Expensify

Modern Tools in a Modern World:
How App Technology is Benefitting Small Businesses

U.S. House Of Representatives

Committee On Small Business

Subcommittee On Health And Technology

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TESTIMONY OF DAVID BARRETT, FOUNDER/CEO OF EXPENSIFY

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Fact Sheet: Empowering SMBs with Enterprise-Grade Apps

Key Points on what is happening

- "Smartphones" are **pocket-sized supercomputers** that enable productivity gains beyond what even the largest enterprises could achieve just a few years ago.

- But smartphones are **so affordable** that even the smallest businesses can receive the full benefit of technology historically limited to large enterprises with massive IT budgets.

- Additionally, mobile "app stores" enable businesses like Expensify to market themselves to small businesses that were **previously unreachable** by classic enterprise-based sales models.

- This all adds up to a smartphone-based "app economy" that is improving the efficiency of the "global economy" with astonishing speed — there is no gradual "trickle down" from big companies to small, **everybody is benefiting all at once**.

What Congress Can Do to help SMBs

1. **Help create awareness** by working with the SBA and Chamber of Commerce to educate small business owners as to what mobile apps are available.

2. **Support the "gig economy"** by strengthening employees' freedom to choose when and how they want to work.

3. **Welcome *legal* immigrants** to start more small businesses and to enable existing SMBs to compete more effectively with large enterprises

4. **Simplify internet tax** collection by centrally aggregating and publishing per-zipcode sales tax rates on a defined schedule.

5. **Encourage crowdfunding** by reducing the risk and overhead for business owners to solicit funds from a broader range of investors.

6. **Reward true innovation** by creating tough software patent standards to invalidate frivolous claims and stop patent trolls.

About Expensify

- Expensify is a service for **business travelers** to get reimbursed for expenses incurred on the road. In simple terms, Expensify does "Expense reports that don't suck!"

- Expensify's **SmartScan™ technology** (patent #US8861861) automatically reads expense data from electronic receipt images captured via iPhone and Android smartphones, which are then submitted, approved, and reimbursed automatically -- all within 24 hours from scan to cash in the bank.

- Expensify is the **fastest growing** expense management service in the world (Gartner'15).

- Expensify is a **"Key Partner"** of Intuit's QuickBooks Online, FastCompany's "2015 Most Innovative Company", and winner of "CPA PracticeAdvisor 2015 Innovation Award".

- Expensify is used by over 1000 churches and non-profits, **400,000 businesses** and 3M users.

- Expensify is best known for powering global expense management for major tech brands like Yahoo, Uber, Square, and most of Silicon Valley. However, 75% of Expensify's revenue actually comes from **small businesses** under 100 employees.

- Expensify is itself a small business, with **75 full-time**, high-tech employees split between offices in Silicon Valley and rural Michigan.

- Expensify has partnered with the Ironwood, MI city government to **bring jobs downtown** and revitalize this civic center.

- Expensify sponsors a scholarship to **Gogebic Community College**, and has partnered with the college to develop a cutting edge engineering curriculum.
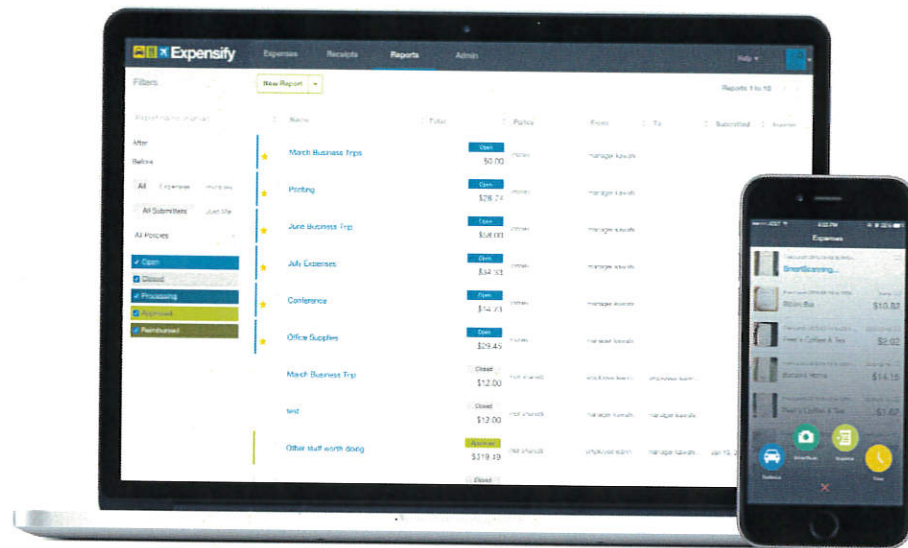
Executive Summary

The last decade has seen an explosive rise in smartphone technology delivering a wide range of mobile applications, providing universal access to unprecedented efficiency gains. Small businesses are especially poised to benefit from these gains due to their accelerated adoption of new technology, along with the optimized processes they enable. Expensify is just one example of how enterprise-grade mobile technology can be delivered to small businesses via a low-cost app. Congress is uniquely positioned to help small businesses find products like Expensify through training and awareness campaigns, as well as help companies like Expensify build products to help small businesses through targeted reforms to patent, immigration, internet tax collection, and support for the "gig economy".

Mobile App Stores: a 10 Year Overnight Success

Though it might seem obvious to say the app revolution started in 2007 with the launch of the iPhone (though more appropriately it should be in 2008 when the app store launched -- the same year Expensify was founded), I'd actually mark the start as five years earlier (2002), with the launch of a little known phone called the **"Danger Hiptop"** created by a guy named Andy Rubin. This was the first phone sold by a major carrier that had largely unrestricted access to the internet, and that launched with an integrated app store.

I was a big fan of the phone: I hosted the first dinner for Hiptop developers, and even wrote the first Hiptop calculator. But what is most notable about the Hiptop's app store was how it was a **colossal failure**. So far as I can tell -- and I've owned nearly every version of the device since launch -- no new apps were ever added. Indeed, I couldn't even get my calculator app listed, despite not connecting to the internet.

Accordingly, the world would need to wait another **6 years** before iTunes was updated to allow third party developers to publish applications to a global store for download and installation onto the iPhone. Four years later, there were over a million apps listed. Now, I'm sure there are many reasons why the iPhone App Store succeeded where the Hiptop App Store failed. But I would say the biggest reason comes down to: **carrier control**. Apple had the clout to force AT&T to allow (largely) unrestricted applications onto their network, whereas Hiptop didn't.

(Fun fact: After Hiptop's failure, Andy Rubin went on to build a new mobile operating system: Android. It launched in 2008 with an integrated app store, and now has more apps than the iPhone.)

> **KEY TAKEAWAY:**
> Innovation requires providing developers open, unrestricted access to both the internet and its users to flourish. Carrier control delayed the app economy by 6 unnecessary years; support network neutrality to ensure carriers and ISPs don't undermine innovation again.

Smartphones: Pocket-sized Supercomputers

It's hard to fathom just how powerful smartphones have become, and how quickly they continue to grow. Though not at all scientific, here are some examples to put things into perspective.

Perhaps the original "portable computer" was upon the Apollo Command Module, in 1969. It had 64 kilobytes of memory, and operated at a speed of 43 kilohertz. As comparison, the iPhone 6 has 1 gigabyte of memory, and operates at 1.4 gigahertz. In other words, the iPhone can process 16,000x more data at 33,000x the speed as the Apollo Command Module. Indeed, a single iPhone has far more computing power than **all of NASA** combined at the time it was landing astronauts on the moon. And it only costs $200.

For a more modern example, take IBM's legendary supercomputer in 1997, named "Deep Blue". It achieved fame when beating the world chess champion Garry Kasparov in a controversial 6-game rematch. At the time, it was the 259th most powerful computer in the world. The iPhone is about 10x more powerful, meaning the phone in your pocket could easily **defeat the top 10 chess players** in the world, simultaneously.

Or even closer: take IBM's latest supercomputer named "Watson". In 2011, Watson challenged the top to Jeopardy! champions to a duel, receiving the exact same inscrutable hints at the exact same time as the human contestants. Watson beat them handily, and was hailed as the **smartest AI ever built**. That version of Watson is still more powerful than an iPhone -- and actually more equivalent to about 2500 iPhones.

But technology never stands still. One of the founders of Intel, Gordon Moore, coined the famous "Moore's Law", which states (loosely) that "**Computer power doubles every 18 months**." By that measure, everybody should have a computer in their pockets as powerful as Watson in about 7 years. That means in three terms, many of your constituents will have a computer as powerful as the most powerful AI ever built -- in their pocket. (And this doesn't even include the inconceivably more powerful computers it will have instant access to over the internet.)

KEY TAKEAWAY:
While it's not technically accurate to say **smartphones are equivalent to the fastest supercomputers** today, draft policy as if it were true because Moore's Law will make it true before that policy goes into effect.

Real World Automation: Expense Reports that Don't Suck

So while the future will see increasingly powerful artificial intelligent applications automating away the mundane details of life in ways that are hard to imagine, we can get a glimpse of what that looks like in the **humble world of expense reports**.

As background, expense reports are the worst part of business travel. It's bad enough leaving your family for days or weeks at a time, living out of cramped hotels and eating in lobby restaurants. It looks so glamorous on TV, but in practice it's a stressful, exhausting mess of taxis, meetings, airports, and delays. So at its best, **business travel is still pretty awful**.

But then add in the pile of crumpled receipts you pull out of every nook and cranny at the end of the trip, and it's **downright sadistic**. The end of the trip is just the start of your expense report -- which means flattening out every receipt and glue-sticking it to a separate piece of paper, typing each receipt carefully into the right cell of a spreadsheet, stuffing everything into an envelope, submitting for approval and, eventually, if lucky, getting reimbursed.

In a sense, you are extending a zero-interest loan to your employer, and then need to act as your own repo-man to get paid back. Every receipt lost is a receipt unreimbursed -- a coffee here, a dinner there -- and pretty soon it adds up to real money. It's an almost offensive end to a grueling journey, but it's the world that **millions of business travelers** experience every day.

But mobile apps like Expensify are changing that. With Expensify, just scan the receipt when you get it using your smartphone's built in camera. The **Expensify app** will instantly upload it to the cloud such that it will never be lost, meaning you never need to put that receipt in your pocket in the first place.

Next, Expensify's **SmartScan™ technology** will automatically read the information off of the receipt image, such that you don't need to type it in manually at the end of the trip. Then it creates a new expense report for you, puts the expense on the report, and submits it right on time -- exactly as your finance team always wished you would. After that the report is updated with the categories your accountant needs, analyzed for fraud, automatically approved, exported to your accounting system, and then automatically reimbursed.

All this adds up to Expensify getting you **reimbursed *tomorrow* for your receipts *today*** -- without anybody needing to look at it ever again, not you, your manager, or your accountant.

KEY TAKEAWAY:
The steady march of technology will continue to create new automation capabilities, each **optimized for different problem domains**. Automation sophisticated enough to be called "artificial intelligence" won't appear overnight in the form of HAL 1000, but rather as specialized apps built to solve an increasingly-difficult array of specific problems. So while Expensify can't beat Waston in Jeopardy!, Watson can't do your expense report, either.

And the Winner Is: Small Business

One of the most incredible aspects of the mobile app revolution is that unlike previous technologies that appeared first in the enterprise and then "trickled down" to the people, mobile apps start with the people first. This means mobile apps are improving the efficiency of **everybody, all at once**, regardless of company size. Indeed, if mobile apps favor anybody, they favor small businesses -- in three broad ways:

First, small businesses like Expensify who create these apps are given a massive advantage over larger enterprise competitors. Concur took 22 years and 4,200 employees to amass 22,000 customers, for example, while it's only taken 7 years and 75 people for Expensify to obtain 16,000 customers; Gartner says we're the fastest growing company in our class in the world. This is because the historical strengths of a large company -- access to capital, global reach, and an army of "warm bodies" to throw at problems -- are neutralized in an environment where anybody in their basement can create an app that is given the **same visibility and distribution as every other app**. This means the need for expensive marketing campaigns and giant sales teams has been dramatically reduced, leaving large companies with very few strengths and a long list of weaknesses for their smaller competitors to exploit.

But second and more importantly, the sheer power and affordability of the mobile app ecosystem enables companies like Expensify to offer enterprise-grade capabilities to the smallest of businesses: **what previously cost millions of dollars, now costs $5/ mo.** This means the businesses who are most able to adapt quickly to new technologies, are now the first to access them. Accordingly, large businesses who are accustomed to having a technology advantage are seeing much stiffer competition from their smaller competitors, driving a heightened level of innovation nationally and globally.

> **KEY TAKEAWAY:**
> The mobile app economy is increasing the speed of business innovation, which fundamentally favors **smaller, more nimble companies** over their larger competitors.

The Smallest of Businesses: Enter the "Gig Economy"

The third benefit I'll mention is still emerging, but is potentially the most interesting yet: the rising "gig economy" is expanding the workforce by **unlocking underutilized capacity** in existing workers, and enabling those to work who simply couldn't before. This is best explained by example:

One of Expensify's key technologies is something called "SmartScan". This is the magic that not just reads information off of your receipt, but categorizes it correctly, puts it on the right expense report, links it to the corresponding transaction on your credit card statement, and more. It is a very complex and sophisticated system involving a wide range of technologies, along with **a dash of human review**. The human component is critical because even the best technology has limits -- and providing a truly magical experience requires going beyond the limits of what technology can do alone.

This is especially important in an area called "optical character recognition" -- the process of not just reading information off the receipt, but making sense of what it means. Mobile cameras are good, but not good enough for a pure technology solution alone to get the level of quality we need: even the best technology isn't nearly as good as the human eye. Accordingly, Expensify has a team of **"SmartScan agents"** who manually transcribe and categorize information from the receipts quickly, accurately, and at very high scale.

Our initial approach was to hire full time employees for this task -- and in fact we still do for certain types of receipts that require it. But as important as it is for the results to be

accurate, they also need to be **low cost to provide**: even though we offer the feature free to users, it's not at all free for us. As a result, we initially started these positions overseas on the assumption that would provide the lowest "unit cost".

Unfortunately, over time we realized that this sort of transcription work is best done in very short shifts -- quality tends to degrade dramatically after about 4 hours. But for all the attention given to the lost cost of overseas labor, we were surprised to discover a wide range of **employer restrictions overseas**. For example, in many cases we found that we could only hire in consecutive 8-hour shifts, in 5 consecutive days, all starting at the same time per day -- regardless of the employee's individual wishes. These unexpected constraints meant that in order to maintain adequate staffing at all hours of the day (we process millions of receipts daily) we needed to hire far more people than expected -- and many of those workers were producing very low quality results. After doing the math, we realized the anticipated cost savings of working overseas were almost entirely eliminated by these accumulated constraints -- while at the same time making an unhappy work environment for some employees.

For this reason we've fully reinvented the system around the notion of a **flexible, "on demand" workforce** based out of rural Michigan. We have since brought work to hundreds people who are either unemployed or even unemployable via normal channels due to a simple lack of appropriate jobs in the area. These workers can dial in at a time and place that is convenient for them, any hour of the day, and for as little or as long as they like. This flexibility means we've been able to bring high-paying work to hundreds of students, stay-at-home moms, seasonal employees, those recovering from medical conditions, entrepreneurs starting their own small business, or anybody just looking to add a secondary source of income to make ends meet.

Most interestingly, we find we get a **significantly lower unit cost** from workers in Ironwood, MI than those in Nepal, Honduras, or the Philippines -- despite paying them substantially more on an hourly basis -- due to increased speed, accuracy, and cultural awareness of the receipts being processed (eg, "Subway" is both a mode of transportation and a delicious sandwich). This means we are able to pay workers more, in a better work environment, while keeping well-paying jobs in the United States. In aggregate, we've paid millions of dollars to workers and employees in rural Michigan, as a direct consequence of it being the best place in the world to find high quality, reliable labor.

KEY TAKEAWAY:
The individual right to choose where and when to work creates a global competitive advantage for the American workforce.

But Challenges Remain, and How Congress Can Help

So the state of the mobile app union is strong -- and it's already providing significant benefits to small businesses nationwide. If nothing else, our #1 goal should just to be **avoid screwing it up**. But we can do more than merely that, and here are a few ideas of where to start:

1. **Help create awareness.** The vast majority of customers who come onto Expensify aren't coming from a competing solution, but rather coming from nothing -- a shoebox of receipts, if that. It's great that they are finding us, but the fact is that millions of businesses could be getting the benefit of Expensify and other mission-critical apps of our kind (payroll, benefits, insurance, etc). Recognizing that Congress can't endorse specific solutions, I could imagine Congress working with the Small Business Association (SBA) and Chamber of Commerce to provide **training and awareness** to small businesses, thereby accelerating the adoption of these productivity tools and thus increasing the efficiency of the US economy.

2. **Support the "gig economy".** I'm not sure if that is really the most flattering framing of the issue ("flexible economy" is more accurate, though less sexy), but the reality is workforce flexibility creates a major competitive advantage -- both with small businesses competing with larger businesses with greater resources, but also US businesses competing abroad. There are valid concerns that need to be taken seriously so as to provide adequate protections for 1099 contractors, but we should actively seek solutions that preserve the **major advantages** that this flexibility affords.

3. **Welcome *legal* immigrants.** The news has been dominated by the impact of illegal immigration, but the more important story is how incredible legal immigration has been for this nation's small business community. Trump's statements notwithstanding, legal immigrants are some of the best the country has to give: over 40% of Fortune 500 companies (each of which started out as a small business) were founded by immigrants or the children of immigrants -- and immigrants are twice as likely to start new businesses as non-immigrants. Additionally, if we're going to let anybody in, we should absolutely be expanding the H1-B program as it explicitly invites the **best and brightest talent in the world** -- with every H1-B visa holder creating between 2 and 5 jobs for native born Americans. Given the reduced reach and visibility of each small business relative to their larger incumbent, H1-B visas are an especially powerful tool for obtaining the best talent and competitiveness.

4. **Simplify internet tax collection.** Sales tax collection is a fast moving and increasingly complex world. Historically, companies would grow their teams roughly as fast as they grew their sales regions, and by the time you were selling nationwide, you'd have a whole team devoted to tax compliance. But the internet enables small businesses to sell nationwide well before they have the internal capacity to figure out the ever-shifting world of internet sales tax collection. It would be helpful if Congress created a **central registry** of sales tax rates by zip code, updated on a regular schedule (eg, quarterly), to reduce the burden of compliance on small businesses.

5. **Encourage crowdfunding.** The cost to start a business has fallen dramatically, but still isn't remotely free. Most entrepreneurs need some help to get off the ground, and despite the rise in "angel investors" and "seed VCs", getting that first bit of funding can be a daunting task. "Crowdfunding" platforms like Kickstarter and Indiegogo are great options for companies that sell a specific, finite product (such as a watch or even a song), but the law restricts selling equity in the business outright. Well-connected entrepreneurs can get around this with "handshake" deals among "friends and family" to get off the ground, but entrepreneurs without the right friends or family are out of luck. If Congress were to define a low threshold under which businesses could **legally sell equity to their peers** -- and not just high-income "accredited investors" -- this would reduce the barrier to entrepreneurship and thus drive an increase in new small business creation.

6. **Reward *true* innovation.** Love them or hate them, patents and copyright are here to stay. Used properly they can help foster an innovative ecosystem of ideas. However, too often they are used in anti-competitive fashion that undermines innovation. Congress could tip the scales away from the **dark side** by raising the bar for what is seen as "non-obvious", simplifying the process to challenge the legitimacy of the patent, and increasing penalties for using frivolous patent suits as a form of naked blackmail.

☐🍴✈ Expensify

Witness Bio

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David Barrett started programming at the early age of 6 and has been working hard to become an expense report magnate ever since. David attended the University of Michigan and worked in their Virtual Reality Lab, before moving to Texas to write 3D graphics engines for the video game industry. Next he moved to California to join Travis Kalanick in building a peer-to-peer file transfer technology called Red Swoosh, which was acquired by Akamai in 2007. In 2008 David left Akamai to start Expensify, and has been improving the world ever since, one expense report at a time.