Appendix

to

Archimedes' Offspring Pitch Deck

U.S. Innovation is Stagnant.

- For the past 40 years, U.S. innovation has been dominated by the "VC-funded Startup Model"
- That Model is broken:
 - "Go big or Go Home!" (no room for incremental, commercially-viable, smaller-scale innovation)
 - Non-Innovator Founders don't want to stick around and "grow a business";
 "pump and dump" mentality the exit is more important than the business itself
 - Large companies buy smaller companies using "acquire-hire" approaches,
 thus destroying new innovation in its incipiency

<u>Outcome</u>: Fewer ideas and inventions get funded since most can't make it through the "filters" established under the VC-Funded Startup Model

The "VC-Funded Startup Model" has Impoverished Ordinary Americans.

- Due to U.S. (federal and state) securities laws, ordinary Joe's and Jane's are, with few exceptions (e.g., Title III and IV of the JOBS Act), excluded from participating in the earliest stages of the innovation process;
- Many companies staying private longer (i.e., the problem of the disappearing "public company" thereby leaving less opportunity for the retail investor);
- Smaller companies disappear as large companies acquire them, thus eliminating "separate branch" innovation, foreclosing eventual participation by retail investors;
- Recent IPO (e.g., Uber, Lyft, Slack, WeWork) failures have demonstrated that too much cash is chasing too few sustainable business models and market-unproven products

Outcome: disappointed (or denied) public shareholders and vast quantities of cash wasted on mediocre or failing businesses

The "VC-Funded Startup Model" has Hurt the Independent Inventor

- Due to institutional (business) bias and legal constraints, the independent inventor, without a team, has little or no chance to secure VC, angel or other outside funding
- Large companies dominate the innovation-space due, principally, to financial
 constraints on the independent inventor (e.g., intentional-infringement by larger
 companies, coupled with large-scale indifference to the plight of the independent
 inventor)
- Significant cost that needs to be shouldered exclusively by the independent inventor before reaching commercial-viability

Outcome: Fewer ideas make it into the marketplace since the independent inventor is overwhelmed by the obstacles he or she faces



Retail Investor

By <u>ADAM HAYES</u> Updated Oct 1, 2019

What Is a Retail Investor?

A retail investor, also known as an individual investor, is a non-professional investor who <u>buys and sells securities</u>, <u>mutual funds</u>, or <u>exchange traded funds</u>(ETFs) through traditional or online brokerage firms or other types of investment accounts. Retail investors purchase securities for their own personal accounts and often trade in dramatically smaller amounts as compared to <u>institutional investors</u> like pensions, endowments or mutual funds.

The Retail Investment Market

The retail investment market in the United States is huge. Over 50 million households are retail investors of some kind and over 50% of households have savings accounts or investment plans like 401(k)s. And while Americans gravitated to savings accounts and passive investing in the aftermath of the <u>financial crisis</u>, the number of households which own stocks is rising again. According to the Federal Reserve's survey of consumer finances, 54% of households owned stocks in 2017.

IT'S THE ECONOMY

Searching for the Next Snuggie



Inventions featured at a recent inventors Association of Manhattan meeting included Stickpods, left, an apparatus for holding lollipops, and TrakPak360, right, a utility belt with a plastic track for moving pouches around.

Credit...Left: Cheryl Manzano

- By <u>Adam Davidson</u>
- April 17, 2012

• The Inventors Association of Manhattan meets on the second Monday of each month in the conference room of a Times Square law firm. I went to their most recent meeting to explore an idea that I've been hearing a lot about lately — that we are living in a golden age of the independent inventor. Or as Ron Reardon, a patent agent who was a guest speaker that evening, explained, the odds of making money "aren't good — 1 in 100, 1 in 1000, I'm not sure — but they are better than the lottery."

• Gathered around the room that evening were 55 people, old and young, in suits and T- shirts, everyone hoping that his or her idea could buck the odds. Chris Landano, a young, wiry firefighter, told me about his TrakPak360, a utility belt — perfect for photographers, carpenters, "anybody who carries tools!" — which is equipped with a plastic track that allows pouches to swing around easily. Lorraine Muriello, a woman from New Jersey, described her borderline-brilliant (but extremely easy to rip off) idea: No Sweat Towels, gym towels with zippered pouches for keys and cellphones. Her friend, Cheryl Manzone, told me she has filed countless patents over the past few decades (shoes with interchangeable heels, a compact diaper travel kit) and is now pitching her latest innovation, Stickpods, which are like straws with legs. They're for holding lollipops, among other treats. The one invention already on sale came from

Gregory Quinn, an immigrant from the former Soviet Union. Quinn, a veteran driver ("Truck, taxi, limo, you name it") has begun selling his <u>Stimulus Pad</u>, a kind of massaging car-seat cover that offers the equivalent of 15 masseurs' hands on your back all at once. And this is only a small sample of the ideas I heard about.



Credit...Illustration by Mattias Adolfsson

America has always been the land of tinkerers, from Benjamin Franklin and Henry Ford to Steve Jobs and the guy who created the <u>Flowbee</u>. But today's basement inventors have it easy in ways their predecessors couldn't have imagined. In the past, someone with a new idea would have had to actually build the thing themselves, find a market for it and figure out how to get it mass-produced. Now inexpensive technology means that anybody can quickly transform an idea into a physical product. Google SketchUp makes it easy for even the sloppiest untrained draftsperson to mock up a 3-D digital model.

Any inventor can contact a Chinese factory, many of which are so hungry for American business that they will create a prototype for next to nothing. Sites like Etsy.com make it easier to reach a market, and others, like Quirky.com, allow users to simply suggest an idea and share the royalties if it makes it to the market.

As this environment approaches the ideal economy that Adam Smith wrote about — one in which size and power don't always beat good ideas in the market. Comprehensive data are difficult to come by, but the largest inventor's organization, the United Inventors

sociation, says their membership has tripled to 12,000 in the last 18 months. This spike is undoubtedly due in part to the economic slowdown and high unemployment, but the new tools seem likely to inspire a permanent increase in amateur inventing when the economy starts growing more aggressively (whenever that is).

This is good news for noninventors too. Many of the things that make life better started off in the brain of some lonely experimenter: the steam engine, airplanes, antibiotics, maybe even self-supporting lollipop holders. But after leaving the meeting, I felt less convinced than ever that we are living in a golden age of invention. Sure, the Internet and other tools have made the inventing process easier; but the entrepreneurial landscape hardly seems dominated by small inventors. Actually, the new-idea supply chain has some considerable rough patches that, in many ways, are harder to overcome than ever. Once invented and prototyped, those new products have to compete for space in a very narrow pipeline. Retail has become so concentrated that three companies (Walmart, Kroger and Target) control about a fifth of all United States instore sales, and a tiny number of Internet and made-for-TV giants (Amazon, QVC) dominate in- home sales.

UNPROTECTED SPECS

A survey of 1,992 consumers showed that a surprisingly large number of Americans had invented products or tinkered with ones they already used in everyday life. But a surprisingly small number actually patented their work.



11.7 million

Estimated number of consumer-innovators in America age 18 and up.





1.1 million

Estimated number of innovators who obtained intellectual property rights. Another huge barrier to independent inventors is, paradoxically, the system set up to protect them. "The patent system has become rather costly for a small inventor," says James Bessen, a lecturer at the Boston University School of Law. "Go back 100 years, and patents were very inexpensive to get. You didn't have to have a lawyer to get one. The system is working in a very different way than it did years ago, and that favors large corporations."

These days, the average costs for a patent are about \$10,000 — chump change for a corporation, but a considerable amount for many home inventors. And even when they spend that much, they often see their patent applications rejected. Even if an application is approved, larger companies have become adroit at swooping in and copying the product with just enough changes to make it legal. As a result, many give up on the process altogether. Gary Clegg invented the Slanket before Allstar Products Group introduced its near-identical Snuggie. Allstar outmarketed the unpatented Slanket, and the rest is history.



Zonked on Vicodin in the Corner Office

Since he took over the United States Patent and Trademark Office in 2009, David Kappos says, he has thought every day about a man he met from northern Vermont ("He

was dressed, literally, in overalls with a red-and-white checkered shirt") who had invented a brilliant, transformative two-cycle engine for a snow blower. "If you don't protect your invention with intellectual property," Kappos says, "it will be copied almost immediately if it's good." So Kappos has initiated a host of initiatives to help the small inventor with cheaper patent filing fees, pro bono legal help and a more responsive patent office.

It probably won't matter, though, says Paul Romer, an economist at N.Y.U. and perhaps the leading thinker of our time on economic growth. It costs around \$1 million to defend a patent-infringement lawsuit, Romer says. So even if a lone inventor has a legitimate patent claim, a large company can sue and force the person into bankruptcy. Romer says that our patent-law system is one of the key barriers to progress, because wealth typically wins out, which would set Adam Smith spinning in his grave. The problem, Romer says, is not simply that the amateur snowblower tinkerer is cheated out of some profit; it's that people with real world-improving ideas may ignore them because they think the system is stacked against them. If that's the case, winning the lottery might be their best hope.

Adam Davidson is co-founder of NPR's "Planet Money," a <u>podcast</u>, <u>blog</u> and radio series heard on "Morning Edition," "All Things Considered" and "This American Life."

Brief: Report Finds Average US Patent Cost US\$ 374,000 In 2012

12/02/2013 BY INTELLECTUAL PROPERTY WATCH - 2 COMMENTS

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By Kelly Burke for Intellectual Property Watch

A new quarterly report on patent sales by technology shows that in 2012 the median price paid for issued US patents was US\$ 221,000, while the average price paid was US\$ 374,000.

The first annual Patent Value Quotient (PVQ), created by an IP services firm called IPOfferings LLC and introduced in November 2012, initially reported only the patent transactions for the first three quarters of 2012. The report has since been updated to include 35 major patent transactions for the full 2012 calendar year.

Patent valuation can be difficult to calculate. Each PVQ report includes the seller and buyer of the portfolio (unless they requested that they be anonymous), the technology of the patents, the number of issued US patents, and the "quotient", which is derived when the total transaction is divided by the number of issued US patents, according to an IPOfferings press release [doc].

THE USPTO PATENT PRO BONO PROGRAM

JENNIFER M. McDowell & Saurabh Vishnubhakat†

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AMERICA INVENTS ACT PRO BONO ASSISTANCE PROGRAM

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CHAPTER 14