FRANK HAWKINS KENAN INSTITUTE OF PRIVATE ENTERPRISE CONFERENCE PROCEEDINGS

# 2019 FRONTIERS *of* ENTREPRENEURSHIP

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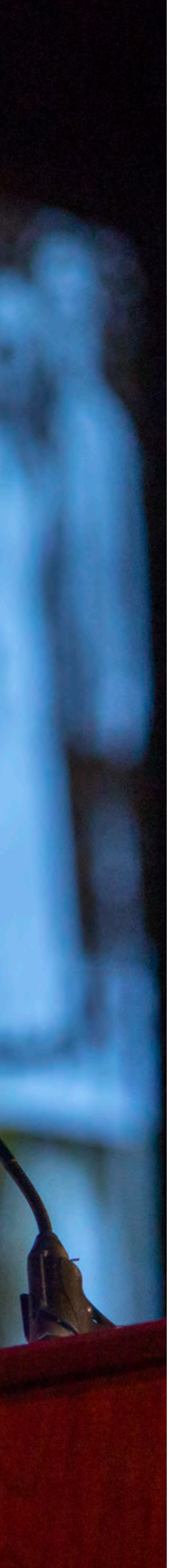
Although entrepreneurship historically has been viewed as the lifeblood of free enterprise, many questions still remain regarding its resiliency and efficacy in increasing economic productivity and improving society.

Greg Brown

*Executive Director, Kenan Institute of Private Enterprise*



# INTRODUCTION

On January 31 and February 1, 2019, the Frank H. Kenan Institute of Private Enterprise (Kenan Institute) hosted its Frontiers of Entrepreneurship Conference at The Breakers Palm Beach Resort. The conference brought together more than 150 academic research scholars, policy experts and private sector professionals to discuss and debate the most challenging current issues in the field of entrepreneurship in order to set the agenda for future research and policy.

Kenan Institute Executive Director Greg Brown opened the conference with an overview of free enterprise and entrepreneurship as drivers of economic prosperity.

Brown referenced the fact that, though the per capita U.S. GDP has grown substantially during the last 20 years, median household income in the U.S. has not kept pace. The implication is that much of the new wealth created during this time period has gone to a very small group of people at the very top of the economic ladder.

Entrepreneurship is seen by many to be a means of redistributing this wealth more equitably. Although entrepreneurship historically has been viewed as the lifeblood of free enterprise, many questions still remain regarding its resiliency and efficacy in increasing economic productivity and improving society. Specifically, recent research suggests that the increase in the wealth shares of the top 0.1 percent and 1 percent groups of households is almost exclusively driven by entrepreneurs.

Due to its interdisciplinary nature, entrepreneurship is a rapidly shifting and evolving field. Brown underscored the need to further entrepreneurial research from both a corporate and a policymaking outlook in order to move the discussion forward and find answers to the question of entrepreneurship's value within the current economic framework.

Finally, Brown outlined three primary goals for the conference:

- To better understand what we already know about entrepreneurship;
- To have conversations we would not otherwise have through an interdisciplinary approach; and,
- To decide on important issues we need to further explore across the field.

The proceeding summary offers highlights from each day's presentations and discussions.

# DAY ONE
## OPENING PLENARY SESSION

Howard Aldrich, *Kenan Professor of Sociology, UNC-Chapel Hill; Professor of Strategy and Entrepreneurship, UNC Kenan-Flagler Business School*

Howard Aldrich opened the conference with several ideas that challenged common perceptions of entrepreneurship. First, said Aldrich, most studies of entrepreneurial ventures are focused on "the tip of the iceberg" – the 10 percent of startups that follow what Aldrich called the "Silicon Valley model of entrepreneurship" (high growth/capitalization companies). By not looking at the overwhelming majority of companies that are less successful or even unsuccessful, researchers are missing important data.

Aldrich said by focusing on high growth/capitalization companies, we are, in essence, focusing almost exclusively on outliers. A wider research net needs to be cast in order to get a more complete picture of entrepreneurial activity. He said doing so would allow us to study "small and fragile" startups – which, Aldrich maintains, are where most jobs in the U.S. are created.

To obtain a more realistic view of entrepreneurial activity, said Aldrich, we need to view entrepreneurs as humans and focus on their learning processes. We also need to keep in mind what he referred to as the "pyramid of destruction." As we focus on the few hundreds of successful startups at the top of the pyramid, we lose data on the millions of startups underneath. Those millions of startups are where most of our focus should be. Otherwise, said Aldrich, we miss "most of the entrepreneurship that happens in entrepreneurship."

Aldrich said by focusing on high growth/capitalization companies, we are, in essence, focusing almost exclusively on outliers.

Christina Lewis, *Founder & CEO, All Star Code*

Christina Lewis highlights the value of developing an entrepreneurial mindset for boys of color to succeed in a technological world.

Next on the schedule was a fireside chat with Christina Lewis, founder & CEO of All Star Code. Vickie Gibbs, executive director of the UNC Entrepreneurship Center, led the discussion.

Lewis began by highlighting what is unique about All Star Code, a computer science education organization – namely, that it targets young men of color, especially black and Latino boys. In addition, All Star Code not only provides an education in computer science, but also helps students develop an entrepreneurial mindset. More than 400 students have graduated from the organization's six-week flagship program for high school students, with assistance from corporate partners such Goldman Sachs and Facebook.

Lewis described her upbringing as the daughter of the first African-American to own a billion-dollar company, saying that she came to understand the difficulties that men of color face in a world dominated by white males through her father's experience. That understanding impelled her to create All Star Code as a means of diversifying the pool of entrepreneurs and workers in the technology sector. Lewis said she believes that, because tech startups are a critical source of innovation and job creation, the wealth gap will widen if men of color are left behind in this important sector.

She highlighted the value of developing an entrepreneurial mindset for boys of color to succeed in a technological world. The approach All Star Code takes is based on research showing that a growth and learning mindset creates a positive overall behavioral mindset, which, in turn, can improve academic and career outcomes.

Lewis described All Star Code as being founded on the three pillars: dare greatly, celebrate failure and tell your story. She chose to work with young men of high school age because her research showed middle school is too early and college too late for students to develop the skills, credentials and networks they need to succeed.

When a member of the audience asked Lewis why she chose to target boys of color instead of girls of color, she replied, "Evidence suggests that girls are more resilient to different factors related to poverty; they are more resilient to discrimination. Boys are receiving less attention compared to girls of the same race." She added that existing accelerators, education programs and conferences do not focus on young men of color.

In describing the success of All Star Code, Lewis gave two examples: graduates Jessie and Gary. After graduating from the six-week program, both boys entered college and secured internships at prestigious companies. After an internship at Google, Jessie will soon be going to Budapest as an exchange student. Gary, who is still a senior in college, has built a strong project portfolio and is advising students in his local community as a mentor.

Lewis believes that organizations like All Star Code can have long-term effects. Just as Gary is working with students in the local community, other program graduates are encouraged to provide opportunities for other males of color, creating a ripple effect and building leaders in both the tech industry and in local communities.

In concluding her presentation, Lewis encouraged researchers in the audience to consider undertaking studies on the underrepresentation of males of color in the tech space to build awareness of the issues among practitioners and policymakers.

During his keynote presentation, Nelson said small hunches have led him to big decisions, and eventually to working with visionaries.

### Steve Nelson, *Co-founder, Carbon*

Steve Nelson attributes his entry into 3D printing to force multipliers and synchrodestiny. General Colin Powell taught Nelson about force multipliers – a factor or a combination of factors that dramatically increases your effectiveness, allowing you to multiply what you can accomplish. Deepak Chopra introduced him to synchrodestiny – which Chopra defines as "coincidence [that] contains a purpose and meaning, and has a direction and intention."

During his keynote presentation, Nelson said small hunches have led him to big decisions, and eventually to working with visionaries. Five years ago, his life changed nearly overnight when he got the opportunity to come on board Carbon Inc. as CEO and co-founder. His previous work as a venture capitalist provided the synchronicity Carbon needed to get

off the ground. "We had no money, we had a big idea," said Nelson. "I knew the best VC investors in the world and in history." In one afternoon, he added, they had enough funding to operate for two years.

Carbon currently has 400 employees, and has raised $400 million in capital. Some of the biggest companies in the U.S. are Carbon customers – Apple, Google, Boeing and Johnson & Johnson among them. It's a far cry from the early days, when the founders built the first printer out of wood and printed a 3D ice cube as proof of concept.

"I go back to my notion of force multiplier," concluded Nelson. "How did all of this happen? I have no idea. I was the guy that had no skill other than finding good talent."

## KEYNOTE SESSION

Bonnie McElveen-Hunter, *Founder & CEO, Pace Communications and Chair of the Board, American Red Cross*

Bonnie McElveen-Hunter's experience is unique: entrepreneur (she is the founder and CEO of Pace Communications), government dignitary (she served as U.S. ambassador to Finland) and nonprofit leader (she chairs the American Red Cross).

McElveen-Hunter's keynote provided a personal glimpse into the forces that shaped her unique career.

Her keynote provided a personal glimpse into the forces that shaped her unique career. Those forces, she said, began with her mother, who told her to always look for the good in others. Her mother also instilled in her the "power of personal courage, and the nobility and necessity of service." And she literally made McElveen-Hunter and her siblings lay to rest the word "can't" by making them write it on a piece of paper and bury it in the yard.

McElveen-Hunter is passionate about entrepreneurship, calling entrepreneurs the most important economic force today. She said that as ambassador and as chair of the American Red Cross, she has personally seen how entrepreneurship is a force for creating jobs around the world.

As an entrepreneur herself, McElveen-Hunter watched the four-decade growth of her own business, Pace Communications, from sole proprietorship to communications giant with such distinguished clients as Walmart, American Airlines and Four Seasons Hotels and Resorts.

McElveen-Hunter is justifiably proud of the many awards the company has won, and cited Pace's culture as one reason for its success. In fact, she added, for entrepreneurs, culture trumps strategy in importance. She said that Pace welcomes and embraces change, and operates by the FIDO principle: forget it and drive on.

McElveen-Hunter also believes in the power of personal relationships, including those that involve giving back to clients and the community. For example, when the events of 9/11 took the lives of several United Airlines employees, Pace stepped in to help its client and established an education scholarship fund for the 21 children who had lost their parents. "We redefined family," said McElveen-Hunter.

## BREAKOUT SESSIONS

### MARKET GENESIS

**Chair**: Mahka Moeen, *Assistant Professor of Strategy and Entrepreneurship, UNC Kenan-Flagler Business School*

**Panelists**:

- Rajshree Agarwal, *Rudolph P. Lamone Chair and Professor in Entrepreneurship; Director, Ed Snider Center for Enterprise and Markets, University of Maryland Robert H. Smith School of Business*
- Joe Colopy, *Managing Director, Colopy Ventures*
- Arnobio Morelix, *Director of Research, Startup Genome*
- Mary Tripsas, *Associate Professor of Management and Organization, Boston College Carroll School of Management*

How do new markets form? How does the knowledge base underpinning innovation interact with other factors to create a new industry? This session examined the foundations of business innovation and the evolution of ideas into new market segments.

Mahka Moeen opened the session by acknowledging that understanding the emergence of new industries is vital to understanding the determinants of economic growth. To understand markets and industries, we must look at their "root structure," she said.

- Technological viability (Does the product or service work, given current technologies?)
- Demand (Where and how can it be employed?)
- Ecosystem (What else is needed for it to be viable?)
- Institutional (What social/formal institutions affect the structure of a product or service?)

Picking up on the theme, Rajshree Agarwal said that, in many ways, the process of market emergence is still a black box in need of further research and exploration. However, she added, experimentation can answer many of the questions about market genesis.

One thing Agarwal's research dispels is the idea of the "lone entrepreneur" with a breakthrough invention that launches a new industry. Instead, she said, it is much more common for several individuals to be conducting experimentation and making investments

Agarwal said that in many ways, the process of market emergence is still a black box.

in the same area prior to commercialization of a product.

An additional area for research, according to Agarwal, should be the institutions underlying market creation and industry formation. Most extant literature has focused on developed markets, primarily in the West. But the traditional migration of innovation and technology from West to East is no longer dominant. For example, mobile payment technology developed first in the East, because developing countries already had the institutional infrastructures to accelerate its development. Therefore, Agarwal believes that more research is needed on the role of underlying institutions in new market generation.

Joe Colopy put a personal spin on the topic of how new markets form by relating his own path to becoming a successful entrepreneurship in an emerging market. Colopy decided to become an entrepreneur during the dot-com boom of 1999. He did not have a clear vision for a product or service, but knew it would involve both software and an online component.

Eventually, Colopy started a company in the relatively nascent software-as-a-service (SaaS) market. The company, Bronto, quickly grew from a local entity to have a widespread international presence. Ultimately, as the SaaS market matured, Bronto was acquired by Oracle.


Colopy has now embarked on a new eponymous endeavor, Colopy Ventures, to found and fund startups in and around Durham, North Carolina. His goal is to facilitate connections and investments to help others succeed in the entrepreneurial tech space.

Arnobio Morelix moved the conversation to an exploration of some of today's fastest-growing markets, particularly in the tech industry. According to Morelix, artificial intelligence (AI), blockchain and advanced manufacturing are in rapid growth mode. Interestingly, he said, entrepreneurs in these markets seem to counter the trend of younger startups. Typically, the founders of companies in these markets are older and more likely to have graduate degrees.

At the other end of the tech market growth spectrum, said Morelix, are digital media, adtech and gaming, all of which are declining.

Morelix raised concerns about the geographic distribution of new markets, stating that 80 percent of new market value creation is limited to the world's 10 largest cities. He also referenced the current slowdown in productivity growth as a potential barrier to creating new markets.

Finally, Mary Tripsas delved into a look at market emergence from the perspective of cognitive convergence. Conventional wisdom, said Tripsas, holds that technical variation is rampant in the early stages of a market or industry, but that as the market matures, it settles on a dominant design. An alternative perspective, said Tripsas, is to focus on the shift in cognitive convergence, rather technical convergence.

Tripsas said that industries develop a collective identity. Firms that do not fit the collective identity struggle to gain acceptance from potential customers. In her experience studying

market segments such as air taxis, digital cameras and music synthesizers, Tripsas found that, in established market segments, newcomers attempt first to fit the collective identity of the market, then work toward "optimal distinctiveness" as they mature – something that will distinguish them from the pack. In an emerging market, this approach is unavailable to newcomers, since a collective identity has not yet been established for the industry.

## LOWERING BARRIERS FOR DIVERSE ENTREPRENEURS

**Chair**: Carolyn Rodz, *Founder and CEO, Alice*

**Panelists**:

- Dell Gines, *Senior Community Development Advisor, Federal Reserve Bank of Kansas City*
- Henry McKoy, *Faculty Member and Director of Entrepreneurship, North Carolina Central University School of Business; Managing Director of the Eagle Angel Network, North Carolina Central University*
- Jessica Tabbert, *CEO & Founder, J. Gisele*
- Qingfang Wang, *Associate Professor of Public Policy, University of California at Riverside*

Dell Gines highlighted a deficit of research as a hindrance to truly understanding the barriers for diverse entrepreneurs.

Evidence suggests that barriers to financial support, mentors and other essential facets of entrepreneurial ecosystems help explain why female and minority entrepreneurs are under-represented. This session explored opportunities to lower barriers and to determine what else is needed from industry and policy to promote more equal opportunity.

Carolyn Rodz kicked off this roundtable discussion by highlighting the aim of the session: not only to identify the barriers for diverse entrepreneurs, but also to better understand why such barriers exist and how scholars and practitioners can resolve them.

Panelists began the conversation by identifying the barriers to entrepreneurial diversity. "Education is the first and foremost barrier," said Jessica Tabbert. Henry McKoy noted that, for minority entrepreneurs, obtaining capital is perhaps the greatest challenge. Qingfang Wang cited the results of her research that shows there are three types of capital—human, financial and social—critical to entrepreneurial success, yet entrepreneurs from underrepresented populations lack access to these resources. In particular, she said, these groups lack role models in their local communities from which to draw information and support.

Rodz agreed that both awareness and access are critical, yet lacking, among minority populations. During her conversations with entrepreneurs, she has consistently found that women entrepreneurs' confidence levels are the same as those of their male counterparts, but many lack knowledge of entrepreneurial processes, including how to access outside capital. Rodz said that, on average, female entrepreneurs, compared to their male counterparts, start with half of the capital and receive less funding and fewer loans.

Dell Gines highlighted a deficit of research as a hindrance to truly understanding the barriers for diverse entrepreneurs. He acknowledged that researchers lack data to support important research questions on these entrepreneurs.

Next, the panelists turned to existing solutions to entrepreneurial equity, and whether these solutions are working. Gines noted that, in general, the entrepreneurial community exhibits a lack of awareness of the barriers for underrepresented groups, adding, "People either don't know or don't care—I think in America it is the combination of both." He emphasized that researchers should be more diligent in making their study results available to the public and increasing awareness of the issues.

Wang focused on solutions that entrepreneurship centers at universities can introduce. Saying that most entrepreneurship centers focus on high-tech, high-growth entrepreneurs, Wang suggested that universities and centers make a conscious effort to bring in underrepresented populations to "educate them to build human capital [and] encourage them to build social capital, so that they can access financial capital."

McKoy indicated that communities with strong government procurement programs tend to address entrepreneurship barriers better than others, and advocated for more work and research in this area. Tabbert proposed more intentional programs to help diverse entrepreneurs develop basic skills. She cited WeWork's Veterans in Residence program,

Carolyn Rodz and Henry McKoy discuss barriers for underrepresented entrepreneurs.

a joint partnership between WeWork and Bunker Labs that empowers and resources U.S. military veterans and their families to start their own businesses. Rodz advocated for more members of the corporate and business community to commit to actively helping underrepresented entrepreneurs. Products and services that target underrepresented populations, such as Rodz's startup incubator, Alice, can provide opportunities for information, community and support that are otherwise unavailable to these populations.

Finally, Rodz opened the floor for a joint brainstorming session. One suggestion involved identifying the stage(s) of the entrepreneurial process at which biases come into play, perhaps by tracking entrepreneurs who are initially rejected by accelerators or venture capitalists at the seed stage. A better understanding of when and how biases occur is necessary to develop feasible solutions.

Bobby Franklin, president & CEO of the National Venture Capital Association, approached the question from the viewpoint of funders. Franklin noted that the institutional capital community is responsible for shaping the demography of the entrepreneurship ecosystem, and that that community can be insular. Franklin sought ideas and suggestions from the participants on how to broaden the awareness of venture capitalists. He also suggested the development of more micro-VC firms to invest in startups founded by entrepreneurs from underrepresented geographic, gender and ethnic backgrounds, and the reform of the Volcker Rule to encourage more investments into minority- and women-owned startups.

Participants also discussed the importance of incentivizing resource providers. Many agreed that resources to lower the barriers do exist, yet people with existing access to human, financial and social capital currently don't have much incentive to share those resources.

Rodz noted that, in her experience, having a high-profile investor in the cap table helps bring in additional funding. Thus, it is crucial to attract these high-status actors to take the first step in providing resources to the underrepresented entrepreneurs.

## THE FUTURE OF FINTECH

**Chair**: Olav Sorenson, *Frederick Frank '54 and Mary C. Tanner Professor of Management, Yale School of Management*

**Panelists**:

- David Robinson, *Professor of Finance and J. Rex Fuqua Professor of International Management, Duke Fuqua School of Business, for Lin William Cong, Assistant Professor of Finance, University of Chicago Booth School of Business*
- Eric Ghysels, *Edward Bernstein Distinguished Professor of Economics, UNC-Chapel Hill; Professor of Finance, UNC Kenan-Flagler Business School*
- Marina Niessner, *Vice President, AQR Capital Management*

The explosion of applications for blockchain technologies is transforming the financial services industry. These innovations and other advances have resulted in substantial venture capital flowing to the fintech industry at the same time that new technologies are altering how entrepreneurial firms raise capital. This session explored where fintech is taking us with initial coin offerings (ICOs), new financial technology and the rapid reshaping of the financial infrastructure through disruptive technologies.

Moderator Olav Sorenson kicked off the panel by explaining that fintech is not yet well defined. Multiple innovations fall under the rubric of fintech, and fintech interacts with

entrepreneurship in multiple ways, muddying the waters as to what exactly fintech is.

Sorenson said, however, that fintech is changing entrepreneurial finance in fundamental ways. For example, text analysis and machine learning are transforming how financial institutions perform credit scoring, which has the potential to dramatically expand entrepreneurial finance in developing countries. Crowdfunding platforms also have the potential to do the same.

Eric Ghysels turned the discussion to one particular type of fintech – robo-advising. Robo-advisory services are a class of financial services that provides investment management with minimal human intervention, typically using algorithms to automatically allocate, manage and optimize client assets. Robo-advising is a fast-growing application of fintech for asset and wealth management. Examples of robo-advisors include Wealthfront (launched in 2008) and Betterment (launched in 2010). While robo-advisors demonstrate a lot of promise, we have only limited evidence thus far regarding their performance and effect on the financial ecosystem.

Ghysels said that his research suggests that lower-income individuals stand to gain the most from robo-advising. For reference, the median mean-variance return spread for high-income individuals was -1.5 percent, whereas the corresponding median spread for low-income individuals was +8 percent. Ghysels warned, however, that studies also suggests that there is reason to be concerned regarding the fragility of the algorithms in response to financial crises.

In summary, Ghysels said that industry experts believe that the ultimate market for robo-advisory services is in developing countries, not the United States. There is hope that robo-advisory services can help the historically disadvantaged and poor, who often lack financial literacy and access to financial planning. However, there is still much to learn about the behavior of robo-advisors, particularly on whether the underlying algorithms are robust to crisis.

Marina Niessner turned the discussion to ICOs. Niessner said that ICOs mark a significant innovation in entrepreneurial finance, representing more than $18 billion in capital raised between January 2014 and June 2018. Yet as a nascent financing mechanism, there is still much to learn about the characteristics of ICOs and their potential for success. While they represent an alternative way of raising capital, they are almost completely unregulated.

Presenting findings from research she undertook with Sabrina Howell and David Yermack that studied a dataset of approximately 1,600 ICOs, Niessner said that only 8 percent of those ICOs were VC-backed, and 14 percent did not have an associated white paper. Although white papers are not a formal, legal document, this lack of business plan

documentation highlights the "Wild West" regulatory environment currently in place for cryptocurrencies.

Niessner's research also showed that ICOs are more successful when the firm has a white paper and other proxies for better corporate governance in place, in addition to VC backing. Issue/founder characteristics are also important. Prior computer science background seems to matter most for ICO completion, but previous entrepreneurial experience matters more for liquidity and continued interest. In the post-ICO stage, the importance of technical expertise seems to fade, and the relevance of a business background grows.

Niessner next turned to the importance of social media to the fintech revolution. She said that approximately half of retail and institutional investors get information from knowledge-sharing platforms such as SeekingAlpha and Motley Fool. As such, it is important to understand what type of information is available on these platforms, how it spreads and how it affects financial markets. In particular, social media platforms make it easy to spread false information.

Niessner's research estimates that roughly 4 percent of articles on financial social media sites involve fake news. Also, these fake articles do, in fact, affect financial markets and move stock prices. However, smaller firms are more likely to be affected; abnormal trading volume and temporary price impact increase following fake news for small firms, but not for large firms.

Turning to the blockchain market structure, David Robinson was next to present, using information prepared by Lin William Cong, who was unable to attend the conference. Robinson said that the central idea behind blockchain advocacy was decentralized, anonymous consensus. The original thesis was that decentralization democratized the process, but questions have arisen as to the technical limitations of decentralization and the fundamental tension between decentralized consensus and information distribution.

Robinson said that, to understand where fintech is moving, new focus must be placed on how changing the medium of transaction can shape and interact with other economic forces. For example, how does fintech support the increasingly common economic reality of the "gig economy," with its intermittent spells of temporary employment and unemployment?

Robinson also said that more exploration of how cryptocurrencies and "tokens" differ from other assets needs to be undertaken. Fundamentally, crypto tokens are not assets backed by streams of cash flows; instead, their value is based upon their scope of network adoption. This makes it exceedingly challenging to apply standard finance tools to cryptography-based assets. What is a crypto token actually worth? Cong and others have

attempted to answer just that by formulating a model that incorporates endogenous user adoption into cryptocurrency asset pricing. The model speaks to the supply of platform tokens, cryptocurrency competition and pricing assets under network externalities.

Turning to big data and its applications, Robinson said that many of the celebrated neural network models and other "big data" statistical techniques have as their goal to fit data as well as possible, which can run afoul of economic theory quickly. Approaching the data purely from a set of statistical algorithms without any form of underlying theory to constrain the technique can lead both to overfitting the data and missing the underlying model that's driving the behavior. Statistical tools need to be married to economic models in thoughtful ways for big data analysis to be successful.

Robinson described recent work by Cong to examine the application of big data techniques for textual analysis. Much current text analysis treats text as "a bag of words," and involves performing raw word counting exercises on large unstructured pieces of text. This, however, ignores the subtle nuances of how linguistics operate.

Cong's work combines existing "black box" methods with new linguistic tools to glean more accurate information from text. It provides a general framework for large-scale analysis of text data that captures complex linguistic structures while ensuring scalability and interpretability.

## FOUNDING TEAMS

**Chair**: Chris Bingham, *Philip Hettleman Distinguished Scholar, Professor and Area Chair of Strategy & Entrepreneurship, UNC Kenan-Flagler Business School; Co-Director of Kenan Entrepreneurship Initiative*

**Panelists**:

- Emi Abramzon, *Co-founder, Nearpod*
- Jaclyn Baumgarten, *CEO & Co-Founder, Boatsetter*
- Y. Sekou Bermiss, *Associate Professor of Management, University of Texas at Austin McCombs School of Business*
- Michael Freeman, M.D., *Department of Psychiatry, UCSF School of Medicine; Cofounder, CentraLink; Founding Chief Medical Officer, Triggr Health*
- Sonali Shah, *Associate Professor of Business Administration, University of Illinois Gies College of Business*

The selection of a founding team may be the most important decision contributing to venture success. This session examined the dynamics of co-founder teams and their influence on the success of their business.

Emi Abramzon, who has founded four companies, stressed the importance of knowing your co-founders well. "In corporate America," said Abramzon, "if you don't get along with

someone you can go around it or find some way to avoid it." But in a small entrepreneurial venture, you have to make the dynamics work.

One of the ways to do this, said Abramzon, is to keep the focus on the business. During the early stages of a business, many situations have multiple options. His advice was for teams to focus on agreeing on just a few things and getting them right, rather than trying to do everything.

In addition, Abramzon said that hiring the right people is critical. Even though early-stage hiring budgets can be slim, hiring the wrong initial team can devastate a company. Abramzon said that, in one of his companies, looking to investors for hiring suggestions was key to putting together the right founding team.

For Jaclyn Baumgarten, putting the right team together starts with knowing your own skill set, strengths and weaknesses. She said that founders need the emotional maturity to recognize where there are gaps in their skills and experience, and hire to fill those gaps. Another critical element to success is developing a foundation of trust. She related her own experience of selecting her co-founder by spending 10 days together with her and both their respective spouses in a vacation home to quickly determine whether they felt comfortable with each other.

Finally, said Baumgarten, team dynamics are important. In her opinion, it's critical to find people who think differently and can provide constructive pushback. She also warned that constructive pushback is not the same as toxicity, and that founders should "hire slow, but fire quick" when the situation warrants it.

Y. Sekou Bermiss' research on the advertising industry revealed something interesting about founding team dynamics. His research found that if an advertising company lost one of its creative leads, it didn't hurt the company's success. Losing a back office lead, however, put many firms in jeopardy. The reason was that back office work, while not wildly heralded, is critical to the business. The lesson is that firms need to understand and appropriately value positions critical to their success.

In Sonali Shah's experience, there is still much to learn about how founding teams are formed. One type of team Shah is familiar with, however, is the type of team formed when a lead employee leaves an existing firm to build their own enterprise. Many times, such a "ringleader" will look to other employees within their previous firm to bring on as co-founders. This often results in a founding team with a complementary skill set and goals that are aligned. Team members are familiar and comfortable with each other, and used to each other's work styles.

As part of his work as a psychiatrist, Michael Freeman has provided about 5,000 hours of psychiatric care to entrepreneurs. He is also a serial entrepreneur himself. Both of these experiences have given him unique insights into the minds of entrepreneurs.

According to Freeman, entrepreneurs have a specific mental health profile. Their personality is defined by five key foundational traits: high levels of openness, achievement orientation and extraversion, and lower levels of agreeableness and neuroticism. Freeman also said that entrepreneurs are more likely than non-entrepreneurs to have ADHD, hyperactivity and bipolar attributes, all of which are associated with higher levels of dopamine. These increased dopamine levels propel entrepreneurs to seek out and explore opportunities.

To successfully meet the demands and pressures of running a business, said Freeman, entrepreneurs need to develop emotional intelligence. They must recognize and manage their own emotions and those of others. They also need to be highly attuned to the cultural aspects of their organization and possess well-developed social skills.

With respect to co-founding teams, Freeman added, co-founders need to "merge their minds." The capacity to be in tune with the larger group is critical to the team's success. The reason, he said, is that humans are social creatures, and in groups, our minds synergize.

Session chair Chris Bingham wrapped up the discussion by observing that many entrepreneurs compare the co-founding relationship to a marriage. Interestingly, in Bingham's experience, the most successful of these relationships appear to be more like arranged marriages, in which a third party introduced previously unacquainted co-founders.

## PRINCIPLED ENTREPRENEURSHIP EDUCATION

**Chair**: Tom Byers, *Professor of Entrepreneurship, Stanford School of Engineering; Co-Director, Stanford Technology Ventures Program*

**Panelists**:

- DeLisa Alexander, *EVP and Chief People Officer, Red Hat*
- Laura C. Dunham, *Associate Dean, Entrepreneurship, Schulze School of Entrepreneurship, University of St. Thomas*
- Jon Fjeld, *Interim Director of Innovation & Entrepreneurship, Acting Director of Graduate Studies, Duke University; Professor of the Practice, Professor of Philosophy, Executive Director of the Center for Entrepreneurship and Innovation, Duke University Fuqua School of Business*
- Laura Maydón, *Managing Director, Endeavor Miami*

Recent ethical violations and legal troubles at start-up firms have highlighted a disconnect between entrepreneurial business culture and acceptable behavior. What do we know about what is driving this issue, what do we need to learn, and most important, how

should the academic community and the broader entrepreneurial ecosystem close this gap?

Tom Byers started the session by referencing two recent books that denounce the perceived lack of attention to ethics in Silicon Valley tech startup culture: "Brotopia: Breaking Up the Boys' Club of Silicon Valley," and "Bad Blood: Secrets and Lies in a Silicon Valley Startup."

"The world is just waking up to this," said Byers, "This is our own Enron and Madoff and tobacco moment. Now it's up to us to take action."

DeLisa Alexander is no stranger to the culture Byers described. As a female tech company executive, Alexander called the prevailing ethos among tech companies a "masculinity/contest culture."

Alexander said she views the problem as a result of startups being too focused on certain things, such as pitch, speed to market, pivoting and risk-taking. She said entrepreneurs aren't given training in "inspiring and pulling people along."

"If we would teach more principled leadership in curriculum and personal development," asked Alexander, "would this effort yield different outcomes? Would we have better

Participants discuss the topic of entrepreneurship ethics.

returns? More successful companies? Women getting funding? Faster innovations, more diverse populations participating in startups?"

Part of the solution, said Alexander, is to provide leadership training to would-be entrepreneurs early on, during their college years.

Laura Dunham said that, as an educator at a Catholic university, she has a ready-made framework for incorporating ethics learning into entrepreneurship education. This framework includes the principles of treating everyone as an equal, pursuing the common good in all actions and maintaining a social justice focus.

"For my school," said Dunham, "the purpose of the firm is not to maximize shareholder value or profit. Entrepreneurship is about solving problems that matter to you and creating value for others." Entrepreneurship education needs to include both market discovery and self-discovery, she added.

Jon Fjeld took up the ethics banner by discussing the approach to teaching entrepreneurship he uses at Duke University. Students are encouraged to think about entrepreneurship not as a thing, but in terms of actions. They're also taught to ask questions about each action: How does this advance my goals? What is its purpose? What are the consequences to both me and to others? Does this conform to the principles I've set for the enterprise?

Laura Maydón and Endeavor Miami offer scale-up support to high-impact entrepreneurs. She raised the question of whether entrepreneurs start out to deliberately act unethically, or if the stresses and high stakes of taking a startup to the next level lead entrepreneurs to act unethically out of fear.

"Growth can cause a firm to lose principles along the way," said Maydón. "Fear can lead the decisions of high achievers." The goal of education, Maydón said, should be to help entrepreneurs think about the responsibilities of being a leader, including developing and adhering to principles.

## CORPORATE SPAWNING

**Chair**: Maryann Feldman, *Heninger Distinguished Professor of Public Policy & Finance, UNC Kenan-Flagler Business School*

**Panelists**:

- Ryan Decker, *Economist, Federal Reserve Board of Governors*
- Sabrina T. Howell, *Assistant Professor of Finance, New York University Stern School of Business*
- Igor Jablokov, *Founder and CEO, Pyron*
- Matthew Rhodes-Kropf, *Visiting Associate Professor, Finance, MIT Sloan School of Management*

Corporate spawning is when employees of incumbent firms quit their jobs to spin out entrepreneurial ventures. Data shows that the average startup founder today is 40 years old, rather than the stereotypical new college grad (or younger). Can mid-career spawning be the reason for the increasing age of the average entrepreneur?


Maryann Feldman opened this session by presenting data on spawning activity among several large companies in North Carolina's Research Triangle Park. Over the past 20 years, 140 spawns can be traced back to a single company in this area. Although the number of spawns has decreased overall, data shows that spawning spikes have occurred whenever the company was involved in potential merger discussions. Feldman said that one conclusion that might be drawn is that employees begin thinking about outside opportunities when they suspect their current positions might be in jeopardy.

Ryan Decker began his presentation by focusing on the broad question of why researchers and practitioners should care about new firms. The advantages of incumbent firms, said Decker, are that they drive wage growth while being able to take advantage of economies of scale. On the other hand, he said, incumbents struggle to adapt to changing environments.

Decker shared data that indicates that new entrants into industries are strong drivers of productivity growth, whereas mature firms show no such growth. Even when accounting for productivity selection (meaning that only productive new ventures survive early stages), young firms are found to make a large and disproportionate contribution to employment growth. As such, we might characterize the spawn's role as piggybacking on the incumbent's advantages while retaining the adaptability of a small firm.

Next, Sabrina Howell presented some of her recent work on research and development (R&D) leading to knowledge spillovers – the idea that knowledge created inside an established firm can be appropriated by employees to form new ventures. Howell tracked employees across firms and found that a 100 percent boost in R&D spending led to an increase of 8.4 percent in departures to entrepreneurship.

Matthew Rhodes-Kropf took an "investor insider view" of spawning, arguing that there is still relatively little that we know about the origin of new firms. While some contend that spawning is the result of learned behavior of employees being internalized and applied outside of the original firm, others maintain that a stifling environment is what pushes employees to launch a competitive firm. Rhodes-Kropf also said more research is needed to compare corporate spawns with other entrepreneurial ventures.

Igor Jablokov, who has spent his career working on artificial intelligence assistants, like Apple's Siri, wrapped up the session. Jablokov said that progress on such assistants is nonlinear, and that the need for rapid innovation on uses for the devices is a poor fit for the slow and restricting structures of large, hierarchical firms. Instead, said Jablokov, he looks to entrepreneurs and corporate spawns to champion novel ideas for use.

While entrepreneurial successes are celebrated, failures – which can be devastating – are frequently not discussed.

Chip Paucek
*CEO and Co-Founder, 2U*

## KEYNOTE SESSION

Chip Paucek, *CEO and Co-Founder, 2U*

The Thursday evening keynote was provided by Chip Paucek, CEO and co-founder of 2U, an education technology company that partners with leading colleges and universities to provide online degree programs.

Paucek's presentation outlined his personal path to the leadership of 2U. He began by stating his conviction that entrepreneurship is much harder than many people realize. While entrepreneurial successes are celebrated, failures – which can be devastating – are frequently not discussed.

Paucek is no stranger to such failures. His undergraduate studies at George Washington University were in liberal arts, and he had never taken a business course before he started his first company right out of college. That company folded, and Paucek realized he needed a better grounding in business.

He embarked on an MBA degree at UNC Kenan-Flagler Business School, while simultaneously managing an initial public offering for 2U. He knew that, in order to do both, he'd need extra time to complete his degree. He asked the school's dean, Doug Shackelford, for an extension. As a result, Paucek proudly holds the record as the longest-standing MBA student at Kenan-Flagler.

Paucek largely credits his success to his father, who, while never attending college, was

an entrepreneur his whole life. Paucek said his father taught him much about luck and opportunity.

He is also a firm believer in education "as a path to an incredible life." He said George Washington University changed his life "in every possible way," and that the knowledge he gained at Kenan-Flagler informs his approach to business to this day.

Another of Paucek's guiding principles is the power of relationships. When he resigned from his position in Senator Barbara Mikulski's (D-Maryland) office to start his own company, Mikulski invested in his future and handed him a check for $5,000. "As a former social worker," said Paucek, "she believed in me." Several years later, when Mikulski was up for reelection, Paucek took a break from the business world to serve as deputy campaign manager for Mikulski.

Paucek said he has learned as much from his failures as his successes. One of his earliest entrepreneurial ventures was Cerebellum Corporation, which produced the award-winning educational television program Standard Deviants. The company began to fail after 10 years when its interests became too thinly spread. Paucek had to lay off employees, which he said pains him to this day. From Cerebellum's demise, he said he learned the power of focus.

Chip Paucek and Doug Shackelford enjoy a pre-dinner reception.

One of Paucek's successes was Smarterville, Inc., the parent company of Hooked on Phonics. As CEO, Paucek took the company worldwide.

Paucek's next venture was 2U. From a handful of university partners, the online degree company has expanded to become one of the fastest-growing businesses in Maryland and just celebrated its five-year anniversary with NASDAQ. The company supports university programs worldwide, and has nearly 2,000 employees at its headquarters in Maryland and housed in satellite locations across the country.

Paucek closed his presentation by sharing some key learnings he's amassed over his years of starting and leading companies:

- Entrepreneurship is difficult. Most entrepreneurs don't get it right the first time; those who do are lucky.
- Entrepreneurs are frequently "attracted to bright shiny objects." Focus is critical to success.
- "No is easy; yes is hard." Entrepreneurs should not be deterred by skepticism, particularly their own.
- Continuous learning is critical to successful entrepreneurship.
- Culture is important, and there is power in an organization's trusted brand.

- Entrepreneurs can easily get caught up in "the cult of personality." The company is not about the entrepreneur, and the entrepreneur has to be smart enough to know what he/she doesn't know.
- Entrepreneurs need quality employees. Paucek's definition of quality? "Hire the people who brighten the room."

# DAY TWO
## PLENARY SESSION: THE CHANGING LANDSCAPE OF GROWTH FINANCING

**Chair**: Brett Palmer, *President, Small Business Investor Alliance*

**Panelists**:

- Bobby Franklin, *President & CEO, National Venture Capital Association*
- Anne Glover, *Chief Executive and Co-founder, Amadeus Capital Partners*
- David Robinson, *Professor of Finance and J. Rex Fuqua Professor of International Management, Duke Fuqua School of Business*

Presenters David Robinson and Vickie Gibbs share a light moment.

As the profile of venture investors has altered significantly in the last 15 years, access to growth capital has changed substantially. This has caused various spillovers, including companies staying private longer and new strategies for growth investors. Who are the winners and losers in this shifting landscape, and what are the unexpected consequences?

Brett Palmer set the stage for the session by describing the path of venture financing from the tech bubble of 15 years ago through the financial crisis that followed. He then opened up the discussion to the panelists to help determine where we are now, and where we might be headed in the future.

Bobby Franklin provided National Venture Capital Association statistics from its 2018 Venture Monitoring Report. A record year for venture capital, 2018 saw $130 billion in investments – the first time investments broke the $100 billion mark since the financial bubble.

Franklin cautioned, however, that the numbers tell only part of the story. Valuations have doubled at many stages (seed, series A and others), and those at the D+ stage have tripled. While the overall amount of investment has increased, the number of deals has declined.

Franklin also said that there has been an increase in non-VC dollars. VC funds raised $558 billion in 2018, which means there is a significant amount of the $130 billion in total investments that is coming from other sources – tourist capital, corporate venture groups and others. Therefore, though many companies are referred to as venture-backed, in some cases that is a misnomer.

David Robinson took up the discussion with an exploration of new structures, such as search funds. Robinson said there has been a tremendous surge in the number of his students who want to launch search funds. The advantage, as Robinson sees it, is that search funds represent an important evolution in the way private capital is organized, pushing out the private capital fund structure toward some of the smallest businesses in the market and allowing them to access capital more easily.

Brett Palmer said that he has seen a rise in the number of independent sponsor transactions among SBIA members. These transactions are typically conducted by executives with real industry expertise, who are seeking a company that they can reinvent or scale, but who don't have the funds to buy the company outright. Palmer attributed the uptick in such deals to generational transfers from retiring baby boomers.

Palmer also discussed the SBIC lending program, which allows SBIC-approved private capital funds to access a credit facility allowing various exemptions (SEC registration, Volcker Rule) and to leverage up to $175 million per fund. The only restriction is that funds must exclusively invest in domestic small businesses. The program has been surprisingly successful, with losses currently running at a six-year low.

Participants took part in roundtable discussions.

Anne Glover provided a European market perspective. She said while the European market has shown improvement, the numbers remain shockingly low compared to the U.S., with Europe raising only $10 billion and investing $20 billion in 2018 despite the fact that Europe's economy is roughly the same size as the U.S. economy. Glover said that the good news is that this $20 billion is the largest amount ever for total annual investment in the EU.

Glover also discussed the makeup of VC financing in Europe, saying that 20 percent of deals include U.S. investors, and 20 percent include corporate investors. Of the corporate investors, Chinese firms are among the largest group, especially as U.S.-China relations have cooled and China looks to Europe.

Glover and Robinson also raised the idea of the European Commission's interest in starting programs similar to the U.S. SBIC program, in which companies are provided a lending window to private capital. Glover mentioned the success of Horizon 2020, which is the research arm of the commission's efforts to boost growth. From a research and technical perspective, said Glover, academics have also made strong pro-growth reform arguments, which may push the European Innovation Council to consider new initiatives.

Glover did note, however, that European ventures in the past 10 years have been funded by the government at a rate of 40 percent. This contrasts with 15 years ago, when private capital was much more readily available. Glover said that governments as investors often

have "institutional sclerosis" – that is, no desire to scale down to allow private capital in. One of the key issues facing European venture capitalists is how to get trillions of dollars in pension fund money interested in the asset class. Because there is almost no investment from domestic private institutional players in Europe, many are looking to the U.S. for capital.

Franklin said the U.S. faces challenges similar to those in Europe, with respect to a lack of enough institutional capital to support regional markets. In 2018, he said, 60-70 percent of investment dollars went toward activity in three states: New York, Massachusetts, and California. Half of the deals made were in the other 47 states.

Franklin also said that 2018 saw a sharp decline in angel investment relative to a near-high two years ago. On the other hand, he said, micro-VC investment has increased in what he called a "spray and pray" model.

Ryan Stone (left) and Brett Palmer catch up between sessions.

In a discussion of U.S. policy, Franklin said one of the challenges is that Washington, D.C., is "run by big companies." Fortune 500 companies pump large amounts of money into lobbying efforts, thereby heavily influencing policy. There is also a lack of attention in Congress to high-growth companies, which, Franklin said, are major sources of new job creation.

Franklin also cited a lack of both refundable R&D tax credits and an immigration visa category for entrepreneurial activity as two major impediments to high-growth firm creation in the U.S. He cited a statistic that shows that 20 years ago, more than 90 percent of global venture capital dollars went to U.S. startups. That number is now only 54 percent. Glover added that this statistic also reflects the rise of tech R&D and production in China, which is in direct competition with the U.S.

Returning to the earlier topic of valuations, Glover raised the question of how the industry is preparing for a potential decline in valuations – for example, in the event of a stock market crash.

Franklin said that the largest VC firms have stepped up their fundraising, raising questions about whether they might be preparing for a downturn. He asked, "Given an environment characterized by the lack of public companies, the lack of IPOs, the fact that companies are staying private longer—does that mean capital will find its way [to investment targets] regardless?"

Glover said that would probably not happen, given the current liquidity pressures on funds. Robinson posited that, if valuations were to decline—especially considering the provisions in some later stage rounds—in order to get subsequent funding and exit at

lower valuation, tremendous dilution would be created for earlier investors.

Glover said that in the U.K., the argument she has been trying to advance is that "patient" capital is needed. She said 10-year fund lifecycles simply don't work now that firms stay private for longer periods of time. A related consequence of this trend is that secondary funds are becoming increasingly large and important.

## BREAKOUT SESSIONS

### WHAT SHOULD POLICYMAKERS BE DOING TO HELP ENTREPRENEURS?

**Chair**: Greg Brown, *Sarah Graham Kenan Distinguished Professor of Finance, UNC Kenan-Flagler Business School; Executive Director, Kenan Institute*

**Panelists**:

- Rebel A. Cole, *Kaye Distinguished Professor of Finance, Florida Atlantic University*
- John Dearie, *Founder and President, Center for American Entrepreneurship*
- John Duca, *Vice President, Federal Reserve Bank of Dallas*
- Mary Moore Hamrick, *National Managing Principal - Public Policy, Grant Thornton*
- Jason Rathje, Ph.D. Candidate, *Management Science and Engineering, Stanford University*
- Hans Rawhouser, *Assistant Professor, Management, Entrepreneurship and Technology; UNLV Lee Business School*
- Igor Tasic, *Founder and CEO, Startup Europe Week*
- Xinxin Wang, *Assistant Professor of Finance, UNC Kenan-Flagler Business School*

This session focused on the current relationship between policy and entrepreneurship, including what systemic changes in finance and access to capital are needed to encourage entrepreneurship.

John Dearie opened the discussion with the acknowledgement that, in many discussions about what makes a healthy entrepreneurial ecosystem, public policy is overlooked. He said public policy will be a key factor in reversing the current historic low startup rate. New ventures are frequently not on the radar for policymakers, and small business owners are too busy growing their companies to advocate for themselves.

Jason Rathje added that federal regulations are frequently convoluted and onerous, particularly with respect to activities like bidding on government projects. Rathje saw the struggle for small businesses firsthand as an engineer in the U.S. Air Force. Many businesses did not have the time to complete grant forms or the ability to increase staff to comply with contract regulations, said Rathje, making it too costly in time and effort for them to do business with the government.

John Duca discussed how financial reform ultimately decreased the amount of capital

available to small businesses from banks – an unintended consequence of the government's rush to mitigate financial risk.

Rebel Cole agreed, saying that because of the post-financial crisis reforms, large banks no longer readily lend to small businesses. Small banks, which lend to entrepreneurs, are now engulfed in regulations. In addition, regulations have made it exceedingly difficult to establish new banks, further restricting entrepreneurs' access to bank funding.

Mary Moore Hamrick expressed optimism over the possibility of surmounting obstacles mentioned by the other panelists. She said that, for policies to work, agencies need to set goals for their programs and measure whether or not they are meeting those goals. Sharing this measurement data with researchers is one way to hold policymakers accountable, so that funds go only to those programs that actually meet their goals.

Dearie suggested that one solution is the development of an angel investors network. According to Dearie, nine million investors in the U.S. meet the criteria to become accredited investors. The question is how to reach and engage these individuals to mobilize their aggregate wealth.

While crowdfunding has become a popular resource for entrepreneurs, Hans Rawhouser warned that many crowdfunding investors aren't familiar with the risks of investing in startups and have unrealistic expectations about returns. Ultimately, equity crowdfunding could crash if too many investors rush in and then get burned.

Cole turned the discussion to the Community Reinvestment Act, which he said "traps capital to where there is capital, which denies growth capital where it is needed most." While use of the act to develop affordable housing is important, Cole believes the funds would be better funneled into entrepreneurship activity. "Housing is important," he said, "but jobs enable people to afford housing and more."

On a similar note, Rathje said that many times the problem isn't the policy itself, but rather an agency's interpretation of the policy. Adding to the problem is the fact that funders of public policies change often, and with each change comes the possibility of a new and different interpretation.

Mary Moore Hamrick stressed the need for more research into what will actually spur entrepreneurial activity, and what resources entrepreneurs most need. What types of workforce training is needed? What immigration policies should be in place? Too often, policymakers are not educated about the very issues they're trying to address. More education of policymakers is critical. "Otherwise," she said, "these policies are made in a vacuum."

Dearie concurred, saying that policymakers need to communicate with entrepreneurs before designing policies. Dearie gave the example of the Federal Tax Cuts and Jobs Act. While the tax reform was touted as being pro-small business, he said it did not help entrepreneurs.

Finally, Igor Tasic provided a contrast between the U.S. and Europe. In Europe, said Tasic, less restricted funding is readily available in the form of many small regional-level grants. The "dark side" to this support is that entrepreneurs get "addicted" to the grants, and small investors are crowded out of funding opportunities.

## STRATEGY IN TECH ENVIRONMENTS

**Chair**: David Hsu, *Richard A. Sapp Professor of Management, Wharton School, University of Pennsylvania*

**Panelists**:

- Kathleen M. Eisenhardt, *Stanford W. Ascherman, M.D. Professor and Co-Director of the Stanford Technology Ventures Program, Stanford University*
- Rory McDonald, *Associate Professor of Business Administration, Harvard Business School*
- Howard Morgan, *Co-founder, First Round Capital*
- Chad Womack, *Senior Director of STEM Initiatives and the HBCU Innovation, Commercialization and Entrepreneurship, UNCF*

There is no segment of the economy that evolves more quickly than the technology sector. Traditional models of business strategy struggle to survive in such a fast-paced environment. This session explored innovation at hyper-speed and how business, policy, and educators can keep up.

Rory McDonald began the discussion by examining how the rapid influx of methodologies that encourage purposeful experimentation and rapid change for startups (e.g., Lean Startup) might help or hinder companies' abilities to compete successfully in nascent industries. Such rapid reorientations present a drastic shift in product offerings, so much so that the original focus of the company can become completely lost.

McDonald is currently studying why some startups can reorient themselves successfully while others cannot. One of the aspects he is particularly focused on is how companies can reorient successfully without facing backlash from investors, employees and others who were originally attracted by the company's initial offering.

Another of McDonald's current studies involves the costs of "evangelizing" pioneering innovations. Innovators spend much of their time garnering support for their ideas. How do technology startups evangelize effectively, and what pitfalls exist?

Howard Morgan turned the discussion to the measurement work his company does with respect to startup activity. One of First Round Capital's annual State of Startups survey found that, in many cases, startups fail due to inopportune timing. For example, online grocery business Webvan was founded before access to broadband internet service was widespread. Webvan's demise after only three years was, essentially, a consequence of the slow speed of dial-up internet service at the time it was founded.

First Round's survey work also indicates that age – or more precisely, ageism – affects the success of startups. The current trend among investors and supporters appears to be a bias toward younger entrepreneurs. Older entrepreneurs have a harder time attracting venture capital.

Another factor for startup success, said Morgan, is social networking. First Round created a network of entrepreneurs to discuss common issues and strategies. This type of peer network has proven invaluable to the heads of the startups involved.

Chad Womack moved the discussion on to his work in encouraging African-American STEM students to become entrepreneurs. Womack was instrumental in an early effort to form connections between historically black colleges and universities (HBCUs) and Silicon Valley firms.

Womack observed that most African-American entrepreneurs lack access to capital and other supports. UNCF is working to provide programs and assistance to students at HBCUs that will help close the support gap. Womack currently leads a tech ventures program that starts with helping to define entrepreneurship education for African-American students and also takes steps toward helping those students launch startup ventures.

Kathleen Eisenhardt presented some ideas for future research projects on tech environment strategies that she thinks get to the heart of questions to be resolved. They include:

- Studying how ventures with different business models compete. Eisenhardt gave the example of for-profit online education ventures 2U and Udacity versus privately-funded ventures such as EdEx.
- Studying where the bottlenecks are to entrepreneurial growth, and how successful firms eliminate those bottlenecks.
- Taking a closer look at experimentation and what types of experimentation are most beneficial for startups.
- Identifying strategies for growth after an IPO.
- Connecting case study results to macro trends.
- Understanding the value of diversity – particularly diversity in age – to successful entrepreneurial teams.

## ENTREPRENEURIAL FINANCE

**Chair**: Leora Klapper, Lead Economist, Development Research Group, The World Bank

**Panelists**:

- Sameeksha Desai, *Director of Knowledge Creation and Research in Entrepreneurship, Ewing Marion Kauffman Foundation*
- Eric Glustrom, *Founder, Watson Institute*
- Angela Hung, *Senior Economist; Director for Financial and Economic Decision Making, RAND Corporation*
- Chris Wheat, *Director of Business Research, JP Morgan Chase Institute*

How are recent trends in new financing platforms affecting capital formation among start-ups and young firms? What is the impact of digital payments on entrepreneurship and firm behavior? How can we use start-up funding data like crowd-funding and credit card information to better study early-stage financing activity?

Leora Klapper led this session, which looked at research on the ways in which entrepreneurs secure financing for their ventures. As lead economist for the World Bank, Klapper periodically surveys entrepreneurs about their financing plans, which vary from country to country. She cited various examples, including the popularity of microfinance loans in India; a Kenyan dreadlock designer who relied on digital payments from his clients to keep his business afloat; the use of fintech by Saudi women entrepreneurs; China's estimated $100 billion peer-to-peer (P2P) lending market; and the rise of crowdfunding, which is increasing access to capital for women and minority entrepreneurs around the world.

> Time and again, entrepreneurs cite a lack of access to capital as a primary obstacle to their success.
>
> Sameeksha Desai
> *Director of Knowledge Creation and Research in Entrepreneurship, Ewing Marion Kauffman Foundation*

Sameeksha Desai focused on barriers to finance. Time and again, entrepreneurs cite a lack of access to capital as a primary obstacle to their success. Desai referred to a 2016 survey in which 83 percent of employers said that, at the time of their firm's founding, they did not have access to a bank loan or venture capital. Ten percent of those surveyed said they used their personal line of credit to finance their venture.

Desai noted that a lack of access to capital shapes entrepreneurs' business process decisions, profitability and the long-term survival of their business.

Eric Glustrom discussed the work of the Watson Institute at Lynn University, which offers Bachelor of Science degrees in social entrepreneurship. The goal of the institute is to provide a practical entrepreneurship education to its students.

Glustrom said that, although raising capital is a barrier for many entrepreneurs, there are other challenges that come first – for example, learning to formulate a solid business plan.

He also recognized the fact that, for many young entrepreneurs, overwhelming student debt is the first financial barrier they must overcome. Student debt makes it difficult for young entrepreneurs to take on risk and pursue their ideas.

To combat this problem, the Watson Institute is tuition-free. Instead, students are part of an income-sharing program, in which they promise to share a certain percentage of the profits from their startups once those profits have passed a certain threshold.

Angela Hung's research focus is understanding the interaction between entrepreneurs' personal and business financial decisions. Hung outlined her ongoing research on Rollovers for Business Startups (ROBS), a program that allows individuals to use retirement savings to start their businesses, eliminating the need for outside financing.

According to Hung, 60 percent of ROBS participants report that their businesses are profitable.

Chris Wheat concluded the session with a look at how JP Morgan Chase Institute is using administrative data to perform research on small businesses. Since 2012, they have been consolidating small business data from their customers, with the advantage over the traditional survey method of a large sample size and dataset.

One key question Wheat has been studying is how small businesses manage their cash flow. The data shows that the median small business has only 27 cash buffer days in reserve. Additionally, the incentive for small firms to hold cash is low, due to current low interest rates.

## WHO ARE THE WINNERS AND LOSERS FROM INNOVATION?

**Chair**: Melissa Bradley, *Founder, Venture DC/Project 500; Senior Fellow - Metropolitan Policy Program, Brooking*

**Panelists**:

- Peter Cornelius, *Managing Director, AlpInvest Partners/The Carlyle Group*
- Michael Ewens, *Assoc. Professor of Finance and Entrepreneurship, California Institute of Technology*
- Kristoph Kleiner, *Assistant Professor in Finance, Kelley School of Business at Indiana University*
- Michael Roach, *J. Thomas and Nancy W. Clark Assistant Professor of Entrepreneurship, Cornell SC Johnson College of Business*
- Amit Singh, *President and CEO, Spectraforce*

Recent attention has focused on immigration and trade as forces leading to lower real wages for American workers. Similar sentiments exist in other developed economies. The role of innovation has been less prominent, though evidence suggests that many

skilled professions are coming under pressure from automation and other rapidly evolving technologies. This session explored the winners and losers from innovation in developed and developing economies and policies needed to address dislocations.

Moderator Melissa Bradley began the session with some statistics on the wealth gap experienced by historically marginalized communities as a result of a lack of access to innovation, citing several examples of how these communities lag behind their white male peers. For example, minority entrepreneurs are frequently charged interest rates of up to 1.5 percent more than other borrowers. Direct startup costs that often approach $50,000-$75,000 are out of reach for many minority entrepreneurs, giving them less access to marketing opportunities, financial and legal assistance and other business support services.

Bradley stressed the importance of keeping such systemic and individual challenges in mind when developing policies designed to spur innovation and entrepreneurship.

Amit Singh moved the discussion on to the effect of innovation on job creation and destruction. Singh cited a statistic that seems counterintuitive – that despite an increase in automation and technology in the workforce and a significant decline in manufacturing in the U.S. since the 1980s, the country has actually experienced a significant net increase in jobs over that time period. Even more counterintuitive is the fact that many of the new jobs that have been created are not directly related to technological innovations.

Singh cautioned, however, that jobs are once again at stake with the recent rise in artificial intelligence, machine learning and robotics. According to a McKinsey report, between 20-30 percent of jobs across various industries will soon be automated.

But innovation is also helping to create jobs, particularly in developing countries. In Kenya, for example, farmers who struggled in the past with access to farming equipment have been helped by an entrepreneurial venture that provides equipment loans to farmers, making the costs of farming less prohibitive.

Peter Cornelius continued the theme of how innovation and technological change have at times helped with new jobs creation. Cornelius maintained that artificial intelligence and machine learning will free up workers to engage in more productive activities, thereby creating new and more fulfilling jobs.

One interesting question, however, is the impact of technological change on macroeconomic indicators of productivity. There is a disconnect, said Cornelius, between current rapid technological progress and falling indicators of productivity. Does this mean experts are

measuring productivity incorrectly, or is the gap between the two a result of a lag in implementation of technology? As Cornelius stated, a fundamental framework is needed for further study.

Michael Roach focused on how immigration policies can help or hinder the ability of U.S. entrepreneurs to hire qualified employees. Roach maintains that current policies discourage entrepreneurial companies from hiring foreign professionals.

Roach's research shows that qualified international students are 50 percent less likely to accept a job offer from a U.S. startup than local students. But once established international professionals receive green cards, they are far more likely to leave a position in a larger firm and transition to a startup.

To get around prohibitive immigration policies and regulations, said Roach, U.S.-based entrepreneurs are setting up offices in places like Toronto and Vancouver, where they can take advantage of Canada's more open climate for skilled foreign workers.

Mike Ewens turned the discussion toward venture capital firms and their influence on which startups ultimately benefit from technological innovation. Venture capital firms are the gatekeeper to investing in high-growth startups, and unintended biases by these firms can sometimes limit access to certain startups. On the other hand, a clustering of venture capital around specific innovations can influence which innovations become widespread.

Ewens noted that current financial regulations, which tend to be reactive rather than proactive, are a major factor in limiting the growth of innovation. Ewens gave the example of Initial Coin Offerings (ICOs) for bitcoin entities, which took regulators by surprise. When one of the first firms offered an ICO, the Maryland Secretary of State was quick to impose prohibitive regulations.

Kristoph Kleiner kept the discussion on the financial track by describing his research with banking startups. The number of U.S. banks continues to drop precipitously (from more than 5,000 to fewer than 1,500 in the past few decades), said Kleiner, in spite of major innovations in the banking industry.

Part of the problem, Kleiner said, is that most banks are bound by tradition and not focused on innovation. Bank leaders frequently lack technical training to adapt to the changing banking environment. In addition, the barriers to entry are daunting for banking entrepreneurs. The FDIC requires individuals interested in starting a financial services operation to have prior banking experience, and the means to buy their own equity. This severely restricts the number of qualified individuals.

## WHAT DOES AN ENTREPRENEUR HAVE TO KNOW ABOUT BUSINESS? AND HOW SHOULD THEY LEARN IT?

**Chair**: Ted Zoller, *T.W. Lewis Clinical Professor of Strategy and Entrepreneurship and Director, Center for Entrepreneurial Studies, UNC Kenan-Flagler Business School*

**Panelists**:

- Sangeeta Bharadwaj-Badal, *Principal Scientist, Entrepreneurship, Gallup Builder Initiative*
- Starr Marcello, *Executive Director; Adjunct Assistant Professor of Entrepreneurship, University of Chicago Polsky Center*
- Phil Weilerstein, *President, VentureWell*
- Bilal Zia, *Senior Economist, Development Research Group, World Bank*

Entrepreneurs know the importance of investing in themselves—building valuable skills and improving their strengths over time. But how important are traditional business skills such as knowledge of finance and accounting compared to skills focused on innovation, design and identifying market opportunities? The question is important not just for entrepreneurs, but is also a fundamental issue for educators training future entrepreneurs. This session explored how we can identify the baseline knowledge a successful entrepreneur requires and the optimal mechanism for obtaining it.

Ted Zoller opened the discussion by asking, "What is the 'secret sauce' of teaching entrepreneurship?" In Zoller's experience, "entrepreneurship is a marathon, not a sprint," meaning that knowledge is only gained with time and experience.

Sangeeta Bharadwaj-Badal maintained that teaching entrepreneurship requires many different areas of expertise, including the ability to look at the subject through a psychological lens. The question to answer is, "What is the best way for entrepreneurs to think?"

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>
> Sangeeta Bharadwaj-Badal
> *Principal Scientist, Entrepreneurship, Gallup Builder Initiative*

Bharadwaj-Badal said that educators need to understand the individual at the center of the entrepreneurial activity. What are his personality traits and how do those affect business outcomes? What is his attitude toward risk, work and income? The answers to these questions are better predictors of entrepreneurial success than external elements such as industry specialty, location or access to capital, said Bharadwaj-Badal.

She has studied how the personality characteristics that are beneficial to entrepreneurial success can be identified, measured and developed. She cited several studies that show evidence of the value of a focus on fostering the personality and psychological characteristics needed for successful entrepreneurship, including a World Bank study in Togo and a Gallup meta-analysis of 43 studies that found that when entrepreneurial teams are given psychological training, their performance improves greatly. Bharadwaj-Badal

is currently conducting research on students at five universities that also points to the benefits of psychological training.

In short, said Bharadwaj-Badal, the body of evidence is building that shows that psychological training is critical to entrepreneurs' success.

Phil Weilerstein discussed the importance of experimentation for entrepreneurs, saying that what works for one venture will not necessarily work for another. He also noted that, in a survey that asked entrepreneurs what they felt they most needed training on, participants consistently mentioned business ethics and risk management as two of the top items. In a study he ran with Tom Byers of Stanford School of Engineering, engineering students interested in entrepreneurship who received business training were more successful than a control group that did not receive training.

Weilerstein emphasized the need for universities to develop consistency in how entrepreneurship is taught, and that better frameworks are needed to help keep track of entrepreneurs' progress.

According to panelist Starr Marcello, a critical factor in moving forward with entrepreneurship education is to "divorce mythology from fact." As a practitioner, Marcello believes that experiential learning is key, and that entrepreneurs at different stages of their careers need different training.

At the University of Chicago's Polsky Center, said Marcello, educators have been reorganizing how they teach entrepreneurship and innovation, including opening a 35,000 square foot co-working space on the city's south side, which even entrepreneurs who are not affiliated with the university can take advantage of.

Marcello agreed with the other panelists that teaching business skills is not enough, and noted a grounding in psychology and soft skills such as managing people provide a competitive advantage to entrepreneurs. Marcello also cautioned educators against assuming that the end goal of entrepreneurship education is to help individuals start a new company, saying that not every student is focused on startup activity.

Panelist Bilal Zia of the World Bank provided a global perspective on entrepreneurship training. He said that, unlike in the U.S., where there are many large companies that employ large numbers of people, in many developed countries, the economy is driven by microenterprises – small shops, sole proprietors and the like. These countries also have large multinational companies. The space between these two, however, is where there is a lack of opportunity. Zia said the focus of education should be to help micro-entrepreneurs scale to the level of a mid-sized organization.

Zia agreed with other panelists that psychology-based training and experiential learning are critical to successful entrepreneurship education. He also stressed other types of training. He cited work he did with entrepreneurs in South Africa in which one group received financial training, another marketing training and a third received no training. Those who received training in finance became more efficient; those who received marketing training increased sales.

## CLOSING KEYNOTE SESSION

Teresa Amabile, *Ford Professor of Business Administration, Harvard Business School*

Teresa Amabile, Ford Professor of Business Administration at Harvard Business School, gave the closing keynote address. Fittingly for a conference that presented much in the way of research on entrepreneurial success factors, Amabile's talk broadened out the definition of success by focusing on the characteristics shared by happy, motivated and productive employees – which, in turn, can create successful companies.

Amabile began her presentation by telling the audience, "My hope is that everyone in this room will leave…with at least one new idea on how to manage human capital and at least one insight into managing your own life and work."

Citing a Gallup poll on employee engagement, Amabile noted that only 34 percent of U.S. employees are truly engaged in their work. Fifty-four percent are indifferent, and 15 percent openly hate their jobs. Gallup estimates the cost of this massive disengagement to be $5 billion in lost productivity each year.

So what makes people happy, motivated, productive and creative at work? Essentially, said Amabile, her research shows that employees' inner work life is key. This inner work life consists of the individual's perceptions, motivation, and feedback about their work.

Amabile showcased two company teams from her research that were at opposite ends of the spectrum in terms of employee engagement. At the start of the study, both companies (which she referred to as "Karpenter" and "O'Reilly" to protect their identities) were profitable and showed up on many "best places to work" lists. A few years after the study began, Karpenter's profitability began to plummet, as employees became less and less engaged in their work.

What had changed? Amabile looked to confidential diaries that employees from both companies (and others) had been keeping as part of the study. A total of 238 employees recorded more than 12,000 entries about their daily work activities, impressions, motivations and emotions. In addition, Amabile collected survey data from colleagues and supervisors of the employees in the sample, including performance evaluations.

During the course of the study, Karpenter had a complete change in top management. The new management team made drastic changes to employees' responsibilities, processes and general work environment. The changes, perceived by employees as negative, began to affect productivity. Employees no longer felt they had control over their work, nor did they feel they were making any progress on meaningful work. Both are critical factors in determining employees' inner work life.

The takeaway, said Amabile, is that inner work life drives performance. Positive perceptions, pleasant emotions and intrinsic motivations all lead to increased creativity, productivity, collegiality and commitment. But the number one factor to a satisfying inner work life, said Amabile, is a sense of making progress on meaningful work. She called this the "progress principle."

"My hope is that everyone in this room will leave with at least one new idea on how to manage human capital."

Teresa Amabile

*Ford Professor of Business Administration, Harvard Business School*

Broadening out her conclusions from individual employee satisfaction to company success, Amabile said that her research shows that successful companies can directly support employees' sense of progress in meaningful work by providing:

- Clear, meaningful goals and a sense of why their work matters
- Autonomy
- Sufficient resources
- Help with the work
- Opportunities to learn from successes and failures
- An open flow of ideas in both directions
- Sufficient time to complete the work, but not too much.

In addition, successful companies create a culture that directly feeds employees' inner work life, exhibiting such "people support" characteristics as:

- Respect and recognition
- Encouragement
- Emotional support
- Organizational affiliation and camaraderie

Finally, said Amabile, successful organizations do not underestimate the power of small wins. "Even seemingly mundane things," she said, "can have a large effect on employees' inner work life." She concluded by urging participants to examine not just their work organizations, but their own inner work lives, to determine whether they are creating "a climate of progress" in their work.


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2019 FRONTIERS OF ENTREPRENEURSHIP

# RESEARCH QUESTIONS

WORKSHOP SESSION I

## MARKET GENESIS

- Are markets getting harder to create?
- What are the implications of current market creation for different regions? Are fewer cities creating markets for global customers?
- What triggers industry emergence, who engages in enterprising/innovative activity and what activities are necessary for industry emergence?
- What market/government institutions are taken for granted?
- When and why may we see "new to the world" industries arise in emerging countries?
- How many entrepreneurs circumvent institutional voids and create new markets and industries?

WORKSHOP SESSION II

## LOWERING BARRIERS FOR DIVERSE ENTREPRENEURS

- How can we provide incentives to resource providers (i.e., people with access to capital) to lower barriers for diverse entrepreneurs? Resources are out there, but most people who have the resources lack incentives to share their financial, human and social capital.
- How can we educate and encourage the VC community to invest in startups founded by entrepreneurs from underrepresented groups?
- At what stages of the entrepreneurial process do biases exist? How can we reduce the biases that lead to discrimination against minority entrepreneurs?
- What interventions can increase awareness of and access for female entrepreneurs?

WORKSHOP SESSION III
## FUTURE OF FINTECH

- Will we see new fintech entrants that disrupt how existing business is done, lower costs and eliminate excess rents by legacy players? Or will incumbents adopt these new technologies to continue the current oligopolies in financial services?
- What sectors or asset classes within financial services are the most likely to be disrupted by the emergence of fintech? Are more illiquid asset classes, such as VC/PE, more insulated from disruption because they are heavily relationship-based?
- What role will regulation play in shaping the fintech landscape in the years to come?
- What role can/will fintech innovations play in "banking the unbanked," expanding financial access to historically disadvantaged groups (e.g., replacing "physical collateral" with "reputational collateral")?

WORKSHOP SESSION IV
## FOUNDING TEAMS

- When is a cofounding relationship truly toxic versus just being part of a productive debate? And how do we teach people to navigate difficult relationships?
- What's the best way to teach people to have an entrepreneurial mindset?
- Do mission-driven firms need or require a different founder type than those that are economically driven?
- Do investors properly weight the mission purpose? Or do they overweight the financial aspects?
- Is it better for relationships among founding team members to be based on a personal tie, rather than a business tie? In what situations do these two types of ties enforce or impede each other?
- What is the definition of a cofounder?
- Does being a founder help or hurt your resume?
- Is it better to have a founding team that starts with an idea, or with people who want to be entrepreneurs, regardless of the idea?
- How is equity distributed among founding teams? Should it be retrospective (what they have accomplished) vs. prospective? Should someone outside the team make the determination? Should vesting be included?
- How do founding teams develop trust and respect? How do they do it rapidly, and how should it evolve?
- Which tend to do better as solo founders rather than as part of a team – older or younger entrepreneurs?

WORKSHOP SESSION V
## PRINCIPLED ENTREPRENEURSHIP EDUCATION

- What type of ethical due diligence do VCs do before funding?
- What are the most common ethical transgressions committed by entrepreneurs?
- Which ethical transgressions by entrepreneurs are considered acceptable? Does society tolerate different ethical behaviors from entrepreneurs?
- What are the latent ethical frameworks that entrepreneurs use in decision-making?
- Are successful and unsuccessful entrepreneurs ethically different?
- To what extent do founders share information (particularly failure-related information) with employees?

- Is there is a business model and problem-solving misfit that pushes unethical behavior (e.g., Facebook)?
- What is the role of venture capital in driving unethical behavior? What makes really good entrepreneurs commit fraud?

WORKSHOP SESSION VI
## SPAWNING

- How receptive are companies to their employees spinning out? Do firms dis-incentivize spin-outs through non-compete agreements? Which firms do so, and how has this changed over time?
- Do international MNEs create spinoffs in developing countries? Is it a valuable strategy for governments to attract foreign MNEs to spur entrepreneurship?
- Should developing countries focus on bringing back capital and/or people who have received their education in the West? Or are spinouts of local origin?
- With development technologies such as 3D printing, has technological progress reduced barriers to entry for spinouts? Which technologies, specifically, have facilitated corporate spawning?

WORKSHOP SESSION VII
## WHAT SHOULD POLICYMAKERS BE DOING TO HELP ENTREPRENEURS?

- Which policies aimed at helping entrepreneurs have actually achieved their goals?
- What role have tax credits for angel investment played in influencing the rates of entrepreneurship?
- How can formulas and algorithms improve policy implementation, such as funding decisions for grant recipients? What role do grants and education by granting organizations play in spurring entrepreneurship?
- Which governmental policies that were designed with good intent to assist entrepreneurs actually have had a negative overall impact?
- How can regulators and startups co-create industries, and how can the government become more agile in its interactions with nascent industries?
- Beginning in 2015, in a series of regulations implementing the JOBS Act, the SEC has provided a framework for small business capital raises via crowdfunding platforms, "mini-IPOs" under Regulation A+ and an IPO "on-ramp" for emerging growth companies (EGCs). What impact have these initiatives had on the ability of small businesses to raise capital? More specifically:
    - How many companies have raised capital and how much capital has been raised under these programs?
    - How can the momentum of these programs be measured (e.g., what are the number and pace of deals in the hopper)?
    - What effect do these programs seem to be having on 1) the overall trend of declining numbers of small public companies, and 2) the participation of non-accredited investors in the capital-raising process?
    - What are the costs of raising capital by these methods (i.e., average costs by type of transaction or percentage of capital raised)?
    - What is the geographic spread of companies raising capital through these methods?
    - Have these capital-raising methods increased access to capital by women, minorities, veterans?
- There has been much discussion about how

expensive and complex it is to manage a publicly traded company, putting public offerings out of reach for small companies.
  - Is there a way to objectively compare the expenses (and ostensible disincentive to go public) posed by non-regulatory legal fees, investment banking and brokerage and related fees vs. regulatory compliance costs? Similarly, is it possible to quantify both the IPO "middle market tax" and the cost of IPO underpricing for smaller firms?
  - What other factors limit small businesses from gaining access to public markets, for example, 1) the lack of analyst coverage, 2) investment level by mutual funds (and other institutional investors) in small public companies and 3) regulations such as SEC's AFFE requirements, which caused indices to drop coverage of business development companies (BDCs) (the argument by BDCs is that the application of the AFFE disclosure requirement overstates the expenses of mutual funds investing in BDCs)?
- How much capital geared toward small or middle market companies has been raised by public vehicles that invest in private companies (e.g., BDCs, PCAPS) and what impact has this had on real investment and employment?

WORKSHOP SESSION VIII
## STRATEGY IN TECH ENVIRONMENTS

- What's unique about the tech environment? How much of this is the temporal nature of the industry and market as opposed to it being a tech focus? Is the right way to describe this particular set of questions as being about strategy in nascent markets or technology-based strategy?
- How should we think about disruptive vs. value change strategies?
- Can we better understand different types of funding and when entrepreneurs should take VC money vs. growing more organically?
- Can we study how individuals identify opportunities better? How can effective searching best be supported?
- Can we unpack different kinds of uncertainty - technological opportunity, market uncertainty and other types of uncertainty and their derivative consequences?
- What are the relative bottlenecks to growth and scale? Does the need for pivoting depend on the type of bottleneck faced?
- How do we think about the costs of change?
- Is there an age bias in VC investment?
- How should we think differently about companies that are born global? Do we have theories about how those companies operate?

WORKSHOP SESSION IX
## ENTREPRENEURIAL FINANCE

- What are the barriers to becoming an entrepreneur and getting access to capital?
- How does access to capital shape entrepreneurship? How does that affect entrepreneurs' business process decisions?
- How do entrepreneurs' personal and business financial decisions interact? What are the consequences for entrepreneurship?
- How and to what extent do social safety nets promote and shape entrepreneurship?

WORKSHOP SESSION X
## WHO ARE THE WINNERS AND LOSERS FROM INNOVATION?

- What policies can be designed to spur innovation? And how do local, state and federal governments encourage individuals to take

advantage of such policies?

- What are the implications of innovations in the gig economy for permanent vs. temporary job creation?
- How do we set up policies or help universities train individuals for jobs of the future?
- What are the implications of trading and outsourcing on the ability to balance the pros and cons of innovation?

WORKSHOP XI

## WHAT DOES AN ENTREPRENEUR HAVE TO KNOW ABOUT BUSINESS? AND HOW SHOULD THEY LEARN IT?

- How do we teach the human side of entrepreneurship, such as culture, values, teams, leadership and ethics?
- How do you teach the "person" side of entrepreneurship (i.e., the "why" or heart behind entrepreneurship) vs. the actual curriculum (e.g., business plans, etc.)?
- How do you jumpstart the entrepreneurial ecosystem in a given area?
- How do you keep entrepreneurs inspired throughout the life of the venture? How do you re-inspire those who have lost the motivation?
- How do family dynamics play into ventures as they mature?
- Business schools are often focused on the 20 percent of students in class who are really good and already far along with their ventures. What can business schools do to help teach the other 80 percent?
- Are there consistent traits shared by all successful entrepreneurs?
- Are there unique things we can teach in a classroom setting that cannot be taught online?
- How is the future of work going to change entrepreneurship for future generations?
- Are our courses preparing entrepreneurs for emotional issues?
- Entrepreneurship students at elite universities are not the same as those at other universities, but lower-tier universities tend to copy higher-tier universities' curricula. Is there a different way lower-tier universities should teach entrepreneurship?
- How do we inform our teaching through our research? How can teachers and researchers best collaborate so we can put our research into action? Is there some community that can get around a common approach so we are speaking the same language?
- How can we be equitable in teaching entrepreneurship?

FRONTIERS OF ENTREPRENEURSHIP RESEARCH GRANTS

# CALL FOR RESEARCH PROPOSALS

The Frank H. Kenan Institute of Private Enterprise is seeking proposals for outstanding academic research projects in the field of entrepreneurship.

## FINANCIAL SUPPORT

Approximately five grants of $10,000 each will be awarded. The grant term will be from July 1, 2019, through December 31, 2021. To be eligible, applicants must be full-time faculty, Ph.D. candidates or postdocs at an academic research institution. The Kenan Institute does not cover overhead expenses.

The Kenan Institute pays 60 percent of the grant when the grant is approved. An additional 40 percent will be paid when a working paper is either 1) uploaded to SSRN (with a deadline of December 31, 2020) or 2) accepted for publication in a peer-reviewed academic journal (with a deadline of December 31, 2021). The deadlines must be adhered to for the grant recipient to be eligible for remaining funding. All publications (including working papers) that are directly related to the grant funding must acknowledge the support of the Kenan Institute in an introductory footnote.

## PRIORITY AREAS

The Frontiers of Entrepreneurship grants are intended to support a wide range of research topics important to both academics and practitioners in the field, including entrepreneurs, investors and entrepreneurial ecosystem support providers. Based on the themes that emerged from 2019 Kenan Institute Frontiers of Entrepreneurship Conference, this year's grant priority areas are:

### Entrepreneurial Strategy

Entrepreneurial firms face unique challenges when either entering an existing market or creating a new one. From choosing a co-founder to experimenting with products or services, entrepreneurs must make strategic decisions that will give them advantages in a space where they previously held no market share. We want to support research that studies the strategic decision-making of entrepreneurs and how support services (such as incubators, accelerators, universities, etc.) can aid entrepreneurs in these decisions.

### Entrepreneurial Finance

From seed funding to IPO, the Frontier of Entrepreneurship conference discussed the capital life cycle of new and growing firms with an emphasis on addressing barriers to access to capital. Therefore, we would like to encourage research that looks at the various stages of the capital needs of startups, including early stage funding (such as friends and family, angel investors and grant funding) to exits (IPOs, M&As, closures, etc.).

### Future of Work and Innovation

As the future of work continues to evolve, we want to know how this will influence entrepreneurship and affect the emergence of new industries. For example, the gig economy, artificial intelligence and automation present both opportunities and challenges that companies – existing and entrepreneurial – will face, with real implications for workers around the world. Therefore, we are interested in funding research projects that address the intersection of innovation, entrepreneurship and the future of work. Additionally, we are interested in learning more about how universities and training programs will address these changes to teach the next generation of innovators and entrepreneurs.

### The Role of Government in Firm Creation and Growth

All levels of government have an impact on entrepreneurship through policymaking, and by offering a wide array of programs, incentives and funding opportunities to entrepreneurs, investors and ecosystem partners. We are interested in funding research projects that study how governmental policies and programs affect entrepreneurship regionally, nationally and internationally. Additionally, we have a special interest in nascent industries (such as fintech) and the role government policies and regulations can have on either stifling or spurring growth in these areas.

### Inclusive Entrepreneurial Ecosystems

We are interested in funding research that identifies and addresses the biases (both explicit and implicit) faced by diverse people (women, people of color, veterans, etc.) throughout the entrepreneurial ecosystem, including entrepreneurs, funders, startup employees, service providers, etc.

A list of sample research questions developed by conference participants during the working sessions is available on pages 41-45 of this proceedings document.

## ADDITIONAL BENEFITS AND OBLIGATIONS

Awardees must be willing to present their research at a future Kenan Institute-hosted event, including the Frontiers of Entrepreneurship conference.

## APPLICATION PROCEDURE

Please submit a proposal by email to kiproposal@kenan-flagler.unc.edu with the subject line "Frontiers of Entrepreneurship Research Proposal." The submission should consist of a single PDF with the following:

- A cover page with project title, date of submission and information for the Principal Investigator including name, email address, phone number, mailing address, university or research institution affiliation and title
- A proposal narrative
- An up-to-date resume or CV for each researcher
- If the principal investigator is a Ph.D. student, please include a letter of reference from a dissertation or program faculty advisory.

The proposal narrative should not exceed five pages, single-spaced, and should include:

- A one-paragraph abstract written in the third-person for posting on the Kenan Institute website, if the project is funded
- A short literature review on the topic
- A comprehensive description of proposed activities, including details about the hypothesis, research design and what data, if any, will be used
- A description of the project budget and timeline

## APPLICATION DEADLINE & DECISION

The deadline for consideration is 5:00 p.m. ET, April 30, 2019. Grantees will be notified by 5:00 p.m. ET, June 14, 2019.

Established in 1985 by Frank Hawkins Kenan, the Kenan Institute of Private Enterprise is a nonpartisan business policy think tank affiliated with the UNC Kenan-Flagler Business School. The nonprofit institute and its affiliated centers convene leaders from the private sector, academic community and government to build a greater understanding of how entrepreneurship, economic development and global commerce can work for the public good. The institute leverages best-in-class research to develop market-based solutions to today's most complex economic challenges. In doing so, the institute aims to support businesses and policies that better the lives of people in North Carolina, across the country and around the world. For more information, please visit **kenaninstitute.unc.edu.**

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*We put knowledge to work.*