

TECHONOMY

TECHONOMY DETROIT • SEPTEMBER 12, 2012 • DETROIT, MI

The DIY Economy: Democratizing Finance, Design, Manufacturing and Distribution

Speakers:

Grady Burnett, Vice President of Global Marketing Solutions, Facebook

Mark Hatch, CEO, TechShop

Danae Ringelmann, Founder and COO, Indiegogo

David ten Have, CEO, Ponoko

Moderator:

Erick Schonfeld, Executive Producer, DEMO

KIRKPATRICK: A few seconds to get into your seats. But we don't mess around with the clock in this conference. So please -- you know, by the way, there's a lot of seats, and it's very easy to get in and out of these aisles. If you've been in the back, don't hesitate to come forward. I know it's easier to see the monitors also when you're a little closer to the front.

So the next whole segment of this program is going to be devoted to the topic of manufacturing and the future of manufacturing in the United States. So I would like to bring out my long-time colleague when I was at Fortune Magazine, Erick Schonfeld, who is now writing with us at Techonomy. He was for many years the writer of TechCrunch.

Erick Schonfeld, please come out to lead your session on the DIY economy. So thank you, Erick.

SCHONFELD: Thank you, it's great to be here. Let me just quickly introduce our panelists. Please have a seat.

To my immediate left is Grady Burnett, who is the Vice President of Global Marketing at Facebook, and lived in Ann Arbor for many years. So he's a local.

Mark Hatch is the CEO of TechShop, which has a recent facility that opened up here not too far from the airport. We will be talking about what we do there.

Danae Ringelmann is the co-founder and COO of Indiegogo, which is a crowd funding platform.

And David ten Have is the CEO of Ponoko, which is a very interesting platform for manufacturing.

What we're going to talk about today is the do-it-yourself economy and how different tools have become available to entrepreneurs beyond just what we've become accustomed to in the Internet world.

So the cost of producing a startup, you know, has declined dramatically in the past decade, and we've seen this flowering of Internet and mobile startups. But we're also starting to see many of those same tactics and techniques being used by startups in other industries, particularly in manufacturing.

And I think it goes all along the chain from, you know, ways to fund your product with Indiegogo, ways to prototype your product with TechShop, ways to manufacture it and ways to market it and to reach out to your customers, you know, after the fact, with social -- you know, Facebook and other social streams.

So let's talk a little bit about sort of where we are today. Obviously a lot of people talking about, you know, Detroit in this election season and bringing back manufacturing jobs. But I almost think that misses the point. Like, yes, we want to shore up the manufacturing base.

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But in my mind, what is more interesting is what is the new form of manufacturing that is being opened up. What are we seeing here in terms of the types of people who can now consider themselves manufacturers? Is it possible to create GM in your garage now?

Mark?

HATCH: Absolutely. Some things that people don't necessarily realize today. The cost of a computer numerically controlled milling machine, CNC tool, has come down something on the order of 95 percent, primarily again because of Moore's Law.

Most importantly, software companies like Autodesk are making the software so much easier to use. We are training people how to use these tools in two or three class sessions. Now, they are not world class millwrights at the end of a two or three-class session.

But if you're Patrick Buckley and you want to do an iPad case, and you come in and take three cases, 90 days later, you could have, just like he did, a million dollar company. They did 3 million in the second year, 10 million dollars this year.

Square did the original three prototypes at TechShop on the benches, and they are doing just fine. So the chasm has just gotten much smaller. Typically when you do a software startup, now you need 25, 50, \$75,000. Now you can do a hardware startup for the same kind of money.

We've had dozens and dozens and dozens of crowd-funded projects come through from 10,000 to \$100,000 that actually got them all the way through the prototyping stage, their first run in manufacturing. That is new to the world. You've never been able to do that for those kind of price points.

SCHONFELD: Danae, there's all kinds of amazing projects on Indiegogo, everything from products to even -- my favorite recent one is building the Tesla museum.

I think you told me backstage about the -- what is it, the bug blaster?

RINGELMANN: The Bug Assault.

SCHONFELD: The Bug Assault, yeah. What are some of the products and companies that have emerged on Indiegogo and how do you see it opening up, you know, these opportunities to people who maybe would have just been hobbyists in the past?

RINGELMANN: Sure. What he just mentioned was the Bug Assault, which was a few young entrepreneurs who were passionate about keeping bugs away. Who's had that problem before? The flies. Yeah.

So what they did is they put their creative minds to work and they came up with this awesome contraption to, in a very benign fashion, shoo away flies. What they ended up doing was they used Indiegogo, which leveraged Facebook and all the social media. They ended up raising almost \$600,000 by offering their product as a way to raise the money to actually go build the product.

So what was fascinating about that, as well as other -- we've had campaigns raise money for 3D printers, we've had campaigns raise money to make their next film. We've even had campaigns that are doing charity or cause-related stuff.

So people funded their baby. We had a couple who couldn't afford IVF, in vitro fertilization treatment, so they went on to Indiegogo and raised \$10,000 to have a baby.

So what is so incredible about this and what we were --

SCHONFELD: Does the crowd get to pick the name?

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RINGELMANN: Yeah, the perks. You can't actually give away the baby. I think that might be illegal.

SCHONFELD: Or \$5,000.

RINGELMANN: Well, what's so powerful, especially from products and services, is that we had a campaign where two young women wanted to create solar-powered environmentally friendly inflatable lights that they could give away in a Toms shoes model to the developing world.

So a lot of women and children die every day or get injured every day from the kerosene lamps, which is the popular way to light your homes around -- across the world.

So they came up with a very ecofriendly, cheap, and affordable solar-powered system to light people's homes across the world. They ended up raising \$60,000 in Indiegogo. The Bug Assault people, the 600.

But what was true for both of those cases is that because it's a product, because they are in a way preselling the item, because people who contribute to the idea and the project actually get a perk in return.

And oftentimes for a product-based crowd funding campaign, the actual product that you're trying to raise money to go build is the perk that you deliver.

They ended up mitigating the risk of overfunding or underfunding their production, because they raised just enough money to produce just enough product that was actually purchased in their crowd funding campaign. So if that makes any sense.

SCHONFELD: Right. The preselling. There is very much a social aspect to this, which gets to -- Grady, maybe you can address this. You sort of see that the marketing starts before the product even exists. Right?

The marketing starts with the core group of, you know, maybe what you would call early adopters, right, who are going to be your most loyal customers. And then they kinda cheer you along all along the way.

And then once you have the product, a lot of people are finding that these social -- that the Facebook is a great distribution mechanism for actually connecting with new customers and getting people to recommend those products down the line.

BURNETT: Yeah, I think that distribution is incredibly important. If you think about how we always make decisions, we make those by what our friends, what our family, what our co-workers do.

What the platform at Facebook allows you to do is actually engage that community in a word of mouth and scaled way that has never existed before.

So you can really activate those friendships, those people most passionate and have them tell your story in their voice and augment your marketing message. I think that's really powerful.

So if you think about -- a crowd funding idea that I saw recently, actually yesterday, was I went to the University of Michigan. There is a football player, Martavious Odoms, who played there a couple years ago who graduated, and like most college athletes is going into the workforce and not playing professional sports. He's jumped back into his community in Florida and has a new business called Pound Eating that is all about sustainable farming and eating healthy in his community that has not done that historically.

He's doing it through crowd funding. But he's actually funded this through a group of friends. He's distributed it through Facebook to people that have like interests, and as a result, I contributed to that. I'm excited about it. And that's how increasingly these things are happening.

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SCHONFELD: What kinds of businesses are you seeing on Facebook? I think you mentioned to me a woman who started making toys or puppets?

BURNETT: Yeah, there's a variety. It's such a range, which is great. Think about -- and it always starts from a personal set of interest. Almost every business story on Facebook starts with a person connecting with their friends on their page. Talking about a set of interests. Realizing, wow, maybe I have a business opportunity here. Creating a page and going from that.

The woman we talked about was a woman named Brandy in North Carolina who has a business called Lolly Wolly Doodle. It's a kids clothing business, and it's based in North Carolina. They basically distribute E-commerce platform all on Facebook. They do that through the southwest, southeast, and midwest.

And what she did is she was just -- sewing was a hobby at first. Her husband lost his job. She made it more of a career. She started doing more and more projects, realized she could build a business. Funded that through the community and through a bunch of different opportunities and distributing through Facebook.

And she found her entire customer base that way. She found her entire workforce, which is now 80 people. She's built a business of 80 people now.

SCHONFELD: And she doesn't have a website. She just sells through Facebook.

BURNETT: All through Facebook. And she does that all through Facebook at this point, and she's found a community of people that care and that are passionate about her products share those with her friends, share them with their friends, and that network builds and she's shipping product all over the country now.

SCHONFELD: Right.

David, tell us a little bit about some of the products that you're seeing on your platform and how would you sort of compare and contrast it to TechShop, in terms of where in the cycle would you, as an entrepreneur, maybe taking advantage of your platform versus some of the facilities that are available at TechShop?

TEN HAVE: Sure. So the way that we fit into the ecosystem is that we enable distributed manufacturing. So we enable people to reach out to not only their local community, which is where TechShop is really strong. But also in a -- to a global market.

And so, you know, we allow people to produce product next to the customer. That's kind of our goal.

And what we're starting to see is that people are kind of falling through, you know, a funnel, using the crowd funding model to determine the appropriateness of the product. Is someone going to buy it, are they interested in it. They will do early prototypes at TechShop.

And then if they are thinking on a global basis, they will use a platform like ours to then push their product out into the globe. So that's definitely what we're seeing shape up. And that ecosystem didn't exist five years ago. I mean, it really didn't. It's emerged over the past three years. This idea that you can come up with an idea, you can reach out to your market, determine whether or not they want it and then just follow through the prototyping and then mass manufacturing side of things like that. That's the exciting thing.

SCHONFELD: We've been talking a lot about jobs at this event, and everything that you're talking about is very positive and encouraging, because now anyone can come up with a product idea that needs to be manufactured. They don't need a million-dollar facility that's available to them.

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But the flip side is that, okay, once they prototyped it and they found their early customers and they are scaling up, you know, past 500 or 1,000 items, don't they then just go back into the traditional scaled manufacturing industry that we have? And does that create jobs here or abroad?

I guess -- is this a solution for the job issue that we have in manufacturing?

TEN HAVE: Yeah, it is. And it is because this is like the Internet, right?

When you started using the Internet, when you started getting e-mail, it was kind of like, why can't I use this for everything else?

What we've done is encourage people to think about doing this in a new way. Where we've kind of stepped in is that we've removed the complexity of talking to people overseas.

So there is this interim step where people, as they go to volume, need to do that still. But what we're finding is that people are starting to think critically about everything in their supply chain, you know. And that includes whether or not they can use local resource to do what they want to do.

So what we are starting to see is that people are bringing jobs back locally. Because it just kind of makes sense to them. It's in many cases less complex than sending stuff overseas.

HATCH: I think there's some important things going on with supply and demand curves as well. So specifically, because these robotic tools are so cheap relative to where they were 20 years ago, you're now able to manufacture things in short and moderate runs at price-competitive places that we've never been able to do before.

So the demand curve is literally being shifted because of the ability to manufacture. So now we can do short runs, better meet what the customer wants and move a lot of these jobs back to the U.S.

Now, the job isn't the labor that I just eliminated from the Chinese worker on the line and have a robot do it here. The job is on the design side, imagining what it is that somebody wants and then being able to deliver it for a cost-effective manner.

I believe that's a huge opportunity for manufacturing labor in the United States. We've seen -- the world's fastest electric motorcycle was built on site. They're never going to sell a million of these superpower bicycles -- motor bikes. Their objective is to get it to 400, 500, a thousand, it's kind of the Tesla of motorcycles. A liquid-cooled server cabinet that was launched. Now, those could actually -- they could produce thousands of those, and they'll probably be manufactured in a distributed manner.

Again, this is another example where, yeah, you could get the cheap iPad cover from a Chinese manufacturer for 5 or 10 bucks. But for \$60, you can have a beautiful iPad case that the President of the United States carries. Now Patrick is never going to do a million of these.

SCHONFELD: Is he still manufacturing them?

HATCH: He's manufacturing in San Francisco. Yeah.

TEN HAVE: I think what's a really important thing, right, people are starting to build out the narrative around the product. You know, knowing the person who made the product is an important part of this removal of opacity of information around product. That's what we've kind of suffered from for 30 years. That's what has allowed us to push stuff overseas. Because it's kind of like, well, it's still in my shop, so it's made local, right? No, it's not.

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What people are starting to really question is -- or thirst for is the story. They know the guy who made -- Mark tells that story with real pride because he knows the guy, you know.

And that's what we find from our customers as well. Their customers know them and have a personal relationship to them. And that's -- that's vitally important. Because it's about, you know, reinvigorating a social contract again.

RINGELMANN: I think I would attribute that to like Facebook as helping raise the bar with the expectation that you should know what your money is going to or what you're funding or what you're buying, because now it is so easy to know the story behind the story.

If you don't know the story behind the story, it's --

TEN HAVE: I think the worst.

RINGELMANN: You think the worst. Right. And so -- we are talking about products. We have a great example on our site. It's a food product business. It's a young woman who, because we're talking about jobs, she had started a gluten-free bakery because she is celiac, and she had no good products out on the market for her to eat.

And so she went to the bank and got a little \$10,000 loan to get the business started. It was just her and her friend. They literally made gluten-free macaroons out of the back of their truck, you know, or their garage. And they started getting a little bit of traction.

And then they had the opportunity to expand their production, hire people and get their product into a regional grocery store, which was a huge opportunity.

The only thing is, they needed to update their packaging, which was going to cost \$15,000. So for a small business, where every single dollar you earn goes back into working capital to help grow, they didn't have \$15,000 sitting on the side.

So what did they do, they went back to the bank and said, hey, we have this huge opportunity to grow our business and take the next step. And we wanted the business to be successful. It's not that the bank didn't want to; it's just their risk return models didn't work.

So what did they do? They went on to Indiegogo and they raised the \$15,000 by preselling macaroons, building their customer base -- using the current customer base and building it beyond that in three weeks.

And within three months, they were distributing their product across 40 states in America. And now they are hiring people and now they're like growing business.

And it's all --

SCHONFELD: We talk a lot about social proof in investing, right? Ron Conway invested, so that's safe for me to invest, right?

And what you're describing makes me think about sort of social proof for consumers, right? Oh, you know, 600 people put up some money and helped this woman raise \$15,000. There must be something there.

And I think that, you know, Facebook, you know, is part of that. Like you kind of see how many people like something or how many people, you know, give it their stamp of approval. And this is kind of the next step in the economic realm.

BURNETT: And we're all social beings. We always have been. And I think it's really interesting if you think sort of preindustrial revolution, you lived in a community, around a group of people. Your family all lived there, you shopped at the same place every week, and they knew what you cared about.

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The industrial era let us do so many different things: Engage in different cultures, travel to new places, meet different things, learn about new interests. But what it didn't allow is that personal connection.

So what I feel that Facebook and the social world around it has done has really brought those personal relationships back to the center, so businesses can be personal and they can actually have a voice.

And as a consumer, you can actually feel like you matter and you actually count and have a voice in a way that you haven't in a long time. That creates opportunities for the business, and it creates opportunities -- because when there's businesses that will use Facebook to understand what product they want to build.

There is a little stuffed animal business called Squishable that's in New York now, started in DC. And they literally do all their product design through Facebook. They'll basically say should we create a shark or a narwhal next? Should it be red or should it be blue? And that will actually happen there. People will feel a connection to that product, because they helped make it.

So I imagine you guys see some of that as well. And businesses like fab.com as well, that is a business that started out with flash sales, but it's really connected to a particular designer who might be putting a few hundred things together or a few thousand things at most and have that ability to have that connection go back and look for that person's design.

That personal connection matters a lot, and I think it really drives job growth and business growth.

SCHONFELD: Something you mentioned, Mark, was how you're seeing a lot of businesses being able to produce things in short runs, right? I think there's a bigger issue here when you talk about manufacturing, the manufacturing base, for the last 100 years, it's all been about scale manufacturing. That's where you get your economies.

HATCH: Yeah, but scale is a relative thing, right.

SCHONFELD: But you're saying that that's changing.

HATCH: Yeah, one, it's fundamentally changing. Let's talk about scale. How many Boeing aircraft did Boeing sell last year. A million, 500,000, 10,000, 5,000?

TEN HAVE: Hundreds.

HATCH: Hundreds. So that's not mass manufacturing. That's actually hard core, one at a time. Build it. They have 200,000, 250,000 employees.

GE is the same thing, the aircraft engine decision -- division. Their train division. How many train engines did they sell last year? 100, 500?

So there are hundreds of thousands of jobs, billions of dollars being manufactured in the United States with high-paying jobs using these CNC kind of tools.

Now, again, what's cool is these tools have come down, and they're much more accessible and easy to use.

And here's another fun example. So David Lange came in about a year ago and said, I've never made anything in my life, so I'm going to write a blog about it and I'm going to take a bunch of classes, and I want to see if I can figure out how to make things.

Nine months later, he's running an underwater remote controlled ROV company that has been crowd funded and is using Ponoko to help do the manufacturing. And he's going to sell -- he's already sold hundreds of them.

Now, it's not a million, but do we really need a million remote controlled underwater vehicles? I don't know. Maybe we do. But for \$200 or \$300, you can now own something that can go around at the beach. It's a new kind of fun toy.

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Actually, it's not a toy. NOAA is interested. NASA is interested. The DOD is interested. They have orders from all over the place. This is from a guy who literally didn't know how to make anything this time last year. We are living in a completely different space than we were 5, 10, 15 years ago.

And he leveraged social media like crazy. He used the blog, he used Facebook, he used his friends. He used crowd funding. He used access to our facilities. He's using Ponoko.

It's a very interesting space, and it's not just about are you going to sell a million units and plastic injection mold that in China? Yes, you're going to do some of that stuff. I think Square probably gets their little dongle made in China. But there are plenty of products and plenty of spaces to be able to create products locally that people want locally.

SCHONFELD: The point is also that a lot of the barrier to entrepreneurship is, as we've been hearing, is getting started. Even if you can't keep using these tools, if you do have to make a million, then that's fine. We know how to make a million widgets, right?

And what is really fascinating about all this is that the barriers to entrepreneurship, not just in the digital realm, but in the physical realm, are going away.

So what would you say to a lot of manufacturing jobs have gone away and a lot of skilled labor, you know, people are out of a job. We will talk about retraining. But it seems to me like if you have an idea --

HATCH: Launch it. File your provisional patent and launch the baby.

RINGELMANN: We talk about this in music. How like the democratization of the music industry has actually enabled kind of a rising tide of the middle-class musician. No, you're not Britney Spears. But you can actually make a living now selling enough music on line, maybe make a few hundred thousand dollars a year and actually live off your music, which those people 15 years ago were working at coffee shops by day and playing coffee shops by night to make a living. So there's going to be a rising class, I think, of entrepreneurs.

I was just in the cab coming over here talking to my taxi driver. I was like, how is life going. He's like, it's good. I wish I could make a little more money, blah blah blah. And he's working hard.

And we started talking about ideas. I'm like, well, do you -- would you start a business if you could.

He is like, well, now that you asked, actually there is this incredible pain point where taxi drivers, we drive around all day every day, but it's never easy to find a bathroom.

So I actually have this great idea to create this portable bathroom with a tent that just pops up, and he went crazy, giving me all the details of this amazing business plan.

And I'm like, why don't you go do it. He's like, well, I just need a little bit of money. I'm like, uh-huh, there is a thing called Indiegogo. He's like, well, I need to like help design. I'm like, uh-huh, there's this thing called TechShop. He's like, holy crap. It's actually possible.

So we're in this world where there's all these ideas, and they've just been repressed and they've never seen the light of day, because the mechanisms to raise the money, to design the products, to distribute the products, to market the products were never there. But now they are.

So what I think we're going to see is maybe less about a lot of the jobs or the people who were employees before are now going to become entrepreneurs, and we're going to see this rising middle class of entrepreneurs.

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TEN HAVE: I think this process of demystification is just -- it's going, it's happening. And people, they kind of sit on the edge of their rabbit hole, right, and you go, hey, you can make something, and they slip down the rabbit hole.

And it's the casing, or it's the electronics or it's the software, and then all of a sudden it's everything. So it's not only the manufacturing of big things; at some point in time these people go, well, hang on, why can't I make this microprocessor? And we're seeing that.

People are tumbling down that rabbit hole, and they're going, well, I can make that bit and that bit and that bit and that bit, and they understand exactly what is going on.

What's happened over the past 30 years has been that mystification. We've needed that mystification to keep the system working. The system hasn't supported people.

The macaroon story deep inside of it has got a really important point. The bank wouldn't give them the loan.

SCHONFELD: But is it mystification or -- economists will call it specialization. Should that person in the TechShop be making the microchip?

TEN HAVE: I think it is mystification. I think there is this thing of, you know, that's too hard to do.

HATCH: It used to be.

TEN HAVE: It used to be. That's right. The education system in many respects encouraged that. You would go and get a post-graduate degree to work out how to make something, an MBA maybe. You don't need that anymore.

You know, the way of -- the tools are there for you to engage automatically. Now, you just need to plug them together. There are these stories that are emerging that will allow you to route around the existing systems. They don't support us. You know, and they haven't supported these sorts of entrepreneurs. But our tools do. And, you know, that's the really vital bit.

RINGELMANN: I feel like the best thing Michigan could do, or the city of Detroit is literally just a marketing campaign like Nike. You can do it. Everybody has ideas.

I was just in Berlin, actually I know there is a panel on Berlin versus Detroit, which is interesting. You can feel the, like, energy building. There is a serious inferiority complex over there of Germans versus the U.S. They feel like we're faster, more innovative, all this kind of stuff.

But what you're starting to sense is they're starting to build this confidence that they can actually do it as well. And we're starting to see more and more entrepreneurship come out of here. I feel like that's all Detroit and Michigan needs is a big campaign saying you can actually do it. Here is all your tools, and it's just a matter of you deciding, yes, I'm going to go, I'm going to try.

TEN HAVE: To put it in context, Ponoko comes from New Zealand. New Zealand is literally on the edge of the world. We got on an airplane and flew over here and started the company. Michigan and Detroit is embedded inside of the United States. Those resources are literally on your doorstep. There's no excuse not to just do it, you know. And it might not look like a million dollar company to start off with, but it will turn into something like that, you know.

SCHONFELD: If anyone has any questions, we've got microphones here. Line up and I'll call on you.

So, you know, one thing that you touched upon here is sort of these custom runs, right? And people have been talking a lot about mass customization for a long time. It's something that large corporations have mastered to one degree or another.

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But in a way, it kind of fits in with what you were talking about, about everything having a story or the consumer feeling that they have a connection to the product.

And when products are -- I don't want to say they're hand crafted, but they are custom made, or they can even be custom designed for your specific needs, it's almost like we're going back to some of the connection that we had, you know, almost preindustrial, right, where people were --

HATCH: I think there is a clear resurgence of valuing craftsmanship. Etsy is a great -- Etsy.com is a great example -- great website of handmade goods. People are making a living by producing things in their basements or tech shop or in their living rooms and selling online.

And, again, these tools enable you. The machine doesn't care how complicated it is. You do your design and hit print, and it starts to cut. If you own the machine yourself, you can walk away. If you're at TechShop, you've got to stay there. But the ability to quickly customize that so that it fits. It's great.

Autodesk has got a little app I can show you. I can design a small coffee table. Doesn't look great, but I can design a coffee table in 30 seconds. Spin it around, give me the form, I can print it out.

Now, this is cool because I'm a little bit tall and it would be nice if it was customized to my legs. And IKEA doesn't do that for me. It seems like everything comes out at the same height. Wouldn't it be nice if like my furniture fit my body.

Well, now you can do that, and there's zero incremental cost to it, because you gotta produce it anyway. You're going to probably use these types of machines.

So, yes, there is an artisanal and craft component. And that particularly works well when you're talking about social media and so forth. But these tools are agnostic. If you're building a remote controlled video conference telepresence robot and you're going to do a thousand of them and charge \$20,000 a pop, that's a nice business. It's not really artisanal or craft. But you can produce those things in short runs and make a great living at it.

SCHONFELD: I had an opportunity to visit TechShop yesterday on the way from the airport. And there was a guy working on the laser cutter, and he had a piece of wood and he was making a game board. He can customize these game boards for -- he was making a little side business off of it.

And there was another guy there who had these two robot legs. He was trying to figure out how to make a bipedal robot that could walk and balance. He hadn't gotten to the other parts of the robot, because nobody has really figured out the bipedal part. But he is a guy here in Detroit, and he might figure it out.

HATCH: One of our first members here in Allenpark was Luciano. He's an Italian, moved to Detroit. Lost access to the tools when he got married and moved here. Discovered us and now he's gotten back to making these beautiful string basses.

SCHONFELD: Do we have that picture if we can put that up there?

HATCH: There is Luciano. You're not going to make a million of those. But at \$20,000 a pop and eight to ten of them a year, he can make a pretty decent living.

TEN HAVE: The thing about the customization and the craftsman story. Go back to Mark's example is it provides competitive advantage. If I was Mark's furniture maker, then I would make tables that fit him. That would give me a competitive advantage over the mass manufacturers, because they don't care about Mark because he sits outside of the 95th percentile. So I think that's the other important thing about what is going on here.

RINGELMANN: Also, the other element to customization is you can also price your product at true willingness to pay.

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So we see that happening in crowd funding with the perk model where we had two inventors that were tinkering in the garage and came up with this mobile accessory device. It was a really cool thing where you put your mobile phone into this base that they created. You put a marker on your shirt and you walk around and your mobile device follows you.

They got rejected by 43 VCs to actually go prototype the thing, which was a shame. So they instead went on Indiegogo and raised the money to do it and got themselves going. But what they did was offered different custom builds of this base. Through it, they maximized people's willingness to pay. They were willing to pay for that customization.

So they got more money -- they left less money on the table, I should say, and they validated their idea. And because of their campaign, they got the venture capitalists to call them back, the ones that originally rejected them, because it showed that there was a serious amount of interest.

But it gets back to micro economics, which is when you offer customization, you can actually optimize people's willingness to pay and not leave any money on the table, whether it's dead weight loss or consumer surplus.

BURNETT: And you can really start to really personalize that experience as you market and develop that next product. The Etsy example is a great one. I would encourage people to go on Etsy and not log in through Facebook the first time and then log in through Facebook the next time.

So you can see what they do and construct, play around and get to various interests, and they will learn over time if you connect through Facebook, you will all of a sudden start to see that these products are related to interests you care about, and it's really a very personal store to you, that you're much more likely to engage and buy things from.

SCHONFELD: Have you ever played around with dynamic pricing so that if you're one of the first ten to donate, you get the product for \$5 and then it goes up by \$5 every --

RINGELMANN: Yeah, our customers do that all the time. It's really exciting.

SCHONFELD: We have a question. Can you introduce yourself and ask the question?

BLAUVELT: I'm Chris Blauvelt, founder of Patronicity. We're a crowd funding platform for local community. We just wrapped up a campaign in Indiegogo. Thank you very much.

My question, we would be remiss to have a discussion with do it yourself entrepreneurship and crowd funding without mentioning the Jobs Act. I get asked all the time. Personally I'm very skeptical of it. I'm skeptical because I think it will lead to a lot of very unhappy investors very quickly. And in the few cases of successful companies, a lot of legal battles and unfulfilled promises.

I think all the benefits you guys are talking about, like being able to have presales of your items, that personal connection with your project creator and the donors and the community, you kind of miss out on all of that with equity based crowd funding. So I will be interested to hear the panelists' opinions on --

SCHONFELD: Is equity crowd funding going to ruin it all.

HATCH: I have pretty strong opinions on this. You can read my Washington Post opinion from last Friday.

Look, we have managed to all but destroy the IPO market in the United States in the last two decades. We've had a 92 percent drop in 50 million dollar and below IPOs in the last 20 years, 90 percent. That is absolutely ludicrous.

The SEC in their discussion said look -- this gets technical. But the 506D has raised like \$800 million this last year, and the IPOs raised a billion dollars. We don't see why that's so out of balance.

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Well, this is the peak of the pyramid, this is the bottom of the pyramid, and you're saying there's not a problem. This should be five times the size. You want a robust economy that creates jobs, you've got to unleash the entrepreneur. It's ludicrous.

[APPLAUSE]

So let's get personal, right? Let's say you're a kid from downtown Detroit. And you have this great idea for modifying your skateboard and you have to go to friends and family to raise \$10,000.

Really? Yeah, that's the reality right now. You've got to go to friends and family. There is no way for him to legally reach out into a community, tap into engineers by putting a little blurb out, I'm raising money to try to get out of downtown Detroit. That is against the law. He can go to jail. Thank God that's changing.

RINGELMANN: For equity.

HATCH: Right. For equity.

On the crowd funding side, absolutely, you can do that. Sometimes it takes more than \$100,000 to get something done. There will be fraud, there will be problems. And I am concerned about the orphans and the widows. But we have swung this pendulum so far that we are -- we have destroyed the entrepreneurial society that -- the bedrock.

SCHONFELD: The IPO issue is not because of lack of funding on the seed stage, it's because of other issues on the exit stage. Look at Facebook. You guys -- you pushed off the IPO for a long time, longer than you probably could have ten years ago, because it allowed you the freedom to, you know, to keep developing your company as your CEO saw fit. Now you guys are public and it's a different world. Right?

And a lot of companies are seeing that. They are seeing like, you know, all the challenges that if -- I mean, if Facebook is having issues with going public, I think that's a bigger deterrent than not being able to get funding on the seed side.

HATCH: I disagree with the first comment. I think the reason you believe that seed stage is not the issue is because we've been living under this regime for 80 years that doesn't allow you to go out and find people to help get you equity.

If we had that and then took it away, you would see this incredible reduction in entrepreneurship, like we've seen in the last 20 years. I actually think we can use transparency and some other technologies. I love the fact that that fake game guy got caught inside of like \$2500. So I think there's some tools that we can use today.

SCHONFELD: Danae, we were talking about this back stage. This gets back to the whole discussion of the social proof. A lot of times people use these crowd funding platforms, and it's not so much -- like, yes, they're going to get something in return. They are going to get a product. But they're doing this because they want to see this product or this company sort of come into existence. It's almost like an altruistic motivation.

I think there is a danger that if it becomes a pure financial transaction, that A, you attract more people who are looking at it purely as a financial transaction and they want that return; and that might -- there might be a tension between those motivations and some of the social motivations that we've seen create these amazing things.

RINGELMANN: So to address your question, like is equity crowd funding going to ruin crowd funding. We think no. We see there are five reasons in the world universally why people fund anything. Five. We call them the five Ps.

The first is passion. They just want to see the thing, idea come to life, the person succeed. They want to do good.

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The second is participation. They want to be part of something bigger than themselves. They are working 9 to 5, they have crazy kids at home. They are sleep deprived. Would love to do their own dream project but they just don't have the time, so they are going to live vicariously through somebody else and fund it with a price of a cup of coffee.

The third is the perk. They want the eMaker, they want the printer, they want the rover underwater thingamajigger.

The fourth is pride. They want to be recognized for being the fifth funder. It is crazy. With the Tesla campaign, people are talking about how they were like funder number 25 of 21,000. They were there first.

And then the fifth reason people fund is profit. That's only one of five. And currently, the profit is illegal. Currently at Indiegogo, the first four are dynamically at play. People aren't just choosing one motivation. There is a mix happening at the same time. So there's no reason for us to believe why that wouldn't happen if we added the fifth P.

And we actually think fundamentally that crowd funding is a social experience. Anyone who has not funded something that way or raised money that way does not understand that until they actually do it. Because you're funding people via crowd funding. You're not just funding ideas, but people.

That said, with the equity crowd funding with the fraud, we've been at this for almost five years. We've been worried about fraud since day one. And the reason we're worried is because we want to be in business and we want to empower people across the world. And we don't want some stupid fraudster ruining it for everybody.

So given that, we've been very committed to that, and we've developed the fraud algorithms, the machine learning, all that kind of stuff on the back end to not just provide a completely meritocratic platform where campaigns with the most activity get promoted based on their own actions, not based on what we think. But those same algorithms are what is protecting and catching stuff and pulling stuff off the platform.

SCHONFELD: We have about two minutes left. Let's try to get at least one more question.

JOHNSON: My name is Abora [Phonetic] Johnson, but you can call me -- I'm from Oakland University.

My question is more of a clarification. So basically what you're saying is that a person starting up a business or inventing or innovating something, in order to become a successful entrepreneur it's not so much the skills that they have, but as majority, the tools that they possess -- that they use or are in possession of.

>> I think it's a combination.

TEN HAVE: The tools are an amplifier of the skills. So you might be really, really skillful. If you don't have access to the tools, it's hard, hard work. If you've got access to the tools, you kick ass, right?

You may not be so skillful. You may still have access to the tools. But the end result may not be so great.

HATCH: What is different is that literally for the first time since the beginning of the industrial revolution, you can have access to those tools for the cost equivalent of a daily frappuccino. That has never happened before. And you can raise money now on platforms through a computer that you already own, and you can tap into distributed manufacturing environments that will help you to deliver. This is a new day.

RINGELMANN: And you can make more mistakes and not be completely destroyed by them. Because you only lost the price of a cup of coffee, so you're going to try again.

HATCH: Exactly.

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SCHONFELD: I think we're out of time. We will end it on that note.

Thank you. Panel, that was a great discussion. Thank you.