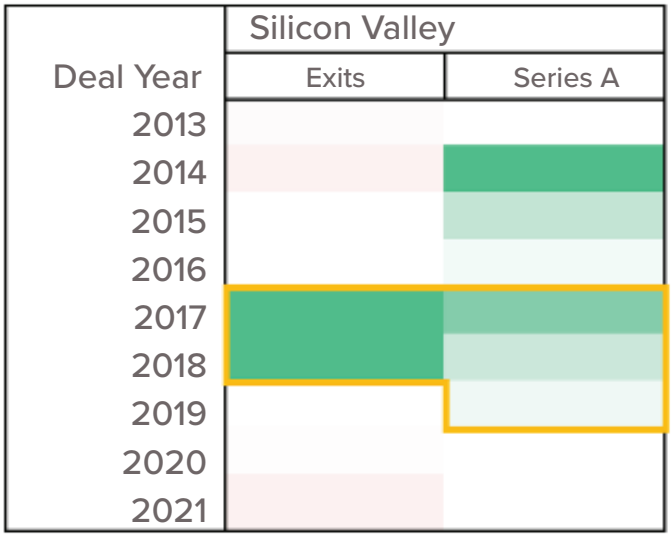
The adjacent heat map looks at the globally-adjusted yearly growth rates of the value of exits and the value of series A investments in a selection of startup ecosystems. To calculate the adjusted growth rate, Startup Genome first calculated adjusted values (with the globally-adjusted value being equal to the difference between the subsequent year unadjusted value and the product of the unadjusted value and global growth rate) before using these adjusted values to calculate the globally-adjusted growth rate. Adjusting the data should diminish the prevalence of some confounding variables like global economic trends, for example. This is important since overall economic trends necessarily impact investment and exit activity.

Exits in the Investment Model

Much ink has been spilled describing the venture capital (VC) investment model and the role of exits in it.[13] Over the decades, the portfolio of companies that venture investors fund has evolved, but the basic model has remained.[14] And as VC has emerged and emerges in new regions—including those with important societal, structural, and cultural differences—exits (somewhat obviously) continue to play a critical role.[15] It is worth briefly describing the model here.

While certainly not the only type of startup financing—and not necessarily the only type captured here—venture capital is the most prominent form of institutional investment in startups, and very few startups grow very large without it.[16] Generally, venture capital is capital pooled together from investors and given to startup companies in exchange for equity in the company. Investors might be high-wealth individuals, foundations, pension funds, endowments, or other institutions, and they are known as limited partners. Their pool of capital constitutes a venture fund, which is managed by the venture capital firm. The general partners at the firm choose the startups to invest in, which are typically technology-based with high-growth potential. A representative of the VC firm will often sit on the startup's board to monitor and guide the company and may provide additional funding as it grows. Once the startup successfully exits, capital is returned to investors, a new fund is formed and the cycle begins anew.

Startup exits are critical to the investment cycle in the innovation ecosystem—successful exits provide returns for investors and founders. That fact, or the prospect of it, is what encourages investors to fund startups and can also be part of what encourages founders to launch in the first place. And investors fund new startups with the profits they earn from prior investments, while founders often launch new startups, become investors themselves, or both. This is rational investor behavior most of us can connect to—investing with risk and potential return in mind, and reinvesting returns, is something most of us do with our retirement savings, for instance.[17]



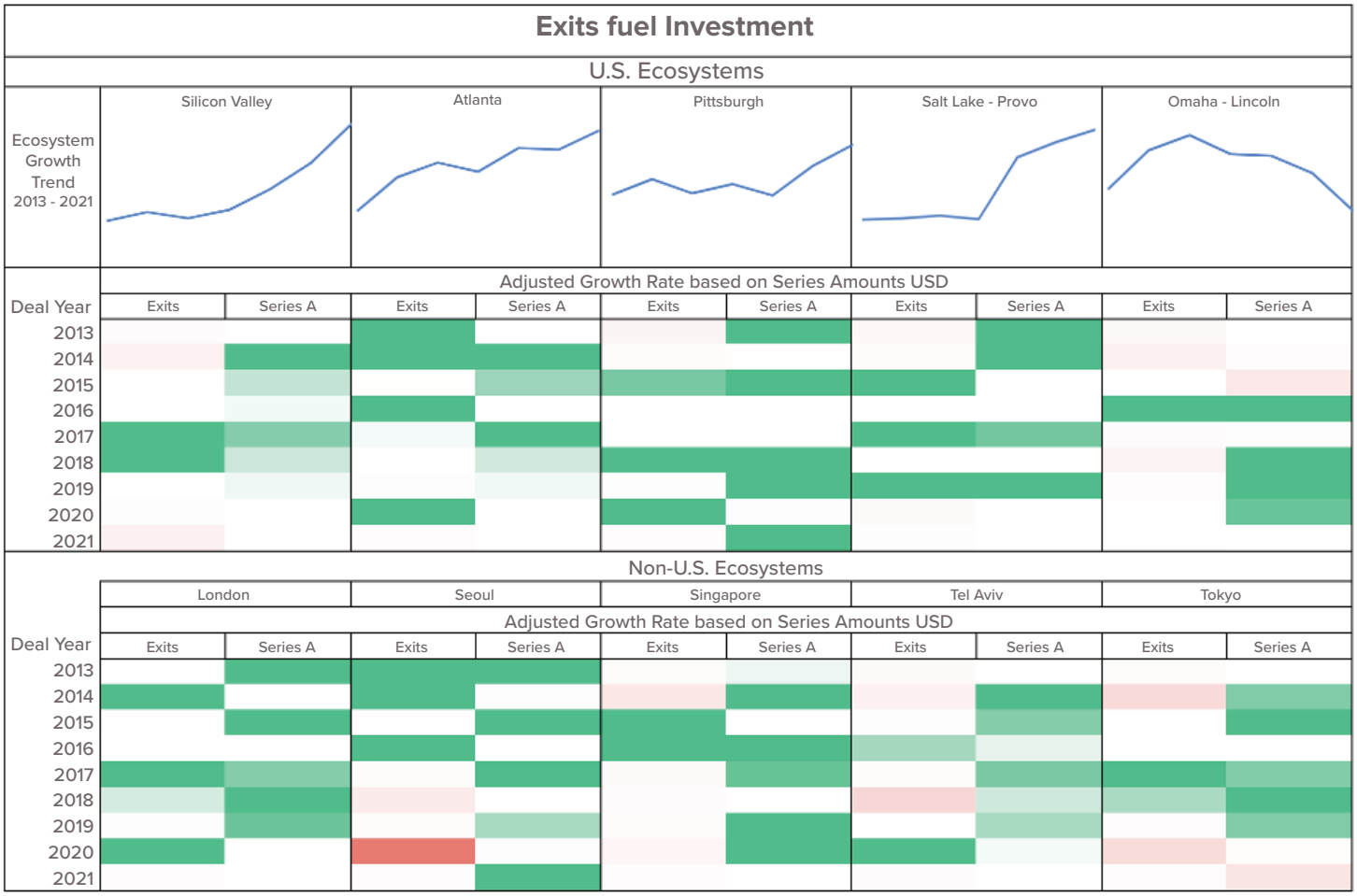
The U.S.-based ecosystems represent a range of size, level of development, geographic location, and predominant industry subsector. Non-U.S. ecosystems represent a selection of global benchmarks. For U.S. ecosystems, trendlines of ecosystem value are presented to lend additional context. Ecosystem value is an economic metric reflecting two and a half years of data ending in the reference year.

Dark-green boxes represent growth rates of 100 to 1000 or more percent. Medium-green boxes represent growth rates of 50 to 100 percent, and light-to-faint-green boxes represent growth rates between zero and 50 percent. Red boxes follow the same pattern, but denote rates of decrease, meaning darker red is more negative.

The heat map below brings into clear view the relationship between exits and investment that has been shown elsewhere.[19] When we see an increase in exits, we see an increase in investment in the same year or an adjacent year (usually both). We see this happen in the world's largest startup ecosystem (Silicon Valley) and in the smallest presented here (Omaha-Lincoln). We see it in both the domestic ecosystems and the foreign ecosystems.

Of the 14 increases in exits that occur in the selected U.S. ecosystems, 13 are accompanied by an increase in series A in the same year or immediate subsequent year, or about 93 percent of the time. For non-U.S. ecosystems this happens 12 times out of the 13 there is an increase in exits, or about 92 percent of the time.

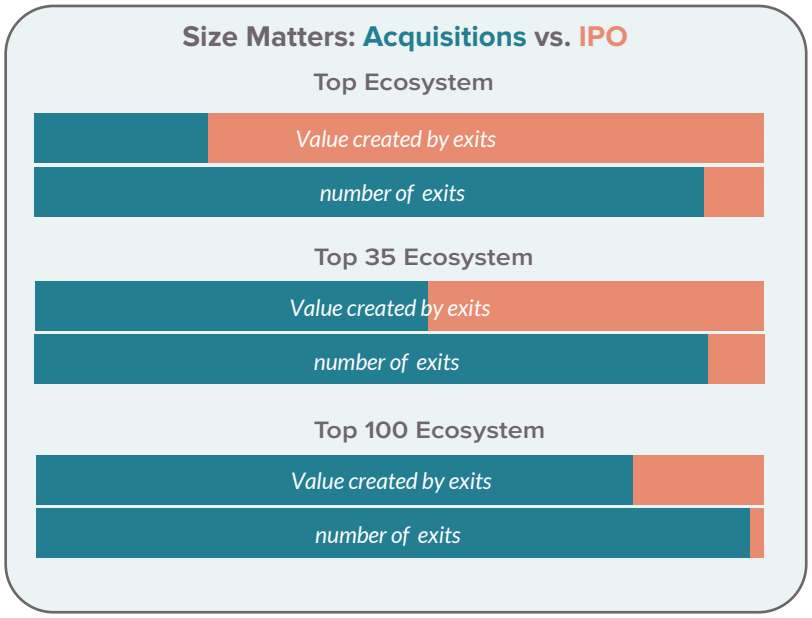
Notably, the chart lets us visualize the impact on investment as described in other scholarship. A 2022 paper describes the initially large impact on startup investment of acquisitions of startups by 'Big Tech' companies that then diminishes over time following the exit event.[20] That relationship is visible here, e.g., in Silicon Valley, Atlanta, and elsewhere—look for the dark-green bars that get progressively lighter.



IPO OR ACQUISITION: KEY DIFFERENCES FOR STARTUPS

While IPOs and acquisitions can both be successful exits that bring positive effects for the ecosystem, it is important to compare the two, given ongoing policy conversations that could result in fewer acquisitions. Looking at what exits happen where is instructive for current policy debates and brings into clear view the importance of acquisitions. In this section, we look at the five U.S. ecosystems included above. Again, they represent ecosystems at different stages of development. Each also varies in geography, demography, proximity to talent pools, and predominant industry subsector. This analysis can also help inform policymakers interested in, e.g., expanding the startup ecosystem and supporting innovation outside of Silicon Valley.

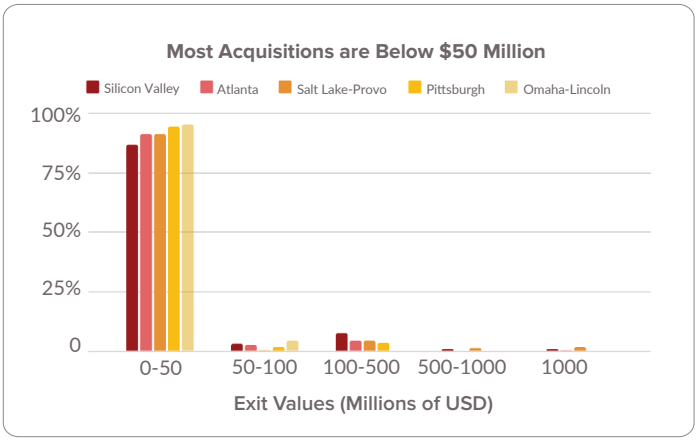
To see the differences in frequency and size of IPOs and acquisitions in each ecosystem, we look at the share of exits by type, the exit value, and overall data on exits. In the largest ecosystem, Silicon Valley, IPOs are responsible for most of the exit value. This diminishes progressively as you move to smaller ecosystems Atlanta, Salt Lake-Provo, Pittsburgh, and Omaha-Lincoln. A similar progression occurs when considering the share of exits by type. IPOs make up a greater share in Silicon Valley which diminishes as you move to Omaha-Lincoln (which only experienced one IPO one of these 10 years). For greatest detail, you can view individual ecosystem charts in the appendix. For the interest of space, a summary chart is presented here with Silicon Valley, the top ecosystem globally, Salt Lake-Provo, a top 35 U.S. ecosystem, and Omaha-Lincoln, a top 100 U.S. ecosystem.

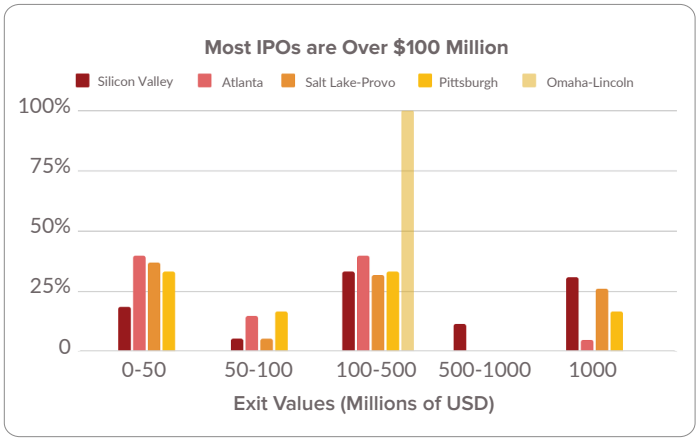


On some level, this shows us what we already knew: IPOs are concentrated in the top ecosystems and tend to be out of reach for startups in smaller ecosystems. But it puts an exclamation point on the importance of exits via acquisition in smaller ecosystems—all of the dynamic benefits to flows of talent and capital that are brought by exit events are meaningfully only available through acquisitions. And this is consistent with the correlation analysis Engine and Startup Genome produced in the earlier report, which showed a strong, positive correlation between acquisitions and investment. As you remove top ecosystems from the data, the relationship between startup exits by acquisition and startup investment gets stronger and more positive.[21]

The data also confirms something else we knew: companies going public tend to be older and have higher valuations. An overwhelming majority of startup acquisitions in each of these ecosystems are below $50 Million. Meanwhile, the majority of IPOs are over $100 million. These differences have implications for company success.

Many companies valued below $50 million cannot conceivably succeed as public companies. A nationwide dataset shows that 40 percent of the companies that have gone public for less than $50 million have since failed.[22] Reviewing the IPOs under $50 million included above reveals similar results. A few of the companies are trading on foreign exchanges. Several of those that went public on the NASDAQ or NYSE are now trading over-the-counter, sometimes with a share price in fractions of a cent.





Going public too soon is risky for startups because it makes it harder to raise additional capital needed to scale. Public companies lose control of their share price, and their valuation is no longer likely to be set by those with knowledge of properly valuing startups. This can make an additional raise too expensive, or, especially if the share price is falling (e.g., as discussed above) make the company undesirable to prospective investors.

Institutional backing is likewise important for helping the company to succeed once public.[23] IPO underwriters typically perform sales-functions to sell the shares to investors. And once public, investment banks analyze and recommend (as appropriate) the stock to their clients. For small IPOs, there tend to be fewer underwriters (which are unlikely to be top-tier firms), and the stock is unlikely to be tracked by analysts (or by as many) at investment banks. Both of these diminish the likelihood of success as a public company in terms of share price. And it is important to note the differences in proximity of such key institutions—there are fewer in smaller ecosystems—which is an important factor for both the frequency of IPOs there and the success of the companies that do go public.

Finally, no discussion of U.S.-based IPOs would be complete without discussing the regulatory burdens and additional scrutiny that comes with being a publicly traded company. The Sarbanes-Oxley Act (SOX) sets out the regulatory framework for public companies, and the cost and complexity of compliance can easily exceed $1 million annually, which can be out of reach for many startups and contribute to fewer companies going public or delaying that move until they are larger and older.[24]

SOX and its consequences for startups and the public markets are instructive for current debates about acquisitions in the startup ecosystem. Sarbanes-Oxley was legislated in response to a series of high-profile accounting scandals. Of course, no member of Congress or the public is or was in favor of corporate fraud in their consideration of Sarbanes-Oxley, but several members of Congress did warn of the consequences of burdening capital formation for small companies like startups through SOX. Then-Rep. Jeff Flake (R-Ariz.) cautioned against proceeding without knowing "what cost we're going to impose, particularly on small businesses."[5] Sens. Phil Gramm (R-Texas) and Kit Bond (R-Miss.) respectively voiced concern that the law would "use up the resources" of small companies, and "damag[e] the economic framework for small companies to reach our capital markets."[26] Given the impacts on IPO frequency, IPO company age, and of compliance costs, those concerns have indeed borne out.

Likewise, today, no policymaker or member of the startup ecosystem is in favor of illegal anticompetitive conduct as they warn of the consequences of burdening startups through poorly crafted competition policies. Creating burdens on startups' ability to exit, especially via acquisition, "risks similar unintended consequences" as those effected by SOX, as one startup founder put it.[27]

EXITS AND THE STARTUP EXPERIENCE

Engine strives to be the voice of startups in government, and our work is informed by our network of thousands of startups located in every state and congressional district all across the country. This project is no different. In the course of this research, we spoke with dozens of startup founders to hear about the firsthand experiences of having their company be acquired. They represent companies across a range of ecosystems, deal sizes, and acquirers. Below is a sampling of some of those stories, which should be instructive for how acquisitions fit into the broader startup ecosystem.

Startup Aquisition Experience: CARLYPSO

Acquired by Carvana • San Carlos, California
Nicholas Hinrichsen, Cofounder and CEO

Originally a peer-to-peer platform for buying and selling used cars, Carlypso is an online platform that gives customers access to wholesale inventory and helps throughout the buying process by performing inspections and arranging delivery.

I came to the U.S. from Germany to go to business school at Stanford, where I met my cofounder, Chris. After we graduated, we started Carlypso—with the goal of building something like an Amazon of used cars. We went through Y Combinator, raised $10 million in venture capital funding and ran the company for about four years.

Our goal at the outset wasn't necessarily to be acquired, but rather to build as big as we could. We discovered that running a car retailing company is really, really hard and capital intensive—particularly what we were building—because success required vertical integration, essentially being three companies in one: a logistics company, a bank, and a car dealership. We became very good at two of these pieces, i.e. the car dealership and the logistics company. But our inability to provide financing, especially to buyers with low credit scores, led us to sell our business to Carvana. Carvana had inherited the lending business from its parent company Drivetime, and so we decided selling to them seemed like a good option.

Venture investors have an expectation for a high exit multiple. Returning capital to investors was important. At the point of the sale, the intellectual property we had created had become very valuable. The technology, however, wasn't as useful without the team that had built it. Therefore, ensuring the best deal for our team—making sure they had a job that paid well where they could apply what they learned and eventually move on—was 100% aligned with our investors' financial interests. Everyone on our team of about a dozen were able to join Carvana.

Looking back, I wish we could have stayed independent and been the successful company in a position to acquire, but this was the second best possible outcome for us. We couldn't have built what Carvana had inherited.

I worked at Carvana in a few leadership roles for a few years, in addition to advising and investing in startups. In 2020, my co-founder and I left to build a new startup, leveraging our deep knowledge of the industry to help consumers with their auto loans in particular and their consumer loans in general. Since then, we've raised $41M in venture funding from amongst others Andreessen Horowitz and our strategic partner CUNA Mutual Group. We're on a mission to turn Credit Unions into FinTechs and help consumers with their financial well-being.

Startup Aquisition Experience: TAKELESSONS

Acquired by Microsoft • San Diego, California
Steven Cox, Founder and CEO

TakeLessons is a learning platform where instructors offer teaching services for sale and individuals receive lessons for languages, tutoring, music, and more, either online or in-person.

I founded TakeLessons in 2006 after noticing a disconnect between people looking to learn and those who could actually teach them. What we recognize today as ecommerce platforms or marketplaces were around—eBay, for example—but connecting buyers and sellers of services was still novel. I started the company out of a spare-bedroom, self-funded, and worked at night with teams in India to build the first version of a product, initially focused around music lessons. We bootstrapped the business for a few years before friends and family funding, and eventually institutional venture capital.

Before being acquired by Microsoft in 2021, we made two acquisitions ourselves to advance the business. One helped us to expand into a new offering—building out our network of instructors at a discount—while the other acquisition added a social aspect to our core offerings around music.

The decision to be acquired was a strategic one, reflective of our understanding of the cycles startups go through. Early on in 2012, business was going well and we started receiving offers from would-be acquirers. While we explored them, we ultimately decided not to pull the trigger—we were just getting started and had a lot of opportunity ahead of us. At various points over the next several years there were times where we would have been open for an acquisition, but there weren't any buyers. So when we experienced the boom in online learning during COVID, we tested the waters and received interest from both strategic buyers and private equity firms, confirming it was a good time to potentially join forces with a strategic buyer.

We were courted by multiple parties, and we were thrilled to be acquired by Microsoft—the second largest company in America. Obviously, key considerations like pricing, terms, and probability of closing were important, but for us, Microsoft's strengths paired well and they had the resources to grow TakeLessons and a shared interest in empowering providers to make a better living doing what they love. Equally important—and I hope this is a priority for every founder—the day after we were acquired, all of our employees had jobs at Microsoft.

The company is in great hands. This has allowed me to step back to a consulting role after spending the several months following the acquisition helping with the transition. I am now taking a breather a bit and thinking deeply about what I want to do next. I've joined the Board of Directors/Advisors for a couple marketplaces and/or ed tech companies, and I've started looking at government policy, social impact, and food tech space. I will certainly remain in the startup ecosystem.

Finally, I've been asked recently about big tech acquisitions that are made just to kill off new technologies. Personally, I haven't seen these "killer acquisitions" where a large company tries to stamp out a small one. It's possible, I suppose, but I find that larger companies are more interested in playing offense than defense.

Regarding policy, policymakers should be thoughtful about limiting mergers and acquisitions by big tech as a way of reigning in the major players. Being acquired is a desirable startup exit path, and restricting it will lead to less capital and less startup competition. Policymakers should also realize that immigration is an important key to startup talent. To compete in a global economy, startups need to hire the best and brightest employees from around the world. The employee-sponsored visa program remains broken, and Congress needs to make it easier for startups and other small businesses to navigate the immigration system. Finally, the protection of the Qualified Small Business Stock (QSBS) incentive is a key driver to allowing entrepreneurs and early employees to be rewarded for taking the risks to start and grow a new business. Without a doubt, the QSBS tax treatment helps the startup ecosystem as an economic engine.

Startup Aquisition Experience: **SAFABA**

Acquired by Amazon • Pittsburgh, Pennsylvania
Alon Lavie, Cofounder and CTO

Safaba is an automated translation solution for global enterprises' digital content, like websites, customer communications and more.

I spent most of my career in academia as a professor at Carnegie Mellon University (CMU) in the AI language technology space. In 2009, a cofounder and I started Safaba, which was essentially a spin-out of my research lab activities. Automated translation technology was evolving quickly at that time, mostly in research settings, and we identified an opportunity and need for commercialization. The technology was particularly advantageous for large, global enterprises—including Amazon, who initially approached us as a customer and really liked the product and expertise we offered.

A lot of our technology development was funded by the Small Business Innovation Research grant program and some investment capital from a few different entities. By the end of 2014, we were at the point of raising a series A round when Amazon approached us with an offer, and we ultimately decided to accept. We were a team of 12 at that point—mostly from the CMU research environment—and eight of us went full time into Amazon. At the time, Amazon was the only large tech company without a presence in Pittsburgh and we made clear early in the process that none of us wanted to move to Seattle. I convinced them that there is a lot of value to the talent and connections at the University, so as part of the acquisition they opened a corporate office here in Pittsburgh. I worked there as a senior manager for three and a half years post-acquisition, and the office has grown to 300-400 people, so I definitely pat myself on the back for being the person recognized as bringing Amazon R&D to Pittsburgh.

Focusing on the positives, I think being acquired was a really good outcome for Safaba. Ultimately, it was the right decision for the company, and it wasn't just financially lucrative for my cofounder and I, but it was a transformational professional opportunity and financial outcome for our entire team. The integration of the technology within Amazon went really well. And managing an R&D team in a large company also added another highly valuable chapter of experience to my career that I really appreciate.

Being acquired is not without its challenges, though, especially with a large company like Amazon. Integration from a culture standpoint is really tough and generates a lot of situations for people to become unhappy. We were a small startup with roots in the University research space, and so the transition to a large company like Amazon was difficult in terms of operational structure, rules and how organizations are managed at that scale. When it came to the acquisition negotiation process, we were also on a different playing field in terms of resources and experience, and so that was probably the biggest challenge for us as founders. Even where we did things right—we had done an immaculate job of clearly separating and documenting our IP in the technology transfer process with the University—there was friction with Amazon. We also had a long relationship with a top-tier legal team that we weren't able to leverage because they represented Amazon elsewhere, and Amazon wouldn't give a waiver to allow our legal team to represent us in the transaction.

Ultimately, I'm glad we saw the acquisition through, but I think there's a lot policymakers, startup supporters, and others can do to help empower startups in the acquisition process, particularly when the acquirer is a large company like Amazon. Shared tools and resources seem like a good place to start. Template agreements or standard terms might help founders understand what is standard in a contract, but wouldn't be very valuable if the acquiring companies are able to toss them aside in negotiations. And for startups, high-quality legal and business representation that you trust to negotiate on your behalf is critically important, as is ensuring your proprietary IP is clearly identified and well-documented to avoid the potential for issues in the acquisition process.

Today, I am an adjunct professor at CMU and a senior manager at a bi-national growth-stage scaleup called Unbabel. Unbabel is fundamentally in a similar AI translation technology space as Safaba, providing an AI-based platform for translation of large volumes of multilingual content for large enterprises. I knew the founders long before they actually started the company—the CEO actually got his Ph.D. at CMU. I opened an office for them here in Pittsburgh and largely oversee the AI technology side for the company. As a growth-stage scaleup, Unbabel is another interesting chapter in my career in the translation technology and NLP R&D space that rounds out my experiences outside of academia in terms of both founding and running a small startup and working at a large tech company.

Startup Aquisition Experience: CLOUDCHERRY

Acquired by Cisco • Salt Lake City, Utah
Vinod Muthukrishnan, Cofounder and CEO

CloudCherry is a customer experience software solution that helps companies manage the customer experience journey and increase customer retention.

Even though there were others in the customer experience market, we decided to create CloudCherry because we saw a gap that could be solved by approaching the problem with a customer perspective lens. Most contact centers are run and evaluated on key performance indicators (KPIs), like average handle time, cost of service or others, but customers don't care about the company's optimized costs, they're more concerned about whether they experienced empathy, attentiveness, and a resolution on their call. None of those components are absolute either. For example, if someone wants to return a broken product, and you give them their money back but are rude about it—you've resolved their issue, but they probably aren't going to buy from you again. So, we built CloudCherry to help companies understand where to invest to improve the customer journey, and we raised funding from corporate and venture investors along the way.

Cisco was one of our investors, since they agreed with our hypothesis that the contact center is really a customer experience business. And so when we began receiving unsolicited acquisition offers from other companies in the space, they made an offer as well. There's a lot that goes into evaluating an acquisition offer. Obviously there's the price, but the terms are very important as well—is it cash or stock? What's the vesting period? Are there clawbacks, performance riders, or other contingencies? In addition, evaluating the company's "acquisition muscle" — their experience and reputation for successfully completing the process and integrating acquired firms is important, too. If you enter exclusivity with one firm and they decide to abandon the deal, it sends a negative signal to all of the others that may make it harder to get acquired in the future.

Ultimately, given all of these considerations and our long relationship with the company, we chose to be acquired by Cisco. That decision was validated by my experience there. The majority of our team joined Cisco and the company put in a lot of work to make sure our culture was safeguarded. For example, at CloudCherry we had an inspiration wall, where each new employee who joined put up a picture of something that inspired them—Cisco let us replicate it there despite the scale it would have to become. They plotted the closest office location to each employee so they wouldn't have to relocate. And we continued to innovate and build our product. For me personally, I ended up becoming Chief Operating Officer for Webex Customer Experience, which was a massive learning experience.

I really enjoyed my time at Cisco—in fact they knew I would never leave to another large company, because if that was the alternative, I'd rather be at Cisco—but my real joy lies in startups. My two options seemed to be: be an investor, which I was already doing, or start a new startup. Ultimately, I decided I wasn't ready to start a new company again (yet), and joined a friends' growth-stage startup, Uniphore, which seems well positioned to IPO one day.

I am also supporting startups as the Co-Chair of the U.S.-India Strategic Partnership Forum. Barriers to immigration is one of the key issues that needs to be solved to bolster the startup ecosystem and both countries' economies. Something like half of unicorn startups have one Indian cofounder, and for every visa awarded to an Indian startup founder, 40 high-paying local jobs are created. Despite this, founders often struggle to come to the U.S. and often end up using job-seeking visas. Such founders are actively being courted by other countries with tailored immigration processes, resources and other incentives. To remain competitive, we need an entrepreneur visa that helps high-skilled individuals who are starting businesses, bringing capital, and creating jobs to do so in the U.S.

Startup Aquisition Experience: PARTPIC

Acquired by Amazon • Atlanta, Georgia
Jewel Burks Solomon, Founder and CEO

Partpic leverages visual recognition technology to help enterprise customers identify industrial parts and save time during maintenance and repairs.

Earlier in my career, I worked in enterprise sales, including for Google and for an industrial parts company, called McMaster-Carr. While at McMaster-Carr, I thought there must be a better way to organize and identify parts using technology—which led me to found Partpic. Users could take a picture of the part they were looking for and Partpic would match it to the correct replacement. We licensed the technology to companies for their websites to help their customers find the parts they needed.

Starting out, we had bootstrapped before raising a seed round. We were actually in the process of trying to raise another round of funding when we were acquired. We were in talks with Amazon about investing in Partpic when the conversation turned into an acquisition offer. It moved too quickly for me to solicit other company acquisition offers, but the investment offers we had coming in helped to raise the acquisition value.

At the time of the acquisition in 2016, we were about four years old and had a team of 15 employees. All but one joined Amazon after the acquisition as part of the Amazon visual search team in Atlanta. Our team was responsible for integrating and building what became Amazon Part Finder, which was released in 2018, about 18 months after we were acquired. I stayed at Amazon for three years—some of our team is still there, but they have all gone to work on different projects.

The integration process with Amazon was tough. Perhaps it was the transition from being a nimble startup to part of a large enterprise or other corporate culture issues, but we really struggled to get the resources we needed to be successful and launch Part Finder. The executive who was our champion within Amazon left about 9 months after we were acquired, which probably compounded the issues. Post-acquisition integration is really important for acquiring companies to get right for startup founders and their employees to have positive experiences and be successful.

From the outset, I always thought that the exit path for us would be via acquisition, given our product and strategy. However, I think we still had room to grow the company further at the point we actually sold. The biggest impediment for us was access to capital—we were having difficulty with fundraising at the time, and a lot of bias in the system contributed to that. Helping to combat these issues motivates the work I do with underrepresented founders at Collab Capital and Google for Startups. Founders should be able to pursue the pathway to exit that is right for them—whether that be an IPO or being acquired—without facing the biases and burdens that can constrain the choices available to them and their potential for success.

Ultimately, the acquisition gave me an authoritative perspective on the entire startup journey from ideation to successful exit. For the work that I do now at Google for Startups and Collab Capital, I'm able to help startups in a different way because I've experienced every part of the journey. That has allowed me to support startup leaders, especially by equipping founders thinking about selling their startups with the many things I did not know going into the process myself.

Startup Aquisition Experience: **NEPRIS**

Acquired by Providence Strategic Growth Fund (PSG Equity) • Austin, Texas
Sabari Raja, Cofounder & CEO

Nepris is an education technology platform that enables educators to connect their students with industry professionals to bring real world relevance and career exposure to every student. Through Nepris employers have an opportunity to engage their current workforce with the future workforce, helping bridge the workforce pipeline gap.

I went to school in India before moving to the U.S. and earning a Master's degree here. Out of school, I went to work for Texas Instruments in their education technology group. Ed tech at the time was very nascent. Working in the space, I got firsthand insight into how technology can impact students' learning and bring equity of access in education. It became evident to me that stakeholders in education, government, nonprofits, and companies were doing a lot to bridge the workforce pipeline gap, but they weren't really leveraging technology to expose students to experiences outside of their immediate network—which especially impacts girls, rural, and minority students. We thought that someone should be making the connection between industry and students earlier—when first graders are learning about rocks, connect them to a geologist, for example—rather than once they're about to look for jobs. That's the basic idea that led my cofounder and I to build Nepris.

We raised two seed rounds before raising our Series A in 2020. While COVID presented challenges, it also presented a lot of opportunities for us. Things were going well—we had plenty of runway, were near profitability, and were growing at 100 percent year over year. But the edtech space had grown up, too—rather than being something niche there were now dozens of competitors to keep pace with. We thought that acquisitions might be a way to accelerate our growth. That wasn't something we were equipped to do as founders, so we ran a process with Vista Point Advisors, through which we had our choice of private equity firms and ended up choosing Providence Strategic Growth Fund (PSG).

As first-time entrepreneurs, we initially had a very stereotypical view of PE—PE buys failing companies and picks them apart, so you don't want to be acquired by PE, you want a strategic buyer, we thought. After talking with founders that had been through the process, we realized that the right PE firm actually might be a better fit for us. With a strategic buyer, you have to slot in that company's products somewhere, you might be locked in for a time, and how well the integration process goes—both cultural and technical—really depends on the company. While we had interest from strategic buyers and PE firms, for our goals of continued growth, a PE buyer that had experience and a good playbook for growth through acquisitions seemed like a better fit. For us, that was PSG. And they had recently acquired a company called Virtual Job Shadow whose strengths paired really well with ours. We merged with Virtual Job Shadow earlier this year and became Pathful. I've since transitioned my duties to a new CEO and become a board member and Chief Strategy Officer where I coordinate our growth strategy.

As you found a company, you have pretty realistic expectations—you know not every company is headed down the IPO path. Overall, very few education technology companies are public companies. Going from one to five million dollars in revenue was tough. Going from five to 10 million was even tougher. Taking it from 10 to 100 million—at minimum where you need to be to think about IPO—is a completely different ballgame. And unlike the early stages where it's exciting and you're innovating everyday, it is very operational. A lot of founders aren't suited to that challenge, get fatigued, or both. So for most founders, growth through acquisition is the realistic and feasible path.

One thing that is really helpful to the startup ecosystem is Qualified Small Business Stock tax treatment (QSBS)—and so few people know about it. I didn't learn about it until we were going through the acquisition process. Then the Build Back Better bill came out with retroactive changes to QSBS that meant we would've missed the favorable treatment by two weeks. Thankfully those changes did not pass, and with the tax savings as a result of QSBS, I was able to invest in six seed-stage startups just this year. Angel investors are really important for early-stage funding and QSBS plays a big role in keeping capital in the ecosystem and helping angels fund more companies to grow the ecosystem. I am excited that I have the opportunity now to continue paying it forward in supporting early stage entrepreneurs.

Startup Aquisition Experience: 21LABS

Acquired by Perforce Software • Campbell, California
Shani Shoham, CEO

21Labs is an autonomous testing and analytics platform that lets mobile app developers and engineering teams accelerate their release cycle and perfect the user experience for Android and iOS applications.

Throughout my career, I have worked for and founded various technology companies and venture capital funds. One company I worked for provided the infrastructure for test automation, but you still needed engineers to write the scripts and manage them. That led to low test coverage and increased cost of testing. Using the knowledge I had gained and what I saw as a gap in the market, I started 21 Labs to further automate the process of UI testing and functional testing of mobile applications.

We integrated and partnered with companies like Perforce, Sauce Labs and others to provide the infrastructure to our customers. These partners also reached out to us for joint GTM activities and introduced us to their customers. It made the acquisition the next step in the natural progression.

I stayed at Perforce to help with integration, but once that was settled and my contractual obligations were up, it was time for me to move on to the next thing. Earlier this year I left Perforce to become the Chief Revenue Officer at a new startup that is focused on software development, testing, demo and deployment environments to help speed software release cycles.

The acquisition of 21 by Perforce was a success and the right move for us, and I hope policymakers don't make these sorts of transactions more difficult. However, one issue that we ran into with 21 is talent. There simply is not enough skilled labor—developers—to be able to recruit and retain the talent we need. As a startup, we couldn't really compete with the compensation packages that large established companies were offering, especially in the Bay Area. While we would have loved to help build the local economy through employment too, we ended up relying on developers from Eastern Europe to grow 21. Part of the answer to this talent problem has to be making it easier for immigrants to come to the U.S.

EXITS AND TALENT

Talent—knowledge and experience—is at least as essential to startup success as the capital needed to seed and grow companies. And critical talent includes the startup founder, with her vision and experiences; expertise and perspective they hire or bring on through cofounders and early employees; and mentors, advisors, and board members that help guide the company. The role know-how and prior experience plays in startup success is not to be understated—new companies with outside mentors succeed at twice the rate of those without.[28] Many such mentors have lived the full range of the startup experience—from launch to raising capital to scaling to exit, sometimes several times over.

Startup exits play a critical role in the development and mobility of talent through the startup ecosystem. If individuals remain at one firm their entire career, dynamic benefits to the economy—leveraging their experiences to grow new ventures—won't accrue and ecosystem building becomes harder. In this way, exits via acquisition are particularly important since key talent are more likely to remain at a company after an IPO (rather than start or join a new company) and likely to seek the certainty of salaried income (sometimes outside the startup ecosystem) following failure and shutdown.[29]

When a startup is acquired, its employees almost always initially stay on at the acquiring firm.[30] Indeed, the startup's key talent—founders, engineers, and those in other leadership roles—are often subject to vesting periods (if paid in stock) or other contract terms that require them to stay at the company for a certain period of time, usually anywhere from six months to three years. During this time, they help integrate the startup's technology into the acquiring firm and experience new processes around running a large enterprise. And working at the acquiring firm can be "a welcome break from the nonstop pace of running a startup," as one acquired founder told us.

At some point following that breather, the cycle begins anew. Founders usually leave the large company and join or launch new startups[31]—critically, taking the knowledge and experience with them. The prior exit experience is looked upon favorably by investors—who see both a founder with a demonstrated ability to scale and a likely eventual positive return on their investment—helping repeat founders to raise capital for their new ventures. And it is needed to help new entrepreneurs succeed. As one founder put it, "we need more people that have done this before" to help develop the ecosystem. Cycles of talent helps the local startup ecosystem to grow,[32] advances innovation, and creates quality jobs—positive outcomes in which the exit via acquisition was a crucial component.

However, some policymakers worry about the role of acquisitions and talent—especially when startups are acquired principally for their teams rather than their technology—colloquially called 'acquihires.'[33] Concerns about these transactions generally fall into two categories: their competitive effects and the impact on the availability of talent. Both are misguided. In most cases, such exits are the best option for the startup, which has tried, but was unable to raise additional capital.[34] Rather than being anticompetitive, the acquisition offers the startup's founders and employees a soft landing (and, as discussed, launching pad for their next act). Indeed, one founder of an AI startup "acquihired" (along with their entire team) by Google called the exit "the right decision for us." The founder has since left to join a new startup as an executive. And empirical research shows that talent brought on by acquisition leaves (to young small firms, i.e., startups) at much higher rates than their conventionally hired counterparts.[35] Acquisitions, then, help, rather than harm, economic dynamism.

WHAT WE CAN LEARN FROM IPO REGIMES ABROAD

Acquisitions play a critical role in the startup ecosystem—particularly in places outside of the largest hubs—as shown through both the data and firsthand experiences of startup founders in this report. However, some policymakers are considering changes that would impede founders' ability to sell their companies or even prohibit acquisitions of startups altogether. They envision that companies will merely go public instead,[36] which risks harming the startup ecosystem and startups' ability to innovate and earn investment.

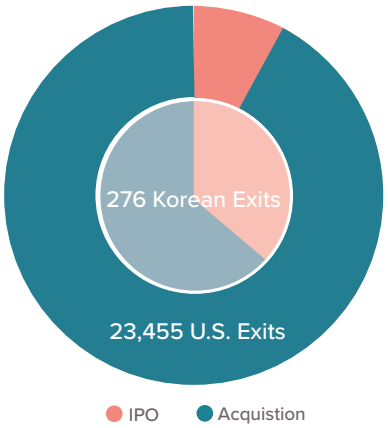
To further underscore the importance of acquisition activity in healthy startup ecosystems, this section leverages cultural, legal, and structural differences found abroad that lead those countries to rely more heavily on IPOs. Both South Korea and Australia have few large acquirers, like those that exist in the U.S., and have systems that allow companies to go public "early" at a low market capitalization. These early IPOs are not exits in the traditional sense, if at all—they are often fundraising events where existing shareholders (like founders, employees, and investors) are subject to long lock-up periods, and market dynamics make it difficult for them to get liquid. As a result, capital and talent don't cycle through the ecosystems there. The countries' experiences highlight the importance of acquisitions to dynamic, healthy startup ecosystems, and the folly of standing up early IPO regimes as a perfect alternative to healthy acquisition activity.

South Korea

Cultural and market factors make South Korea a somewhat insulated market with little acquisition activity, which makes it a useful case study on the importance of exits to startup investment and ecosystem growth. While there are still more exits via acquisitions than IPOs on the whole, acquisitions are not popular in the country. In addition to regulatory headwinds,[37] Korean entrepreneurs regard their companies "like family" and avoid selling, especially to large companies—which would be akin to "selling your soul," as one Korean investor indicated to us. In addition, many Korean software companies sell to consumers or government, and usually remain national, rather than scaling globally—both limiting growth and potential desirability to foreign would-be acquirers. For investors (and founders), this makes it difficult to exit or get liquid.

In part to solve liquidity issues, the government has created an early IPO process. The startup and small-entity oriented stock exchange in Korea is the KOSDAQ (Korean Securities Dealers Automated Quotations), formed in the late 1990s.[38] In the mid 2010s, listing rules were relaxed to allow a special exemption for technology companies to IPO on the exchange. To qualify, companies must meet certain technology requirements but are exempted from some typical revenue and profit requirements required by the exchanges. The technology requirements meant that software companies were not able to use the exemption—but biotechnology companies were. In mid-2019 the exemption was expanded to allow software companies to undergo early IPOs as well.[39]

Share of Exits by type, 2011-2021



The difference in potential exit opportunities between software and biotechnology startups is reflected in investment—Korean venture investors are likely to invest 50 to 100 times more in biotechnology startups than in software startups. And the overall lack of opportunities to exit leads some investors to seek other methods of getting liquid. For example, investors may sell their shares to other investors (or back to the founder, in the worst case), usually for a loss. If an investor holds redeemable shares, which trigger a sale at a certain return

(usually two and a half to five percent), they can earn a very low return—but this too is regarded as failure from an investor perspective. Share structures (and lack of acquisitions) further limit the ability of investors to force an exit event to recoup their investment or earn a return.

While the early IPO process is designed to fix some of these issues with liquidity and provide technology startups with access to the public markets, performance is poor and plagued with practical issues. In an early IPO, companies aren't generally able to raise much capital to fuel additional growth—usually just 10 to 20 percent of their valuation. Investors, founders and other existing shareholders are subject to lock-up periods where they are unable to sell their shares for a certain period of time following the IPO. In some cases, for the largest shareholder (usually the founder), this period is one year. The long lag does disincent insiders from overhyping the stock, but often investors sell their shares right away after they are permitted to do so regardless, with predictable results.[40] The share price drops significantly and is unlikely to ever recover—especially since (as a result of the early IPO process) there is no institution (such as an investment bank) analyzing and recommending the stock to their clients.

Expectedly, performance of early IPO companies in South Korea is generally poor, with share prices falling once investors realize the company cannot stand on the fundamentals—an analysis of Korean IPOs from 2013 to 2021 showed that stocks with opening share prices that were 95 percent higher than their IPO prices fell by 44 percent a year later.[41] This should spell a cautionary tale for policymakers envisioning that an early IPO system could replace a vibrant merger and acquisition market without consequences for startup investment.

Australia

Australia has a few distinct characteristics that make it instructive for investment and the startup ecosystem. The country has few large domestic potential acquirers, its stock exchange rules allow early stage companies to list on their stock exchange ASX (though they have been tightened in recent years) and it has few large domestic VC firms capable of writing late-stage growth checks (series B, C, D+).

Beyond consequences for investment, the lack of several large domestic acquirers in Australia stymies the flow of talent and knowledge-building in the ecosystem there. And both factors create headwinds for overall ecosystem growth. In Australia, Atlassian is the predominant large potential acquirer, but Australian startups are also frequently acquired by large (mostly American) foreign companies. This disrupts typical cycles of talent in the ecosystem because key employees are dispersed, potentially overseas, or might not join the acquiring firm. Domestic acquisitions, where employees remain in the ecosystem, by contrast, enable important talent development. Employees of the acquired startup learn systems and processes at the acquiring firm and hone skills necessary for running and growing large enterprises. When they leave to launch new startups or invest in and advise fellow entrepreneurs, they bring those skills and experiences with them.

Though it has grown meaningfully over the past decade, the VC industry in Australia historically has not been large enough to fund lots of growth-and late-stage startups. Though some particularly successful Australian startups could (and still do) draw interest and investment from U.S. and European VCs, Australian startups often go public sooner and at lower valuations than American startups.

Australian startups going public early is not an exit—rather, it is to raise additional capital. The amount raised is historically comparable to raising series A, though now more comparable to series B or C, both as VC availability has improved and listing requirements have been tightened.[42]

Even if founders or investors wanted to take money off the table after going public, it would be very difficult and not without consequence. Company insiders are subject to long lock-up periods where they cannot sell shares,

sometimes two years—this is an investor protection that is designed to disincent overhyping the company's stock price.[43] And when they are able to sell, trying to sell down their stock holdings sends a signal to public investors who are left wondering if you know something they do not, and why you're taking money meant for growth off the table.

Regardless of location, being a public company invites compliance costs and investor scrutiny, but when startups go public before they reasonably should, as in Australia in the early 2010s, it invites additional headwinds. Listing without deep institutional backing, e.g., of an investment bank, means their analysts aren't scrutinizing your stock and recommending it to their clients. And being public as an early or growth stage startup means you don't control your share price. Since public, retail investors do not know how to value startups, startup valuations can become dislocated from where experienced startup investors would value the company. This can make it difficult to raise additional capital needed to keep growing, and the startup with once-great potential becomes a zombie with enough resources to keep existing but few options to raise capital needed to grow.

Companies that have IPOed early in Australia have generally performed poorly (this is true in the U.S. context as well)[44] and have experienced large swings in valuation—with one enterprise software startup's share price going from a few cents to $2 back to a few cents.[45] To counteract this, the ASX has tightened the exchanges listing rules.[46] Taken together, the comparative experience of the Australian and U.S. startup ecosystems highlights the important role of acquisitions—as an exit path, for promoting investment, for recycling talent—in a healthy vibrant startup ecosystem.

IMPLICATIONS FOR TODAY'S POLICY DEBATES

This report has walked through the role of exits in the startup ecosystem—the incentives they provide for founders to launch companies and the incentives for investors to fund them; the preeminence of acquisition as an exit path for startups, especially in smaller startup ecosystems; the development and flows of talent in the ecosystem they enable; and the firsthand experiences of startup founders that have had their companies acquired. Each of these factors has bearing on today's burning policy debates about competition in the technology sector, particularly those around the role of startup acquisitions. Policy proposals by agencies and in Congress alike threaten to lessen the availability of acquisition as an exit path for startups.

Startups care about acquisitions as an exit path because it helps them to raise capital for investors—and helps reduce the risk of starting a company. IPO is another exit path that many entrepreneurs hope for, but they know it is not an interchangeable alternative with acquisition—different factors lead up to each type of exit. And going public early can go poorly, whether considering the experiences of early IPO systems found abroad or those that go public at low values in the U.S. As a result, IPO doesn't meaningfully offer to 'fill the gap' if the availability of being acquired is indeed reduced through policy change or chilled by enforcement actions based on novel legal theories.[47]

No one is in favor of anticompetitive conduct, least of all startups, who can be particularly vulnerable as small entities with generally few resources. But arbitrary policies that either target only a few large firms based on size or sow uncertainty to broadly discourage acquisition activity threaten to run counter to their stated goals of helping startups.

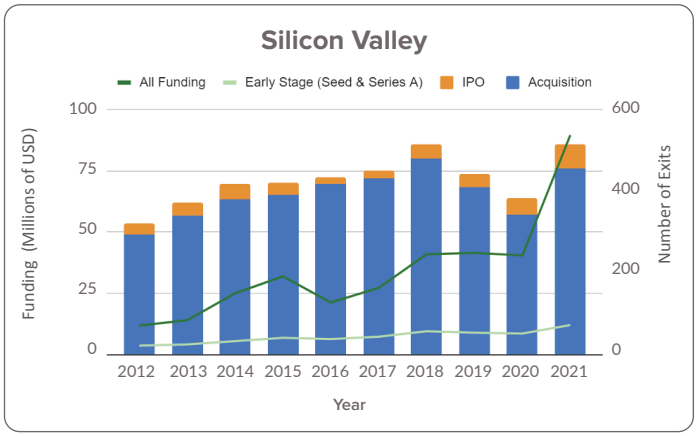
For example, bills introduced in both chambers of Congress would target around five large technology companies, based on market capitalization and other metrics, with the goal of preventing them from acquiring startups.[48] Disallowing some companies (and disincenting others) from acquiring startups takes would-be acquirers off the table, leading to lower acquisition prices and reduces incentives to invest in startups. This has been shown in studies of the bills: they would both reduce investment—by over 12 percent—and reduce exit values—by over 21 percent.[49] Indeed, as one founder who had their company acquired told us: "we had a few other offers from later-stage startups, and I think them knowing Google was at the table really helped," but in the end, "Google's offer was the highest, and it made the most sense for us."

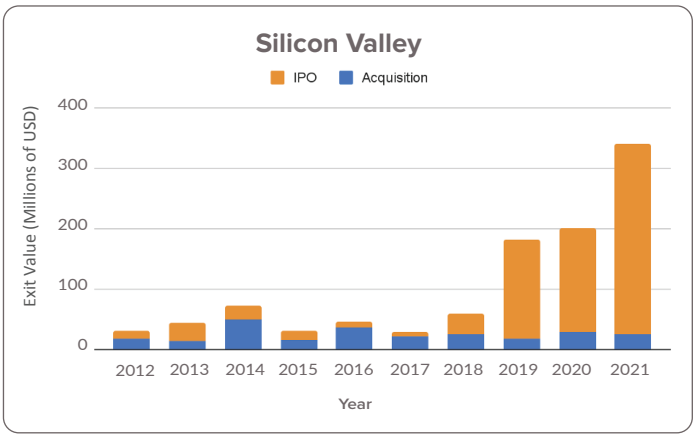
The bills would exempt smaller deals under $50 million from the restrictions imposed on mergers and acquisitions,[50] but this too is arbitrary. While most acquisitions are indeed for amounts below $50 million, exempting those deals could create incentives to acquire companies earlier. For those worried about acquisitions of startups in themselves stifling potential competition, exempting small deals would appear to have the opposite of the stated intent.

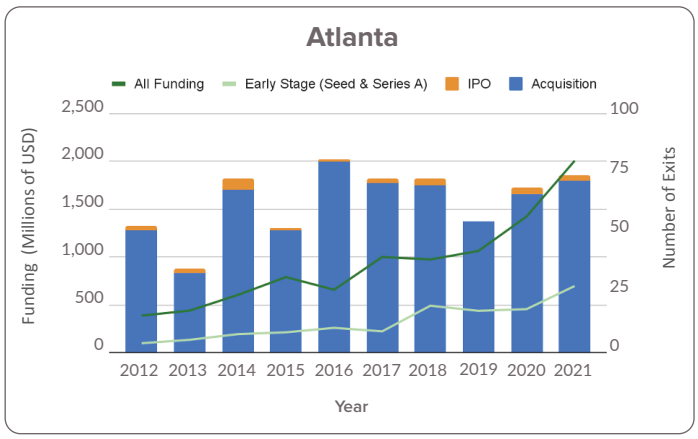
Instead, precise enforcement and individualized scrutiny based on clear, communicated principles is a better approach for the startup ecosystem. Such an approach can ensure that remedies are tailored and do not inflict harms to competition that would outweigh benefits from actions addressing the problematic conduct.

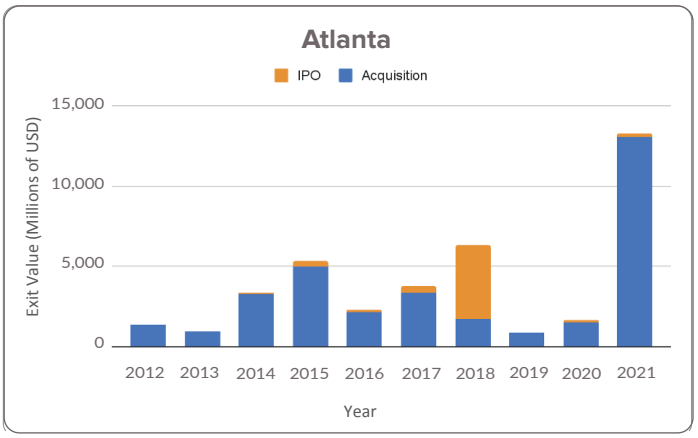
To help startups compete, policymakers can start by addressing their everyday needs. Engine publishes a weekly profile of a startup founder from across the U.S. discussing the policy issues impacting them, and founders routinely bring up a number of ways that policymakers could reduce the obstacles they face.[51] To increase the availability of investment, policymakers can enact reforms that increase the pool of potential startup investors and ensure that government grants and resources are available to early-stage startups.[52] To reduce the costs of critical talent needed to grow startups, policymakers can enact immigration reforms and invest in STEM education to increase the talent pool in the U.S.[53] To mitigate the costs of scaling nationally, policymakers should enact a single federal standard for privacy and work to reduce complex tax burdens.[54] To mitigate meritless litigation, policymakers should take steps to ensure patent quality and defend intermediary liability limitations.[55] Rather than break the investment model that has led to the development and growth of the startup ecosystem, policymakers should start here, because for startups, all policy is competition policy.

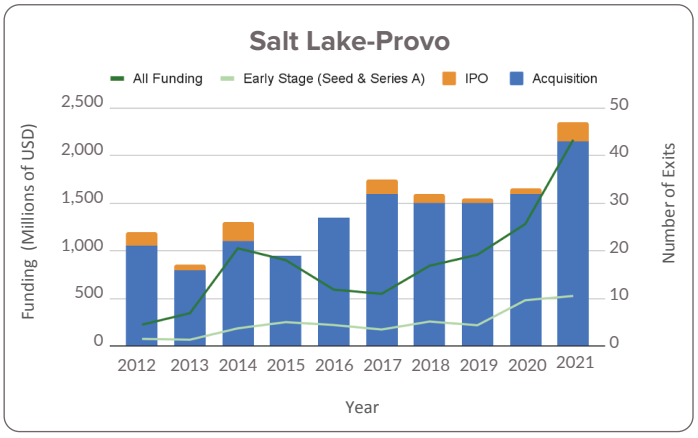
APPENDIX

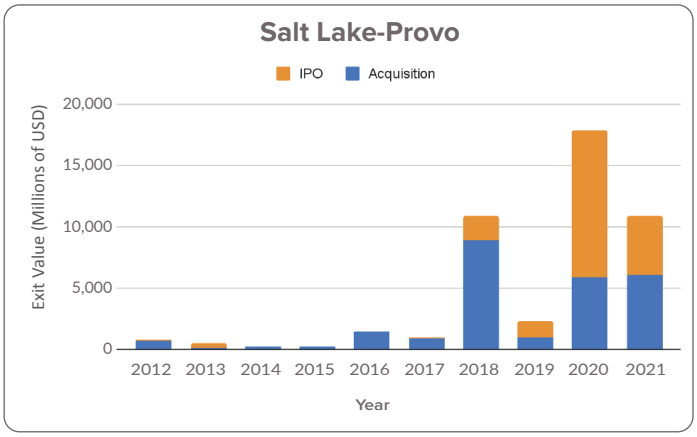

Silicon Valley
All Funding
Early Stage (Seed & Series A)
IPO
Acquisition
Funding (Millions of USD)
Number of Exits
Year

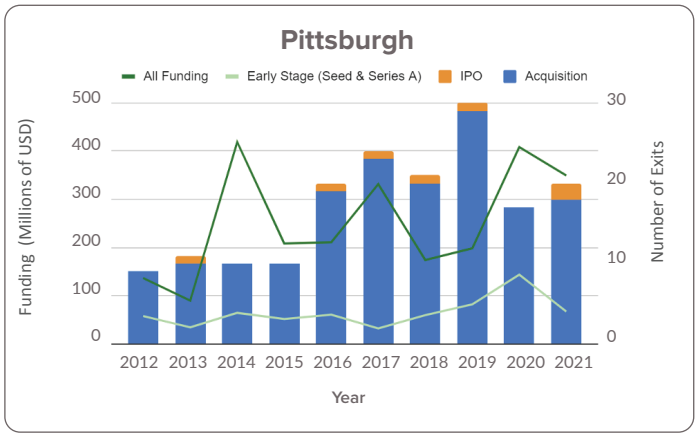

Silicon Valley
IPO
Acquisition
Exit Value (Millions of USD)
Year

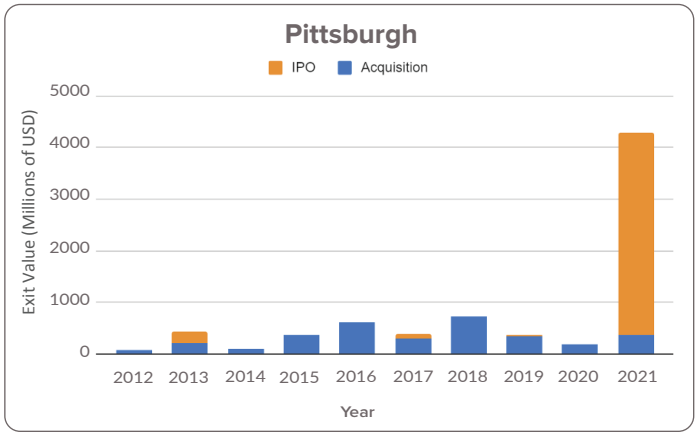

Atlanta
All Funding
Early Stage (Seed & Series A)
IPO
Acquisition
Funding (Millions of USD)
Number of Exits
Year


Atlanta
IPO
Acquisition
Exit Value (Millions of USD)
Year

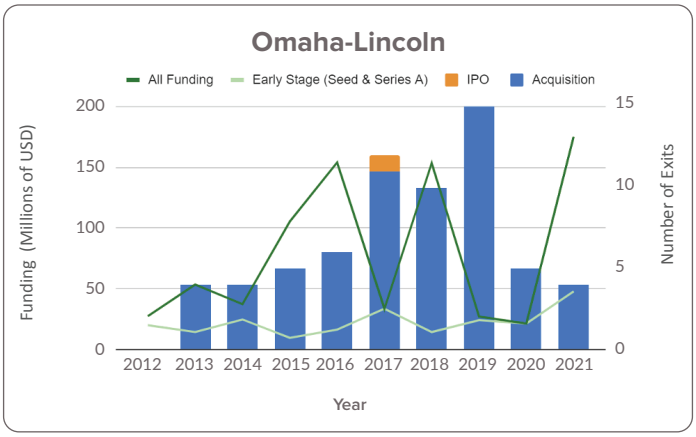

Salt Lake-Provo
All Funding
Early Stage (Seed & Series A)
IPO
Acquisition
Funding (Millions of USD)
Number of Exits
Year

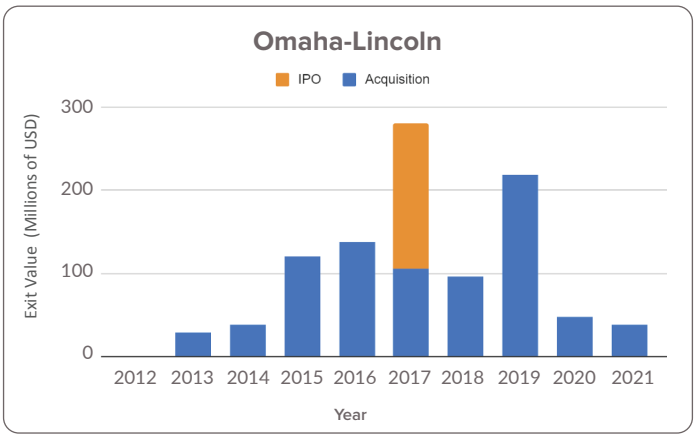

Salt Lake-Provo
IPO
Acquisition
Exit Value (Millions of USD)
Year

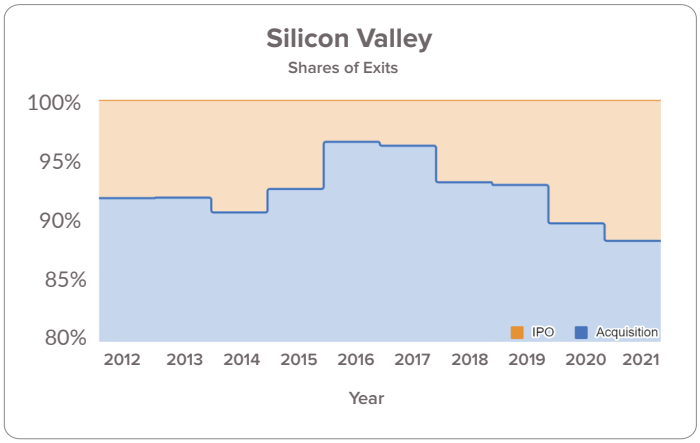

Pittsburgh
All Funding
Early Stage (Seed & Series A)
IPO
Acquisition
Funding (Millions of USD)
Number of Exits
Year

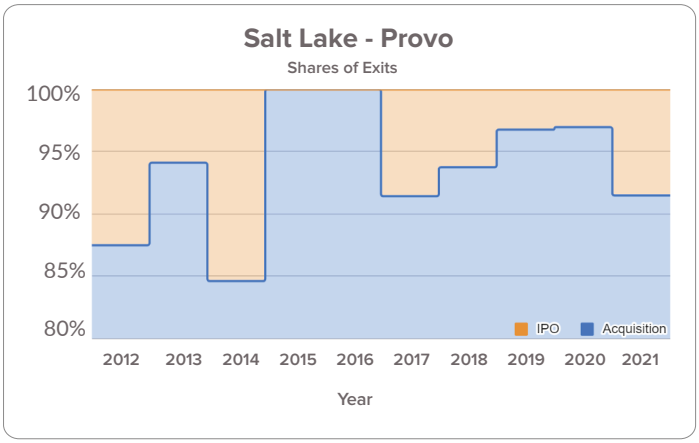

Pittsburgh
IPO
Acquisition
Exit Value (Millions of USD)
Year

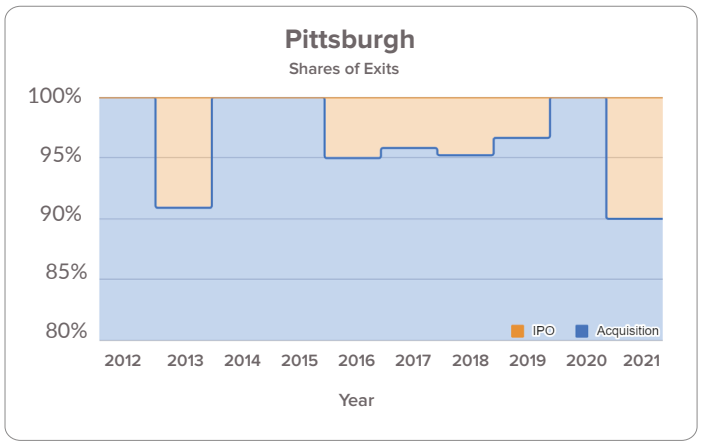
APPENDIX

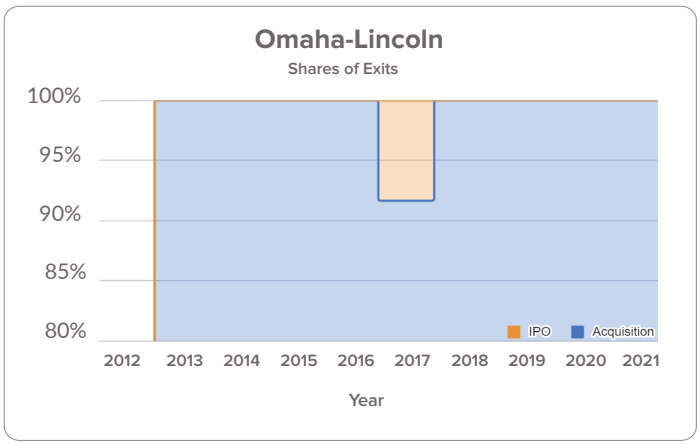

Omaha-Lincoln
All Funding
Early Stage (Seed & Series A)
IPO
Acquisition
Funding (Millions of USD)
Number of Exits
200
150
100
50
0
15
10
5
0
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year

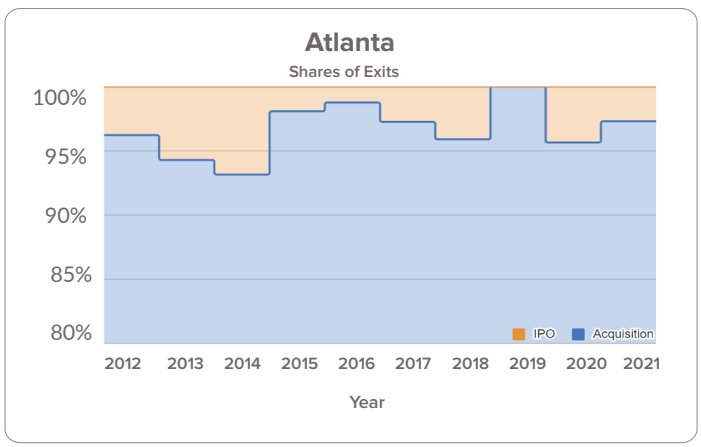

Omaha-Lincoln
IPO
Acquisition
Exit Value (Millions of USD)
300
200
100
0
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year


Silicon Valley
Shares of Exits
100%
95%
90%
85%
80%
IPO
Acquisition
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year


Salt Lake - Provo
Shares of Exits
100%
95%
90%
85%
80%
IPO
Acquisition
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year


Pittsburgh
Shares of Exits
100%
95%
90%
85%
80%
IPO
Acquisition
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year


Omaha-Lincoln
Shares of Exits
100%
95%
90%
85%
80%
IPO
Acquisition
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year


Atlanta
Shares of Exits
100%
95%
90%
85%
80%
IPO
Acquisition
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021
Year

ENDNOTES

1. *See, e.g.*, Justin Kahl and David George, *A Framework for Navigating Down Markets*, a16z (May 13, 2022), https://future.a16z.com/framework-valuation-navigating-down-markets/; *The upside of a downturn*, Lightspeed Venture Partners (May 16, 2022), https://medium.com/lightspeed-venture-partners/the-upside-of-a-downturn-9219ea4b26a2.
2. *See, e.g.*, *Consumer Price Index for All Urban Consumers: All Items in U.S. City Average and Consumer Price Index for All Urban Consumers: All Items Less Food and Energy in U.S. City Average*, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/graph/?g=8dGq.
3. *See The State of the Startup Ecosystem*, Engine 6 (Apr. 2021), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/60819983b7f8be1a2a99972d/1619106194054/The+State+of+the+Startup+Ecosystem.pdf (for data and discussion of 2016 "saas valuations crisis").
4. Susan Woodward, *Irreplaceable Acquisitions*, Sand Hill Econometrics 5-6 (Nov. 2021), http://www.sandhillecon.com/pdf/Woodward_Irreplaceable_Acquisitions.pdf.
5. *Id.*
6. *See 2020 Startup Outlook Report*, Silicon Valley Bank 5 (2020), https://www.svb.com/globalassets/library/uploadedfiles/content/trends_and_insights/reports/startup_outlook_repor t/suo_global_report_2020-final.pdf; *2019 Startup Outlook Report*, Silicon Valley Bank 7 (2019), https://www.svb.com/globalassets/library/uploadedfiles/content/trends_and_insights/reports/startup_outlook_report/us/svb-suo-us-report-2019.pdf.
7. *See Startup Outlook, supra* note 6; *see also Startup Ecosystem, supra* note 3 (noting that these figures do not include startups that end in failure).
8. *See, e.g.*, *The Cost of Being a Public Company in Light of Sarbanes-Oxley and the Federalization of Corporate Governance: Hearing before the Subcommittee on Investor Protection, Entrepreneurship and Capital Markets* 115th Congress (2017) (Remarks of Chairman Huizenga), https://www.govinfo.gov/content/pkg/CHRG-115hhrg28750/html/CHRG-115hhrg28750.htm.
9. *See Startup Ecosystem*, *supra* note 3
10. *See Irreplaceable Acquisitions, supra* note 4, at 5.
11. *2020 Startup Outlook Report*, Silicon Valley Bank 5 (2020), https://www.svb.com/globalassets/library/uploadedfiles/content/trends_and_insights/reports/startup_outlook_report/suo_global_report_2020-final.pdf.
12. *See Irreplaceable Acquisitions, supra* note 4, at 5.
13. Bob Zider, *How Venture Capital Works*, Harv. Bus. Rev. (1998), https://hbr.org/1998/11/how-venture-capital-works#:~:text=They%20expect%20a%20return%20of,have%20a%20lot%20of%20latitude. *See generally* Paul Gompers & Josh Lerner, *The Venture Capital Cycle*, MIT Press (2004). See *Irreplaceable Acquisitions, supra* note 4 for a recent brief discussion of the VC cycle and compensation structure.
14. Paul Gompers & Josh Lerner, *The Venture Capital Revolution,* 15 J. of Econ. Perspectives 145, 146-52 (2001), https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.15.2.145; Josh Lerner & Ramana Nanda, *Venture Capital's Role in Financing Innovation: What We Know and How Much We Still Need to Learn*, 34 J. of Econ. Perspectives 237, 238-39, 245-48 (2020), https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.34.3.237.
15. David Lingelbach & Evan Gilbert, *Toward a Process Model of Venture Capital Emergence: The Case of Botswana* (Aug. 21, 2009), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1459183.
16. As one notable exception, MailChimp was bootstrapped before being acquired by Intuit in 2021 for $12 Billion. See *Intuit Completes Acquisition of Mailchimp,* Intuit (Nov. 1, 2021), https://mailchimp.com/intuit-completes-mailchimp-acquisition/.
17. *See, e.g.*, *How to plan for retirement*, Ameriprise Financial, https://www.ameriprise.com/financial-goals-priorities/retirement/retirement-planning-basics.
18. *See generally Comments of Engine Advocacy in response to Request for Information on Merger Enforcement, Docket no. FTC-2022-0003-0001*, Engine (Apr. 21, 2022), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/626090a94d6c20727e338d01/1650495664536/Merger+Guidelines+RFI+Submission+042122.pdf.
19. *Startup Ecosystem*, *supra* note 3, at 11-12; Tiago Prado & Johannes Bauer, *Big Tech Platform Acquisitions of Start-ups and Venture Capital Funding for Innovation*, 59 Information Economics and Policy 1,3 (2022) https://www.sciencedirect.com/science/article/pii/S0167624522000129#fig0005.

20. *Big Tech*, *supra* note 19.
21. *Startup Ecosystem*, *supra* note 3, at 11-12.
22. *See Irreplaceable Acquisitions, supra* note 4.
23. *See generally supra* Exit Lifecycle: IPO.
24. *Startup Ecosystem*, *supra* note 3, at 9-12; *The Cost of Being a Public Company*, *supra* note 8.
25. *Partial Transcript: Your World with Neil Cavuto*, Fox News (Jul. 30, 2002), https://www.foxnews.com/story/sen-paul-sarbanes-d-md-rep-jeff-flake-r-ariz.
26. *See* 148 Cong. Rec. S7353 (2002) (Remarks of Sen. Gramm) https://www.congress.gov/crec/2002/07/25/CREC-2002-07-25-pt1-PgS7350-4.pdf; *id.* at S7361 (remarks of Sen. Bond).
27. *The Impact of Consolidation and Monopoly Power on American Innovation: Hearing before the Subcommittee on Competition Policy, Antitrust, and Consumer Rights of the Committee on the Judiciary,* 117th Congress (2021) (Testimony of Bettina Hein) https://www.judiciary.senate.gov/meetings/the-impact-of-consolidation-and-monopoly-power-on-american-innovation.
28. *See, e.g.*, Kathleen McShane, *Mentoring: the missing link to small business growth and survival*, Small Business Administration (Feb. 4, 2019), https://www.sba.gov/blog/mentoring-missing-link-small-business-growth-survival#:~:text=A%20survey%20by%20the%20UPS,that%20having%20one%20was%20invaluable; Kushboo Jain, *Why Every Entrepreneur Needs a Mentor*, Entrepreneur (Apr. 14, 2021), https://www.entrepreneur.com/article/369347; *GROWING THE INNOVATION ECONOMY: A Policy Roadmap for Supporting Startups Everywhere*, Engine 2 (2022), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/62fbb0a039956b0d96fef653/1660661921600/Growing+the+Innovation+Economy+Recover+Paper+2022.pdf.
29. In addition to being intuitively true, this was reflected in the conversations we had with founders and investors. And research leveraging large datasets of startup employees and acquisitions shows the *see*, *e.g.*, Weiyi Ng and Toby Stuart, *Acquihired: Retained or Turned Over?* (Oct. 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3461723.
30. *See generally supra* Exits and the Startup Experience (the founders in these stories all worked at the acquiring firm, for varying lengths of time).
31. This was the case with most of the founders we spoke with. *See also, Acquihired*, *supra* note 29.
32. *See, e.g.*, *Global Startup Ecosystem Report*, Startup Genome (2022), https://startupgenome.com/article/methodology-2022, (especially discussion of talent and ecosystem growth metrics).
33. *Prepared Remarks of Comm'r Rohit Chopra*, Federal Trade Commission (Sept. 15, 2022), https://www.ftc.gov/system/files/documents/public_statements/1596340/20210915_final_chopra_remarks_non-hsr_reported_acquisitions_by_big_tech_platforms.pdf.
34. *See Irreplaceable Acquisitions*, *supra* note 4, at 6.
35. *Acquihired*, *supra* note 29.
36. *Comments of Engine Advocacy*, *supra* note 18; *The Impact of Consolidation*, *supra* note 27 (remarks of Sen. Klobuchar); *The Impact of Consolidation*, *supra* note 25, (remarks of Sen. Durbin).
37. Kim So-Hyun, *M&As slow in Korea due to tight regulations: FKI*, Korea Herald (Feb. 10, 2022), https://www.koreaherald.com/view.php?ud=20220210000704.
38. *See, e.g.*, Mi Eun Roh & Heesug Chung, *The Initial Public Offerings Law Review: South Korea*, The Law Reviews (2022), https://thelawreviews.co.uk/title/the-initial-public-offerings-law-review/south-korea#footnote-000-backlink.
39. Jeong Seung-Hwan, *The door to the wider 'special listing'... Opportunities for investors looking for growth*, Maeil Economic Daily (July 16, 2019), https://www.mk.co.kr/news/stock/view/2019/07/529048/, (translated from Korean).
40. *See generally* Kim Geum-yi & Susan Lee, *IPO darlings in Korea perform poorly, boding badly for this year's pipeline*, Pulse (Mar. 3, 2022).
41. *IPO darlings in Korea perform poorly*, *supra* note 40.
42. *See, e.g.*, *Global Startup Ecosystem Report*, Startup Genome (2022), https://startupgenome.com/article/oceania-insights-rankings-and-ecosystem-pages; *see, e.g.*, *Understanding The Financial Health Of Early Stage Tech Startups*, Alliance Software (2017), https://www.alliancesoftware.com.au/early-stage-tech-startups/.
43. *See, e.g.*, *Post-IPO lock-up: Protecting Australian investors at the risk of global competitiveness*, McCollough Robertson (May 12, 2021) https://www.mccullough.com.au/2021/05/12/post-ipo-lock-up-protecting-australian-investors-at-the-risk-of-global-competitiveness-mccullough-robertson/.
44. *Irreplaceable Acquisitions*, *supra* note 4, at 7-8.
45. *See Early Stage Tech Startups*, *supra* note 42.
46. *Id*.

47. *Comments of Engine Advocacy*, *supra* note 18; *see also, e.g.*, Gary Shapiro, *I lead the Consumer Technology Association and I've never commented on an FTC lawsuit until now. Lina Khan's new case against Meta is laughable,* Fortune (Aug. 3, 2022), https://fortune.com/2022/08/03/consumer-tech-cta-ftc-lawsuit-lina-khan-case-v-meta-acquisition-gary-shapiro/.
48. Platform Competition and Opportunity Act of 2021, H.R. 3826, 117th Congress (2021); Platform Competition and Opportunity Act of 2021, S. 3197, 117th Congress (2021). Some economists and entrepreneurs have additionally argued that other competition proposals, such as H.R.3816 / S.2992, the American Innovation and Choice Online Act, and H.R. 3825, the Ending Platform Monopolies Act would also reduce incentives for covered entities to acquire startups, thereby similarly reducing investment: see, for example, *Irreplaceable Acquisitions*, *supra* note 4 at 1-2; Geoffrey Manne, *How Tech Startups Could Be a Casualty of the War on Self-Preferencing*, Truth on the Market (June 3, 2022), https://truthonthemarket.com/2022/06/03/how-tech-startups-could-be-a-casualty-of-the-war-on-self-preferencing/; Donald Boone, *New "Big Tech" Regulations Could Crush Startups*, Washington State Wire (Aug. 16, 2021), https://washingtonstatewire.com/new-big-tech-regulations-could-crush-startups/).
49. Christian Rippon and Matthew Noelle, *The Economic Costs of Regulation of Online Platforms and Marketplaces*, NERA Economic Consulting 48-56 (Mar. 18, 2022), https://research.ccianet.org/reports/economic-costs-regulation-online-platforms-marketplaces/; *see also Irreplaceable Acquisitions*, *supra* note 4, at 1,9-10.
50. *See Platform Competition and Opportunity Act*, *supra* note 48 (the $50 million threshold was added during markup by amendment from Rep. Deborah Ross D-N.C.).
51. *See generally #StartupsEverywhere*, Engine, https://www.engine.is/startupseverywhere.
52. Nathan Lindfors, *Policymakers Should Expand the Pool of Startup Investors, Not Narrow It*, Engine (Mar. 10, 2022), https://engineadvocacyfoundation.medium.com/policymakers-should-expand-the-pool-of-startup-investors-not-narrow-it-b8854a7770f6.
53. *See, e.g.*, *GROWING THE INNOVATION ECONOMY*, *supra* note 28, at 2-7.
54. *See, e.g.*, *Nuts and Bolts of User Privacy*, Engine (July 2019), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/5d76690b20d6a24eb82a6928/1568041228114/The+Nuts+and+Bolts+of+User+Privacy.pdf; Nathan Lindfors, *State Policy Update: Startups need a solution for post-Wayfair sales tax administration*, Engine (June 14, 2022) https://engineadvocacyfoundation.medium.com/state-policy-update-startups-need-a-solution-for-post-wayfair-sales-tax-administration-3b407fbf3038.
55. *See, e.g.*, *Startups & the U.S. Patent System: Prioritizing Quality and Balance to Promote Innovation*, Engine (July 2021) https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/60f8579bae6a2d324b7440a2/1626888093336/Engine+Patent+Quality+Booklet+2021+7.21.pdf; *Startups, Content Moderation, & Section 230*, Engine (Dec. 2021), https://static1.squarespace.com/static/571681753c44d835a440c8b5/t/61b26e51cdb21375a31d312f/1639083602320/Startups%2C+Content+Moderation%2C+and+Section+230+2021.pdf.

Engine was created in 2011 by a collection of startup CEOs, early-stage venture investors, and technology policy experts who believe that innovation and entrepreneurship are driven by small startups, competing in open, competitive markets where they can challenge dominant incumbents. We believe that entrepreneurship and innovation have stood at the core of what helps build great societies and economies, and such entrepreneurship and invention has historically been driven by small startups. Working with our ever-growing network of entrepreneurs, startups, venture capitalists, technologists, and technology policy experts across the United States, Engine ensures that the voice of the startup community is heard by policymakers at all levels of government. When startups speak, policymakers listen.

With more than 100 clients across six continents in 40+ countries to date, Startup Genome is the world-leading research and policy advisory organization for public and private agencies committed to accelerating the success of their startup ecosystem. Our mission and impact are rooted in more than a decade of independent research with data on 1.5 million companies over 250+ cities. Learn how Startup Genome accelerates global startup ecosystems by contacting Adam Bregu at adam@startupgenome.com and on startupgenome.com, LinkedIn, Twitter.