BUILDING AMERICA'S 21ST CENTURY INNOVATION ECONOMY

Progressive Economic Ideas Through the Lens of Millennial Leaders

Edited by Matti Miranda

NLC
New Leaders Council

Acknowledgments

Developing a progressive economic policy idea incubator set through the lens of millennial leaders requires talented, trained, passionate, young, progressive professionals. Members of the NLC community personify the wide scope of the innovation economy; members of NLC span over 25 U.S. states, are on average 50%+ female, ~60% non-white racial background, and from almost every industry.

This set is made possible, first and foremost, due to the persevering dedication of all the NLC leaders – our alumni, our chapter advisory boards, and current and past leadership teams and staff. Although we can't recognize each by name here, everyone made a vital and lasting contribution to the NLC mission; by recruiting and training the next generation of change makers and influencers we set the stage to move Progressive values forward through our policy memos.

Many thanks are owed to our partners, friends and mentors. Further, thank you to NLC Chairman Chris Kelly for supporting NLC every step of the way; to President of the Progressive Policy Institute Will Marshall, Dr. Michael Mandel, Lindsay Lewis, and the rest of the PPI staff for their expertise, time, and friendship; and to CALInnovates and Chief Evangelist Kish Rajan.

Special gratitude is owed to NLC Executive Director Mark Riddle and NLC Development Director Matthew Tompkins for the creative courage to start this set. And of course, our works would not have been complete without the tireless research support, copy editing, and design talents of NLC Communications Director Dustin Robinson, and Steve Schram, Michael Newton, Rahmon Ross, and Freya Gothelf.

This is just the beginning of the millennial progressive agenda.

Letter from our Advisors

How can we get America's economy moving again, so that it once again delivers shared prosperity? This is the central question in the 2016 election and the biggest task laid before America's largest generation. As pro-growth progressives, we believe unleashing innovation is the key to solving our inequality problem. Our economy is in the midst of a top-to-bottom digital transformation, which promises to boost productivity across all sectors and get wages rising again. The task of progressive leaders is to equip Americans with the tools they need to participate in building this new data-driven economy.

It is critical that the leaders of tomorrow become well versed in this new economy, develop recommendations to improve the lot of economic participants, and work with all members of the community in achieving progress.

That is why the time is now to gather NLC alumni and connect them with mentors, advisors, and other experts to craft a progressive economic agenda for robust economic growth that boosts wages, distributes gains, and works to solve the inequality problem.

Here, with building the America's 21st Century Economy, millennial leaders are spearheading the first step in crafting an economic agenda that spurs growth and works to solve the inequality problem through this collection of policy memos.

Our collaboration to further develop this platform, and to turn words to action, will allow us to unlock the amazing potential of American innovation.

In progress,

Chris Kelly, New Leaders Council Chairman
Will Marshall, Progressive Policy Institute President
Kish Rajan, CALInnovates Chief Evangelist

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The Progressive Values Economy

"Right now, we have an unprecedented opportunity to create a new working world, one in which workers have the ability to choose how and when they work, and do not have to sacrifice social insurance to do so."

The Aspen Institute Future of Work Initiative

The Innovation Economy is forcing us to update the relationship between job provider and worker, and the relationship between business and consumer; to invest in equipping people with the skills necessary to participate in the innovation economy. We find ourselves in the middle of a major and impactful cultural shift where the focus on growth and equality need champions. It is up to progressives to take the lead in defining the path forward.

The 21st Century Workforce

by Kate O'Gorman
NLC Washington, DC

The American economy has evolved to demand a reinvention of the American workforce. The fundamental relationship between employers and workers is changing. Progressives must step forward to ensure that this next era of work is defined with progressive values, balancing the prospect of innovation with worker protections and opportunities.

In the past, highly integrated companies provided opportunities, protections and benefits for their employees. Their commitment to their workers reflected a view that the prospects for future success hinged on a highly-trained and motivated workforce. [1]

Technological advances have fundamentally changed business today, presenting both tremendous opportunity and simultaneous challenges to workers. Workers may have access to flexible work hours and supplemental income, but also confront the erosion of a system of benefits and protections.

The Evolution of the Workforce

While online platform companies like Uber have raised the prominence of independent contractors, the trend is not isolated to the online platform economy. Businesses, responding to competitive pressures and new demands from capital markets, began first to outsource non-core activities to focus on key strategic priorities.[2] Then, in pursuit of ever more flexible and inexpensive workforces, they began to rely more heavily on independent contractors, part-time workers, and seasonal hires. The result is the erosion of the worker safety net and the emergence of a new economy with few worker protections.

The result is not simply the reorganization of similar jobs. Subcontracted industries are often much more competitive than those who contract their services. This puts significant downward pressure on wages and benefits, and leaves fewer opportunities for companies to invest in their workforces.[3]

There is little evidence to suggest that this trend will reverse. Companies continue to be under similar pressures and the digital landscape is adding further strain. Stanford lecturer Rob Siegel and Box CEO Aaron Levie recently characterized companies at risk for digital disruption. Included in their criteria were companies that own rather than rent assets, invest in physical locations rather than on-demand services, or are unable to adjust to market needs because of slow product development cycles.[4] This will only boost pressure to further subcontract non-core functions to allow companies to adapt to a highly dynamic economic environment. It also highlights that changes to the workforce are systemic, demanding an approach that incorporates all stakeholders, from investors to workers.

Rise of the Independent Contractor

A further iteration of the changing relationship between worker and employer is the rise of the independent contractor and similar arrangements. The ascent of online platform companies that depend upon independent contractors, such as Uber or Lyft, only illustrate the increased reliance on the independent contractor. While just 0.5% of Americans currently work in the online platform economy,[5] the sector is projected to grow to 2.7% of full-time employment by 2025.[6]

The increase in the use of independent contractors spreads well beyond the headlines of the online platform economy; from 2005 to 2015, all of the increase in net employment across the country could be attributed to alternative work arrangements, such as independent contractors. The number of Americans working in such structures grew by over 9 million through the period.[7] This trend spans industries, including professional services, education, manufacturing, and healthcare.

[1] "Protecting Workers in a Patchwork Economy - The Century Foundation." 2016. 6 Jul. 2016 <https://tcf.org/content/report/protecting-workers-patchwork-economy/>

[2] "The Fissured Workplace — David Weil | Harvard University Press." 2013. 6 Jul. 2016 <http://www.hup.harvard.edu/catalog.php?isbn=9780674725447>

[3] Ibid.

[4] "Introducing The Industrialist's Dilemma - Medium." 2016. 6 Jul. 2016 <https://medium.com/the-industrialist-s-dilemma/the-industrialist-s-dilemma-is-a-new-course-at-the-stanford-graduate-school-of-business-that-runs-6a13702011bc>

[5] "The Rise and Nature of Alternative Work Arrangements in the United ..." 2016. 6 Jul. 2016 <http://scholar.harvard.edu/files/lkatz/files/katz_krueger_cws_v3.pdf?m=1459290955>

[6] "Worker Protection in the Gig Economy by Laura Tyson and Lenny ..." 2015. 6 Jul. 2016 <https://www.project-syndicate.org/commentary/employee-protection-gig-economy-by-laura-tyson-and-lenny-mendonca-2015-11>

[7] "The Rise and Nature of Alternative Work ... - Harvard University." 2016. 6 Jul. 2016 <http://scholar.harvard.edu/files/lkatz/files/katz_krueger_cws_v3.pdf?m=1459290955>

Employers have a significant incentive to move to an independent contractor workforce. By avoiding costs such as those related to healthcare, social security, or workers compensation, employers can cut labor costs by over 30%[8]. For instance, workers rather than employers become responsible for the full amount of the self-employment 15.3% FICA and FUTA taxes.[9] Independent contractors also give companies the flexibility to adjust to changes in market demand more easily.

Yet, the flexibility and cost savings afforded to companies further deteriorates protections available to these workers. Independent contractors are unable to unionize, often lack discrimination protections, and are not subject to minimum wage or overtime restrictions. [10]

For some workers, the independent contractor status can be an advantage. The detachment from a traditional employer relationship allows an independent contractor to select jobs and may widen the range of jobs to select from. It can allow for flexibility in work hours, a potential asset to those raising families or those needing a secondary job opportunity. For instance, most workers in the online platform economy are using the opportunities to make up for a dip or loss of income rather than seeking their primary job through the platform.[11]

Technological Change Altering the Future Landscape of Work

The American workforce is now confronting new technological advances. The speed of technological change is exponentially increasing, raising questions of whether workers can keep up with its progress. The cost of technology is rapidly declining; for instance, from 1980 to 2006, the cost of standardized processing fell by 60% to 75% per year.[12] Some estimates currently project that almost half of current US jobs are at risk of computerization.[13]

Technological advances have already improved local economies. Progressive Policy Institute's 2015 Tech/Info Job Ranking found that communities with higher percentages of tech jobs saw higher growth rates of non-tech jobs; the top 25 ranked local economies with highest tech jobs saw a growth rate of 10.4% during 2011-2014 and non-ranking counties only saw a growth rate of 6.8%.[14] Moreover, sharing economy businesses spurred increased spending; for example Lyft, one popular ride share business, found that in 2014 passengers contributed an increased $225 million back to their local economies.[15] The returns to the technology economy are higher than those to other sectors. New innovation jobs create 5 additional jobs, while traditional manufacturing jobs were linked to only 1.6 additional jobs.[16]

While there is significant conversation on how these advances are shifting opportunity, one thing is clear: the good jobs of tomorrow will rely on high-skilled workers paired with technologies that make them ever more productive.[17] The changing relationship between employers and workers has also impacted the way the country trains workers. Because workers are now more likely to be only loosely tied to their employers, many companies have fewer incentives to invest in their workforce. Nearly all of employers' current investment in their workforce supports already highly skilled workers. The result is that employees are left to bear the risk of any investment in new skills.[18]

The opportunity and challenge now is ensuring that workers across the country are able to acquire the skills necessary to meet the needs of tomorrow's industry.

Progressives need to write the playbook for ensuring safe and fair work arrangements while not impeding the same innovation that will allow America's entrepreneurial spirit to tackle problems of inequality

Worker Expectations

The evolving workforce is largely the product of pressure from the market, but workers' preferences will also shape the future of work. Millennials are now the largest generation in the workforce, recently overtaking Baby Boomers. Much has been written about the work preferences, but it is difficult to disentangle their preferences from the fact that many millennials entered the workforce in one of the deepest recessions in recent history.

Despite conflicting reports, one thing is clear: Millennials are currently dissatisfied with their jobs. Over 70% of Millennials, are disengaged at work.[19] More than 60% expect to leave their current employer within 5 years.[20] This could either reflect a generation that prefers shorter tenure or a workforce that feels like their jobs are inconsistent with their values.

Many reports show that Millennials seek employment opportunities that reflect their values. They seek employers that invest in their development and allow them to find a sense of purpose in their work. They believe that employee satisfaction, a focus on ethics, and customer care will define a company's success.[21]

The recession may have dampened opportunities for Millennials to seek work opportunities that reflect these values. Despite

[8] "The Rise and Nature of Alternative Work ... - Harvard University." 2016. 6 Jul. 2016 <http://scholar.harvard.edu/files/lkatz/files/katz_krueger_cws_v3.pdf?m=1459290955>

[9] Leberstein, S. "Independent Contractor vs. Employee - National Employment Law ..." 2016. <http://www.nelp.org/content/uploads/Policy-Brief-Independent-Contractor-vs-Employee.pdf>

[10] Ibid.

[11] "Paychecks, Paydays, and the Online Platform Economy (PDF)." 2016. 6 Jul. 2016 <https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-volatility-2-report.pdf>

[12] "Worker Protection in the Gig Economy by Laura Tyson and Lenny ..." 2015. 6 Jul. 2016 <https://www.project-syndicate.org/commentary/employee-protection-gig-economy-by-laura-tyson-and-lenny-mendonca-2015-11>

[13] Frey, CB. "The future of employment: how susceptible are ... - Oxford Martin School." 2013. <http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf>

[14] "2015.12-Mandel-Di-Ionno_The-2015-PPI-Tech-Info-Job-Ranking." 2015. 6 Jul. 2016 <http://www.progressivepolicy.org/wp-content/uploads/2015/12/2015.12-Mandel-Di-Ionno_The-2015-PPI-Tech-Info-Job-Ranking.pdf>

[15] "Lyft's Economic Impact." 2016. 6 Jul. 2016 <http://seuc.senate.ca.gov/sites/seuc.senate.ca.gov/files/lyft_economic_impact_report.pdf>

[16] "The New Geography of Jobs: Enrico Moretti: 9780544028050 ..." 2016. 6 Jul. 2016 <https://www.amazon.com/New-Geography-Jobs-Enrico-Moretti/dp/0544028058>

[17] "Work in the Future Will Fall into These 4 Categories." 2016. 6 Jul. 2016 <https://hbr.org/2016/03/work-in-the-future-will-fall-into-these-4-categories>

[18] "A Jobs Compact for America's Future - Harvard Business Review." 2014. 6 Jul. 2016 <https://hbr.org/2012/03/a-jobs-compact-for-americas-future>

[19] "Myths, exaggerations and uncomfortable truths - IBM." 2015. 6 Jul. 2016 <http://www.ibm.com/services/multimedia/GBE03637USEN.pdf>

[20] "The 2016 Deloitte Millennial Survey Winning over the next generation ..." 2016. 6 Jul. 2016 <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-millenial-survey-2016-exec-summary.pdf>

[21] "Myths, exaggerations and uncomfortable truths - IBM." 2015. 6 Jul. 2016 <http://www.ibm.com/services/multimedia/GBE03637USEN.pdf>

dissatisfaction at work, Millennials have a longer average tenure than previous generations, reflecting perhaps the difficulty in finding work.

A Progressive Vision for the Future of Work

Progressives must step forward to shape the new contract for the future of work. While past structures of benefits and protections may not be appropriate for a new economic environment, a new vision should be marked by the progressive values of equality, opportunity, fairness, and innovation. Progressives need to write the playbook for ensuring safe and fair work arrangements while not impeding the same innovation that will allow America's entrepreneurial spirit to tackle problems of inequality in some of our poorest communities.

Modernize Benefits for Today's Economy

The rise of the independent contractor exposed the limitations of the current worker safety net. Today, the provision of benefits - such as workers compensation, health insurance, and retirement - is tied primarily to employers. Many independent contractors, temporary workers, or part-time employees are shut out from these critical benefits, leaving them more vulnerable to shocks.

A progressive vision calls for a portable benefit regime that reflects the new model of work. All workers should have access to a basic safety net no matter their employment arrangement and should not lose access to benefits when they change jobs. Employers, whether hiring workers as contractors or full-time employees, should contribute proportional to the work performed. These principles would meet the business need to hire flexible workforces while supporting competition that is not based on eliminating the cost of benefits alone.

The Affordable Care Act (ACA) represented an important step toward a new benefit structure. Though most Americans still receive healthcare benefits through an employer, the ACA made it possible for many contractors to independently purchase affordable health care through exchanges. Yet, as recently documented by the Aspen Institute, there are other models of a portable benefit regime. For instance, New York provides workers' compensation to for-hire drivers through a black car fund.[22] Critically, they must both address the flexibility required by independent workers yet call for employers to contribute their fair share.

Reinstate and Expand Worker Protections

New work structures have left many workers without access to basic protections. The increased use of the independent contractor classification bars many employees from collective bargaining and other civil rights protections.

The new structure of organizations has also made it more difficult to enforce existing protections as responsibility becomes more diffuse. Today, a worker's direct employer, particularly in a large network of subcontracted firms, may be facing pressure from its customers and competitors to cut corners on workers protections and benefits. The firm they are employed by may not be the firm that ultimately sets the price and wages for their labor.[23]

Collective bargaining and other protections have not adapted to these new pressures, severely limiting their ability to be a balancing force to the downward pressure on workers and wages.[24] Further, it has become more difficult to investigate potential violations of worker protections; David Weil estimated that the probability of an investigation is below 1 in 100, while industries with a more complex network of subcontracting have a probability below 1 in 1000.[25]

A progressive vision of the future must demand an end to what many have called the race to the bottom on wages and benefits. Workers should be afforded new opportunities to bargain across multi-employer units, allowing them to bargain with a value chain or competitors.[26] It also demands new models for worker organizing to push back against new market pressures.

The government should strengthen enforcement of worker protection and ensure that all employees are covered regardless of their employment status; violations should be made public, allowing for greater transparency.

These changes do not amount to needless regulation, but simply basic protections for workers. This distinction reflects what some workers themselves want. For instance, those in the online platform industry want better benefits, training, and protections, but do not call for greater regulation.[27]

Ensure Opportunity for All

As the future of work develops, all Americans should have access to the new economy.

Returns to education and training are outpacing growth. The highly educated are more likely to be fully employed and earning significantly more than their counterparts. The worker today, however, bears a lot of the risk and financial burden of developing these skills and in investing in the wrong skills. The workforce of the future requires both new ways for individuals to appropriately build their own skills and new incentives to encourage businesses to develop their workers.

To help workers invest in themselves, the public should build strong schools and resources to help workers understand what skills are in demand. This requires a continued commitment to college and vocational training affordability and an improved K-12 school system. Yet, it must also meet the needs of workers retraining for the jobs of tomorrow, helping workers to develop fluency in emerging technologies. State and local governments can play an important role in helping their workers navigate the economic system around them.

Employers are also uniquely positioned to understand what skills are in demand in the new economy. This fact is why it is critically important to restore the role of businesses in developing workers.

There are examples of serious investments in workforce training. Organizations like UFCW, are providing vital training to workers and then certifying workers' skills, providing businesses with a workforce they can be confident in and the workers with certifications they can use on the job market. Local and state entities should provide incentives for businesses and organizations to support similar trainings.

The innovation economy is disrupting major industries and cre-

[22] "Portable Benefits in the 21st Century - Cloudfront.net." 2016. 6 Jul. 2016 <https://dorutodpt4twd.cloudfront.net/content/uploads/2016/06/Portable-Benefits.pdf>

[23] "Blueprint to Empower Workers for Shared Prosperity - Roosevelt Institute." 2015. 6 Jul. 2016 <http://rooseveltinstitute.org/blueprint-empower-workers-shared-prosperity/>

[24] Ibid.

[25] "The Fissured Workplace — David Weil | Harvard University Press." 2013. 6 Jul. 2016 <http://www.hup.harvard.edu/catalog.php?isbn=9780674725447>

[26] "Blueprint to Empower Workers for Shared Prosperity - Roosevelt Institute." 2015. 6 Jul. 2016 <http://rooseveltinstitute.org/blueprint-empower-workers-shared-prosperity/>

[27] "What Do On-Demand Economy Workers Want? We ... - Huffington Post." 2016. 6 Jul. 2016 <http://www.huffingtonpost.com/bruce-reed/what-do-ondemand-economy-_b_8958388.html>

ating new ones. By developing a pipeline for developing and training workers, and allowing for flexibility of this pipeline to identify new opportunities we secure the inclusivity of jobs to everyone.

From the CEO: Is “Progressive Capitalism” really Progressive?

by Ernie Anderson
Co-Founder, Anderson Parking; NLC Capital District New York

by Vasco Bridges
CEO, JANO Technologies; NLC Chicago

The progressive movement often focuses on institutions to force change and when we think of these institutions, we immediately turn to governments and non-governmental organizations (NGOs) as the primary mechanisms to push a progressive agenda. The private sector however, also has an important role to play and progressive millennials often look to the influence of the business world as a way to push for change. Whether it’s creating a social enterprise, participating in consumer activism, or serving as a smart and compassionate steward of a traditional business, a new generation of executive men and women are considering business as a way to enact social change. They are “Progressive Capitalists” and they represent our current and future CEOs.

To truly understand the progressive CEO, one must first understand the concept of “Progressive Capitalism”. Once we consider the nexus between Progressive Capitalism and the millennial mindset, we can then begin to craft the ideal profile of a progressive CEO or a progressive enterprise. What are the key attributes? Do they manage a unionized workforce? Do they pay a living wage? Do they offer fair and open employment policies and paid, family leave? Do they take great care to respect environmental controls in their manufacturing processes?

Many of the aforementioned qualities associated with progressive values are easier in high growth, high margin businesses and many more exist in the growing “Social Enterprise” innovations concept. It is important to consider how this impacts new and small business owners’ ability to manage a pro-progressive-business policy with limits on profitability.

Progressive Capitalism

In his book *Progressive Capitalism: How to Achieve Economic Growth, Liberty and Social Justice*[28], David Sainsbury argues that there are three defining characteristics of Progressive Capitalism:

a. Understanding the importance and involvement of the established institutions (e.g. “government”) in the private sector

b. Believing that these institutions create rules and regulations that resolve sometimes conflicting interests (e.g. conflicts between economic growth and environmental protection)

c. Measuring success not only by traditional economic indicators (GDP growth, profitability, productivity, etc.), but by social justice indicators as well.

Broadly speaking, capitalism is the idea that the production of most goods and services and the resulting distribution of income should be almost exclusively handled by the private sector and managed with market-based forces. This economic system has been around for some time, but for the latter part of the 20th century, the evolution of capitalism can be summarized by the work of Milton Friedman, a 20th Century economics professor and advisor to Presidents Nixon and Reagan.[29] Friedman believed that the free market, undistorted by state intervention, would drive a stable, growing economy. He also viewed corporate social responsibility as an unnecessary distraction from a CEO’s main focus on corporate profit and sustainability. According to Freidman, without these priorities as a determining factor, businesses would fail, the economy would suffer and societal ills would worsen as a result.

Progressive capitalism however, is a strong pivot from Friedman’s theories. Rather than demonizing government institutions as controlling, Progressive Capitalism believes in the supportive role strong government institutions can play and recognizes the triple bottom line - economic, social, environmental - as the ultimate measure of success. This new generation of business leaders has witnessed the impacts of Friedman’s neoliberal economic perspective, and with an economic outlook shaped largely by rapid technological change, globalization of commerce, and the 2008 Great Recession, millennials are primed to lead as Progressive CEOs. We will consider numerous ways these new and future CEO’s can incorporate progressivism into their organizational structure.

Progressivism Contained in the Business Model

Recently we have seen a shift by businesses towards being more socially responsible. One example of how we are codifying and recognizing a social conscious business model is the Benefit Corporation Certification. A Certified Benefit Corporation is granted a certification of Benefit by the nonprofit, B Lab. A Certified B Corporation, or B Corp, can be described as a business with a certification that is “to business what Fair Trade certification is to coffee or USDA Organic certification is to milk.”[30] A company undergoes an assessment to determine how their practices affect the communities they serve, their employees, and the environment. After meeting a certain threshold and agreeing to terms that include renewing their certification every two years and incorporating social good principles into the company’s official documents, a company earns their Certified B Corp status.

Just like any business, improved performance is key for a B Corp. There is evidence that a majority of millennials prefer to work where they find purpose and that millennials think only a small portion, 17% of businesses, are improving society.[31] From this we can say that a business seen to provide for the greater good has the potential to attract a motivated millennial workforce.

[28]”Progressive Capitalism: How to Achieve Economic ... - Google Books.” 2015. 9 Jul. 2016 <https://books.google.com/books/about/Progressive_Capitalism.html?id=g3gvlAEACAAJ>

[29] “Milton Friedman - Biographical - Nobel Prize.” 2013. 7 Jul. 2016 <http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1976/friedman-bio.html>

[30] “B Corporation: Welcome.” 2009. 7 Jul. 2016 <https://www.bcorporation.net/>

[31] “The 2015 Deloitte Millennial Survey.” 2015. 7 Jul. 2016 <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-wef-2015-infographic-millennial-survey.pdf>

We also have consumer purchasing and the effect social good has on the consumer opinion. According to a 2013 Nielsen Report, 50% of global consumer respondents agreed that they would spend more on a product that they knew gave back to society, a 5% increase since 2011. Moreover, the rate of change in the U.S. was above the global average at 8% increase since 2011. It also should be noted that what people think and what people do are not always identical. Nielsen also showed that 43% of global respondents actually did spend more. Since the U.S. has been on an economic up turn, there is good chance that the percentage of consumers who are actually paying more, is increasing along with those that merely agree.[32]

Creating Optimal Conditions for Workers

Creating the conditions and incentives for workers is critical for continued productivity and growth of any great company. As such, CEOs and Corporate Board Members have an incentive for the overall success of their businesses to thrive. From raising wages to creating incentive programs, creating desired conditions for employees can boost the successes of the business. The private sector is leading the way in some areas that public policy makers in Washington and state capitals across are having a hard time getting things done.

Progressive Capitalism believes in the supportive role strong government institutions can play and recognizes the triple bottom line - economic, social, environmental - as the ultimate measure of success

In 2015 for example, Aetna, one of the nation's largest health insurance providers announced it would begin paying low wage employees a $16 minimum hourly wage.[33] Aetna CEO, Mark Bertolini, said was not "fair" for employees of a Fortune 50 company to be struggling to make ends meet.[34] In addition to wage increases, employees received improved in their healthcare coverage. This move by Aetna renewed the conversation of income inequality and its can be a role for the private sector to tackle critical issues that affect their workforce. As we continue to deal with gridlock in our political system, the private is taking on these challenges. This is thread that is happening not only at Aetna, but companies like Walmart, GAP are creating these opportunities for their workforce. It is critical for the private sector to be making these moves, as the millennial generation is coming into the marketplace they are going to demand better treatment of workers and private sector has to demonstrate that or they can risk being an entity not supported by this next generation with purchasing power. Businesses are beginning to discover that the economic benefits of better treating their low-wage workers outweigh the savings gleaned from paying them less.[35] Moreover, we find that "high-wage firms can sometimes offset more than half of their higher wage costs through improved productivity and lower hiring and turnover cost."[36]

Providing incentive programs to better equip your workforce is key and good for business. In 2015, Starbucks announced it would give free tuition to full and part time employees to attend Arizona State University Online program.[37] The tuition reimbursement program is designed to give underprivileged Starbucks workers an opportunity to obtained an education without the burden of costs being a factor. As we have seen over the last several years, the cost of obtaining a college degree has skyrocketed; according to College Board in 2015, the cost of tuition rose faster than inflation.[38] So initiatives like this example can help improve overall employee skill set.

Utilizing the capital power of the private sector to take the initiative without government to tackle the large issues is a must in this innovation economy. Paying workers well and giving them opportunities to obtain education and skills is a prime objective of progressive capitalism.

Corporate Strategy for Social Good

Many major companies have been engaging in corporate philanthropy for quite sometime - through company foundations or through formal Corporate Social Responsibility (CSR) programs. This can take the shape of donations to national/local community programs, employee volunteer programs and investments through the use of their business model. But many more businesses are focusing on "Strategic CSR" - the idea that CSR can be configured so as to produce benefits for the company as well as for those causes supported in the community. This means that the types of causes supported or community groups helped will be chosen carefully so that the CSR initiatives support the strategic objectives of the business". [39] By using CSR strategically, many companies are making investments through their business model that can be both mutually beneficial to the public while appealing to the desired objectives of a company's success. Good, strategic CSR is not simply an amalgamation of "pet projects" but truly impactful operations that use a company's business expertise to drive social value.

For example, the Comcast Corporation has used their business model as an Internet provider to launch a program called Internet Essentials from Comcast since 2011 designed to provide low cost internet services and technologies to low-income and underserved communities.[40] The program is designed as a public private partnership with local governments, libraries, schools and

[32] "Consumers Who Care - Nielsen." 2013. 7 Jul. 2016 <http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2013%20Reports/Nielsen-Global-Report-Consumers-Who-Care-August-2013.pdf>

[33] "Wage decision sparks new conversations about income inequality." 2015. 7 Jul. 2016 <https://news.aetna.com/2015/05/wage-decision-sparks-new-conversations-income-inequality/>

[34] "A Fair Day's Wage - The New Yorker." 2015. 7 Jul. 2016 <http://www.newyorker.com/magazine/2015/02/09/fair-days-wage>

[35] "Can Treating Low-Wage Workers Well Become The Hot New ..." 2015. 7 Jul. 2016 <http://www.fastcoexist.com/3040830/world-changing-ideas/can-treating-low-wage-workers-well-become-the-hot-new-business-strategy>

[36] Wolfers, J. "Higher Wages for Low-Income Workers Lead to Higher Productivity | PIIE." 2016. <https://piie.com/blogs/realtime-economic-issues-watch/higher-wages-low-income-workers-lead-higher-productivity>

[37] "College Board Says Tuition Rose Faster Than Inflation Again ... - Time." 2015. 7 Jul. 2016 <http://time.com/money/4098683/college-board-tuition-cost-rose-inflation-2015/>

[38] "Starbucks to give workers a full ride for college - Apr. 6 ... - CNN Money." 2015. 7 Jul. 2016 <http://money.cnn.com/2015/04/06/pf/college/starbucks-college-tuition-arizona-state/>

[39] "CSR strategy and strategic CSR | ACCA Global." 2015. 7 Jul. 2016 <http://www.accaglobal.com/za/en/student/exam-support-resources/professional-exams-study-resources/p1/technical-articles/csr.html>

[40] "About | internetessentials.com." 2015. 7 Jul. 2016 <https://internetessentials.com/about>

nonprofits to provide affordable access to the internet. The program's impact has been felt; the program has served over 600,000 families and 2.4 million low-income individuals with an investment of $240 million dollars in digital readiness initiatives.[41] The Internet Essentials program has been a staple in the organizational DNA of Comcast in firmly believing that the use of technology can begin "bridging the digital divide." Programs like this have a direct impact on both the economic vibrancy of communities and provides a public good to underserved people.

Lastly as example, Goldman Sachs launched the 10,000 Small Businesses program to combine business education, network of support services and access to much needed capital as a way help jump start growth in small businesses. The bank brought together local community colleges and Community Lenders alongside national educational and nonprofit partners to invest in small businesses, who have in turn outperformed other businesses in terms of growing revenues and adding jobs to local economies. 10,000 Small Businesses program not only identified a need and filled it, but also was strategically close to Goldman's core business of banking and finance.

Using the power of a business model to affect positive changes in communities and provide opportunities for underrepresented constituency should be at the cornerstone of the progressive capitalism model. Continued investments in Corporate Social Responsibility can open up a world of opportunity and create vibrancy in local economies to spur growth and innovation. [42]

Building Progressive Capitalism

It is our belief that millennials are entrepreneurial at heart. That likely leads to many thinking about how to build a progressive business. While there are many ways to show progressive values through a career in business, we consider four key points for potential leaders to encompass progressive values of fairness, inclusivity, and innovation, as they become the business leaders of the coming generation. As encompassing progressive values of fairness, inclusivity, and innovation: looking toward the future, creating value for all stakeholders, government regulations and optimal conditions.

Create Value for All Stakeholders

Share buybacks not only reduce investment in long-term success, but also place undue value creation for company stockholders, often ignoring other key stakeholders; employees, and customers. A Progressive CEO understands that shareholder value is not the only concern of a CEO.

Bill George, former CEO of Medtronic, recently said: "I think we've moved way too much towards what's called shareholder value and away from taking into account creating value for all your stakeholders. You've got to think about how you're creating values for your customers and in turn your employees. If you do that, well you'll have great value for your shareholders."[43]

Invest in all stakeholders: Not only stockholders but employees, customers and of course the civic organizations and of course physical environment that allow your business to thrive.

Innovate Appropriate Government Regulations

Adversarial tensions often exist between those in the private and public sectors. Our 21st Century progressive business values and a "Tri-Sector"[44] collaboration should be infused, in order to find policy solutions at both the federal and state levels. In their Harvard Business Review article, Nick Lovegrove and Matthew Thomas described leaders needed to solve our most challenging problems will, "often have prior experiences in each (business, government, and nonprofit) sector and a unique ability to navigate different cultures, align incentives and draw on the particular strengths of a wide range of actors to solve large-scale problems."[45] Business enterprise allows progressives, with previous experience in other sectors, can positively impact their company and community.

Business leaders, who continue to operate within these sector silos, further reinforce actions of segmentation. However, progressive CEO's or government and nonprofit leaders interested in starting a business should value "Tri-Sector"[46] perspectives, in order to maximize value for their companies. Bradley Tusk, speaking from personal experience as a one-time political operative now CEO, gave this advice, "Working at high levels of government and politics is really hard. It takes a lot of intelligence, talent, street smarts, work ethic, and hustle. And those are exactly the same qualities that predict success in most businesses."[47]

Provide optimal workplace for your workers given your industry scope

CEO's running a small business may not be able to afford to raise wages initially. However, progressive entrepreneurs are thinking of ways to maximize their company's value while offering advantageous employee benefits. For example Bruce Paul, CEO of Swivelfly, offered these three suggestions:

1. Allow Flexible Work Options - giving staff responsibility of their own time
2. Value everyone's input - empowered employees are motivated to do good work, which increases the company's bottom line.
3. Give choices - provide an opportunity for employees to customize their own benefits package according to their age and specific life needs.

These workforce benefits, which have no immediate costs to the company, instill collaboration and inclusion into the core functionality of a company - benefiting the organization and its most valued asset, its employees.

Avoid Short-Termism: Build businesses for long term value

Since the 1980s, business leaders have been fearful of activist corporate raiders. It started with the trend of leveraged buy-outs (LBOs), proceeded to private equity turnarounds and now has

[41] Prieger, JE. "The Growth of the Broadband Internet Access Market in California ..." 2016. <http://digitalcommons.pepperdine.edu/cgi/viewcontent.cgi?article=1062&context=sppworkingpapers>

[42] "Goldman Sachs | 10,000 Small Businesses -." 2012. 7 Jul. 2016 <http://www.goldmansachs.com/citizenship/10000-small-businesses/US/>

[43] "MARKETPLACE: Former CEO Weighs in on Shareholder Value - Bill ..." 2016. 7 Jul. 2016 <http://www.billgeorge.org/page/marketplace-former-ceo-weighs-in-on-shareholder-value>

[44] "Bridging the Divide Between Business and Government - Forbes." 7 Jul. 2016 <http://www.forbes.com/sites/darden/2015/02/12/bridging-the-divide-between-business-and-government/>

[45] "Why the World Needs Tri-Sector Leaders - Harvard Business Review." 2014. 7 Jul. 2016 <https://hbr.org/2013/02/why-the-world-needs-tri-sector>

[46] "Bridging the Divide Between Business and Government - Forbes." 7 Jul. 2016 <http://www.forbes.com/sites/darden/2015/02/12/bridging-the-divide-between-business-and-government/>

[47] "Why You Should Hire the Losers of This Year's Election | Inc.com." 2016. 7 Jul. 2016 <http://www.inc.com/bradley-tusk/why-you-should-hire-soon-to-be-former-government-officials-after-novembers-elect.html>

a current incarnation as of activist investors demanding quicker returns on invested capital. This has driven CEOs to take a very short-term approach, getting capital to investors as quickly as possible, most likely through share buybacks. In 2015, more than 60% of companies on the S&P 500 used share buybacks, gave short term wins to shareholders. This reduces spending, R&D, and other long-term value-driving capabilities to business.

Progressive CEOs should not fall for this trap. Not only will business visionaries have to be responsible and invest in long term successes (see either Jeff Bezos or Elon Musk who endure short term losses for potential game-changing business models), but also leaders in the financial services industry have to take more of a long view as opposed, and receive compensation later, to prevent destroying long term value for short term profits.

Bill George, formerly of Medtronic, said: "if you're depleting your ability to invest in research and development, in capital expenditures, in expansion or acquisitions, I think [buying back stock is] a mistake."

Extending the Innovation Economy to Rural America

"Strong rural communities are key to a stronger America."

President Barack Obama, White House Rural Council

The U.S. economy is transforming into one led by constant technological innovation. In addition to completely changing our social lives, the digital age has revolutionized how and where we work. As urban areas continue to grow economically, rural areas are feared to have entered a period of stagnation. Many in rural areas lack the tools necessary to thrive in this new economy, and need assistance. The necessary tools include broadband, collaborative spaces, healthy and accessible foods, and a new mindset that refutes the idea that you must live near work. Progressives are responsible for transitioning the U.S. into a period where opportunity is afforded to all, including those in rural America.

Innovative Spaces Impacts Rural America's Ability to Engage with the Digital Economy

by Elena Ruiz
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Our economy is changing: the innovation economy is revolutionizing the way we work, the way we live, and the way we engage with others.

As urban centers hum with activity, our rural communities are becoming further distanced from the opportunities and advancements propelling our economy forward. For those in urban areas with reliable access to broadband, educational opportunities, and innovative spaces, the digital economy offers a future bright with possibility: low barriers to entry, lack of overhead costs, improvement via disruption across sectors. But, what does it mean for rural America as the economy continues to grow in this direction?

The status quo

The digital economy is shaped by values of "open innovation, co-working and collaboration," rather than "outcomes of production."[48] This is a monumental change from decades of manufacturing and product-driven competition; the infrastructure necessary for economic success has changed dramatically, and in today's digital economy, it is the urban hubs that are strongly equipped to succeed.

The potential of the digital economy is vast; if communities were empowered with equal access to education, broadband, and infrastructure, all citizens, both urban and rural, would have pathways towards economic success. Competition is reshaped through the lens of the digital economy. In decades past, resources needed to create economic success were finite; in today's world, knowledge and skills are infinite and open new realms of possibility.[49] This is both encouraging and challenging when considering rural America. On one hand, if broadband and connectivity were supported in rural communities, barriers to entry into the market, into economic stability, would be low—our communities and families would grow stronger and become more stable. On the other hand, our challenge is clear: rural access to the infrastructure necessary to access the digital economy is severely lacking and must become a priority for policymakers.

On a basic level, rural Americans are at a disadvantage when it comes to broadband connectivity—while only 4% of those in urban centers lack access to fixed broadband a whopping 39% of rural Americans are without this access.[50] In today's economy, both fixed and mobile broadband access are critical to collaboration, the exchange of ideas, and competition.

[48] "Spaces to Think: Innovation Districts and the ... - Centre for London." 2016. May. 2016 <http://centreforlondon.org/publication/innovationdistricts/>
[49] Ibid.
[50] "Fact Sheet: 2016 Broadband Progress Report Chairman's Draft ..." 2016. 1 Jul. 2016 <https://apps.fcc.gov/edocs_public/attachmatch/DOC-337173A1.pdf>

Without basic internet access, rural America will fall behind. Lack of broadband access and reliable connectivity impacts large and small businesses alike, and hamstrings individual entrepreneurs. Specifically, rural Americans are at a disadvantage "firstly in their ability to remain competitive[51] through research, to be up-to-date in their field and to buy and use cutting-edge technology; and secondly, in their capacity for effective marketing, which often requires social media and data-intensive websites."[52]

This is a test of our values: as the digital economy booms, what policies can we implement to be inclusive of the 59 million people (20% of our country) living in rural communities?

Co-working spaces: Education, Collaboration, Innovation

Co-working and collaborative spaces offer an important alternative for innovation in rural communities. Although individuals may not have access to reliable broadband connectivity at home, or may not be able to afford that access, cooperatives of entrepreneurs, skilled workers, and those seeking to access the digital economy offer a viable path to the marketplace. With more than 53 million Americans living in the rural US (34% of the workforce) acting as "independent workers," these spaces provide critical resources for those seeking to compete. [53]

Co-working spaces are "defined as membership-based work-

Leveraging the community trust that already exists, we can transform libraries into modern age resource centers: spaces where people can take classes, improve their digital literacy skills, access reliable networks, and collaborate with other innovators.

spaces where diverse groups of freelancers, remote workers, and other independent professionals work together in a shared, communal setting."[54] Co-working spaces have a large number of advantages. For a comparatively small fee, members have overhead provided, reliable digital access, and space to collaborate with others, both inside and outside of their own business and industry.

Co-working spaces take many shapes: some are formal arrangements with strict fees and cushy perks; others are informal agreements between like-minded individuals looking to pool resources for the collective benefit. Regardless, the root of the movement is the same: using a collaborative approach to access the resources necessary to compete. These platforms have grown organically in urban areas over the last decade. Now the question remains: can co-working and collaborative spaces serve as a viable solution for connecting rural America to the digital economy?

Beyond traditional co-working spaces

Co-working spaces are valuable platforms for individual innovators, entrepreneurs, and small businesses. But beyond that, there are existing models with wider community benefits. For example, Gangplank, which has expanded across multiple states, is publicly funded and acts as a community center. They offer "programs in health, studio arts, and classes taught by educators from local institutions."[55] These educational programs open up the digital economy to a wider range of rural citizens; opportunity is not restricted to those with business ideas and remote jobs, rather, it is available to any community member willing to attend a class and expand their horizons. This type of co-working space has the potential to not only open access to the economy, but to provide a clear learning pathway for those lacking the skills necessary to succeed.

Further, most rural communities already have some level of infrastructure compatible with co-working and collaboration: community colleges and public libraries.

There are nearly 17,000 library branches across the United States[56] and more than 1,600 community colleges.[57] These spaces provide a natural gateway to the digital economy for those living in rural communities. Public libraries and community colleges both provide reliable access and connectivity to the digital economy, as well as make available environments rich with ideas and diverse people, and tools to increase human capital.

The physical infrastructure already exists in many rural communities and the opportunities for the creation of new co-working spaces are endless; for relatively low investment, we can bolster existing resources and incentivize collaborative spaces to lift up whole communities.

Creating Opportunities

Reliable access to educational and co-working spaces has the potential to bridge the divide separating rural America from the innovation economy. These types of collaborative spaces embody progressive values while simultaneously empowering communities to compete in the new economy; policymakers should take note and invest in these opportunities.

1. Investment in public libraries

Public libraries constitute an infrastructure system that already exists across our country. Library branches are a known entity within our communities – a "reliable, trusted environment where patrons can learn workplace skills, take GED and college prep courses, and obtain digital literacy skills, so they can navigate the new digital environment."[58] Leveraging the community trust that already exists, we can transform libraries into modern age resource centers: spaces where people can take classes, improve their digital literacy skills, access reliable networks, and collaborate with other innovators. Ideas can be shared virtually or in person; by clearly establishing public libraries as spaces for innovation, we will open the digital economy to rural communities across the country.

[51] Roberts, E. "The Contribution of the Creative Economy to the Resilience of Rural ..." 2015. <http://onlinelibrary.wiley.com/doi/10.1111/soru.12075/abstract>

[52] "What percentage of - US Census Bureau: FAQs." 2012. May. 2016 <https://ask.census.gov/faq.php?id=5000&faqId=5971>

[53] "As Coworking Spaces Scale, Can They Keep Their Communal Vibe ..." 2015. May. 2016 <http://www.theatlantic.com/business/archive/2015/02/as-coworking-spaces-scale-can-they-keep-their-communal-vibe/385653/>

[54] "Why People Thrive in Coworking Spaces - Harvard Business Review." 2015. Jun. 2016 <https://hbr.org/2015/05/why-people-thrive-in-coworking-spaces>

[55] "Why Coworking Spaces Are Here To Stay - Forbes." 1 Jul. 2016 <http://www.forbes.com/sites/karstenstrauss/2013/05/28/why-coworking-spaces-are-here-to-stay/>

[56] "Rising to the Challenge: Re-Envisioning Public Libraries." 2014. 1 Jul. 2016 <http://csreports.aspeninstitute.org/documents/AspenLibrariesReport.pdf>

[57] "Community College Facts at a Glance - US Department of Education." 2010. 1 Jul. 2016 <http://www2.ed.gov/about/offices/list/ovae/pi/cclo/ccfacts.html>

[58] KRUEGER, K. "Grow2Gig+: Anchors Advance Communities | SHLB." 2016. <http://www.shlb.org/action-plan/papers/Connecting-Anchor-Institutions-A-Vision-of-our-Future/full/>

In communities lacking public libraries, virtual libraries should be explored. For example, a partnership between the local library and airport authority in Philadelphia led to the creation of "The Free Library," which is a virtual library in the airport that provides free WiFi and access to typical library content.[59] Creating partnerships to, at a minimum, ensure rural communities have access to virtual libraries is an important step to connecting rural areas to the knowledge economy.

Transforming libraries will take both stakeholder buy-in and funding. Locally and regionally, policymakers must earmark funding for the maintenance and expansion of library resources and the upkeep of competitive digital access. Roughly two-thirds of libraries wish to improve their broadband speed.[60] Funding these improvements is a manageable way to open up digital access to whole communities at a time.

Federally, we need strong leaders to promote the Schools and Libraries program, or E-rate program, which helps schools and libraries access necessary telecommunication infrastructure.[61] In 2014, the E-rate program was earmarked for modernization; ensuring the process is complete and that we are providing our schools and libraries with reliable digital access is key.

Further, policymakers should encourage and incentivize creative programs within public libraries that exemplify collaboration and access to the innovation economy. For example, Arizona State University "has rolled out a network of co-working business incubators inside public libraries… designed to create a statewide network of places for people to connect, collaborate and find valuable resources."[62] These types of programs are effective examples for rural communities across the country, and must be considered as a timely, cost-effective solution for the growing digital divide.

2. Creating innovation districts: Community colleges and creative partnerships offer another attractive alternative to bridging the digital divide between rural and urban centers.

Like public libraries, community colleges have the necessary infrastructure to connect users to the digital economy. Policymakers should consider programs designed to draw non-students to community colleges in strategic ways to promote collaboration and innovation. For example, in rural Maryland, businesses and individuals have come together to create an information co-operative with advanced telecommunication resources. On top of establishing fast, reliable broadband access, the co-operative has created an incubator at the community college and has built "partnerships to overcome size and remoteness…the primary key to sustaining rural knowledge-based activity."[63]

Beyond the educational and digital access opportunities possible at community colleges, policymakers should examine the potential creation of innovation districts, along with corresponding funding. Innovation districts typically result from the combination of three major assets: economic (universities and businesses), physical (broadband, transportation), and networking (collaboration).[64] Creating innovative partnerships between businesses, educational institutions, and individuals within rural communities, supported by broadband infrastructure, will organically create collaborative spaces that foster competition within the digital economy.

Creating innovation districts and strategic, shared goals with community colleges will enable rural citizens to coalesce, collaborate, and compete. These districts are another platform for economic inclusion, and policymakers should consider how to enhance existing partnerships and build new connections between stakeholders to facilitate these efforts within rural communities.

Looking Forward

The growth of the digital economy creates a moment of truth for our country: how do we leverage new economic growth and encourage innovation without leaving millions of rural citizens behind?

It's within our shared values of "community, collaboration, learning, and sustainability" that we find our answer: co-working and educational spaces will provide timely, critical access for rural Americans seeking to compete in the digital economy.[65]

Co-working and educational spaces provide clear and creative investment opportunities. Policymakers should promote the growth of innovative workspaces, support existing community infrastructure, and foster the collaborative efforts that are growing organically across the country. Without these strategic efforts, we risk a growing divide between urban and rural America, which will become increasingly difficult to address the longer we wait to take action. The new economy is bringing new, exciting opportunities to all sectors. It is imperative that we empower all communities, affording all American citizens access to the boundless opportunities of our digital age.

Policy-Hacking Produce to Food Desert Families: A SNAP-to-CSA Subsidy

by Yonatan Landau
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The Problem

The percentage of Americans diagnosed with diabetes has skyrocketed in the past decades. From under 6 million in 1980, or 2.5% of the population, an estimated 29 million, 9% of America have the disease in 2014[66] . The costs of diabetes to the US are $245 billion annually, an amount equivalent to nearly 7% of the federal government budget - $176 billion in direct medical costs and $69 billion in reduced productivity[67] . 1 in 2 African Americans born today is expected to develop diabetes.

[59] "Rising to the Challenge - Communications & Society Reports." 2014. 1 Jul. 2016 <http://csreports.aspeninstitute.org/documents/AspenLibrariesReport.pdf>

[60] "Grow2Gig+: Anchors Advance Communities | SHLB." 2016. 1 Jul. 2016 <http://www.shlb.org/action-plan>

[61] "FAQs on E-Rate Program for Schools and Libraries | Federal ..." 2015. 1 Jul. 2016 <https://www.fcc.gov/consumers/guides/universal-service-program-schools-and-libraries-e-rate>

[62] KRUEGER, K. "Grow2Gig+: Anchors Advance Communities | SHLB." 2016. <http://www.shlb.org/action-plan/papers/Connecting-Anchor-Institutions-A-Vision-of-our-Future/full/>

[63] "Rural America's emerging knowledge economy - Iowa State University ..." 2005. 1 May. 2016 <https://www.extension.iastate.edu/agdm/articles/others/HenAug05.htm>

[64] "spaces to think: innovation districts and the ... - Centre for London." 2016. 1 May. 2016 <http://centreforlondon.org/wp-content/uploads/2016/04/J4234C-FL_Innovation_Districts_WEB-FINAL.pdf

[65] "Why People Thrive in Coworking Spaces - Harvard Business Review." 2015. 1 Jul. 2016 <https://hbr.org/2015/05/why-people-thrive-in-coworking-spaces>

[66] "CDC - Number of Persons - Diagnosed Diabetes - Data & Trends ..." 2004. 1 Jul. 2016 <http://www.cdc.gov/diabetes/statistics/prev/national/figpersons.htm>

[67] "Economic Costs of Diabetes in the U.S. in 2012 | Diabetes Care." 2013. 1 Jul. 2016 <http://care.diabetesjournals.org/content/36/4/1033>

A major cause of the growth in diabetes is a marked shift away from home-cooked meals, which typically include fruits and vegetables, to a regular diet of fast food and junk food. Although issues of nutrition and health are complex, research has shown that healthy, home-cooked meals of fruits and vegetables are critical to combating diabetes[68] . As marketing dollars have saturated low-income communities with messages about unhealthy food, wages for these communities have stagnated and caregivers are forced to juggle multiple jobs to make ends meet. Parents, primarily single parents, struggle to find the time and energy necessary to shop for and cook healthy meals for their children.

One critical barrier is the inaccessibility of fresh, quality produce in low-income communities, often described as "food deserts" for lack of full-service grocery stores. Because these neighborhoods aren't seen as lucrative by traditional produce retailers, the market gap is filled by corner stores which focus on non-perishable junk food. Produce offered is more expensive and of poor quality, making it even more challenging to include in children's diets.

Community Supported Agriculture

The problem of diabetes grew out of control throughout the 2000's. Only recently have public health advocates seen their work begin to slow the growth of diabetes. From removing soda and junk food from schools to the First Lady's "Let's Move" initiative, a slew of programs over the last decade have attempted to tackle this problem.

America also faces the potential disappearance of the American farmer over the next two decades. The average age of a farmer is nearly 60 years and thousands of acres of farmland are lost to suburban sprawl every day.[69] Without support for more small and medium-sized farms, the lifestyle and heritage of the country's rural farmers, the communities that developed the country, are set to vanish.

Advocates saw the connection between these two trends and in 2005, local food advocates working with the federal Center for Disease Control tested giving a $2 coupon to consumers for every $5 of Electronic Benefit Transfer (EBT) dollars spent at participating farmers markets in New York City.[70] Four years of data showed a significant increase in Supplemental Nutrition Assistance Program (SNAP) dollars spent at farmers markets. In the following years, non-profit organizations across the country raised philanthropic capital to replicate this intervention and build momentum for the concept.[71] [72] [73] Their work culminated in bipartisan support for the 2014 Farm Bill including $100 million in funding through a USDA competitive grant program to increase fruit and vegetable purchases to SNAP recipients. This program focuses on connecting agricultural producers and low-income consumers and provides matching funds, 1-to-1, for dollars coming from states, counties or cities.[74]

At the same time, the economics of fresh produce may be showing signs of shifting. Delivery costs have decreased with investment from major players such as Amazon. Many start-ups are investing in bringing fresh produce to customers through technological and supply chain innovations. Although online delivery services are currently targeting affluent customers and don't produce significant cost savings in 2016, the nature of technological innovation is that with significant investment in software and logistics, distribution costs will drop substantially over the next several years.

The Recommendation

States and counties should provide financial incentives for local agriculture programs utilizing wholesale prices to serve food stamp recipients. This policy would cost-effectively bring fresh produce onto the plates of low-income Americans. It would combat diabetes, leverage federal dollars to strengthen small and mid-sized sustainable farmers and strengthen local economies.

Technology companies and nonprofit providers using cutting edge software to serve farmers have the capacity to reduce transaction costs of marketing, ordering, storing and distributing CSA's. Smart policy can play a role in incentivizing this critical area of economic activity.

The opportunity to leverage technological innovation around Community Supported Agriculture (CSA) purchases should excite policymakers. A CSA purchase, sometimes referred to as CSA, is a box of produce delivered directly from farm to consumer on a regular basis that considers seasonal limitations and other issues that affect farm output. From only 60 CSA's in 1990, the US now has over 8,000 CSAs in every state in the country.

We recommend a program that matches 1:1 SNAP funds and funds from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) spent on a qualified CSA. A pilot program in Washington D.C. matched participant dollars 3:1. Community Food Works, a non-profit program, paid $8 for produce sufficient to last a family of four for one week, a fraction of the cost of purchasing produce from a grocery store. This program is a cost-effective way to combat the diabetes epidemic by bringing fresh, delicious produce into low-income homes. A program that scales this program leverages two sources of federal dollars in parallel – SNAP and WIC funding, as well as $100M of Farm Bill funding that goes to supporting direct to farm purchase incentives.

More importantly, a SNAP-to-CSA incentive policy ensures that low-income residents benefit from technological innovations that would otherwise only bring cost down, and improve quality, for wealthy families. In addition to ensuring working-class families benefit from the innovation, the incentive would draw further private sector financing and innovation to continue reducing the cost of fresh produce transportation into low-income communities. In doing so the program would guide federal dollars currently spent on unhealthy food, produced out of state with little job creation, towards healthy food systems that foster job growth and support the resilience of rural communities.

Bringing CSA's into the homes of low-income families – many of which are single-mother homes – would lower both the financial

[68] "Eating more homemade meals may reduce risk of type ... - Science Daily." 2016. 1 Jul. 2016 <https://www.sciencedaily.com/releases/2015/11/151108124758.htm>

[69] "No Farms No Food | American Farmland Trust." 2015. 1 Jul. 2016 <https://www.farmland.org/no-farms-no-food>

[70] Baronberg, S. "Preventing Chronic Disease | The Impact of New York City's Health ..." 2013. <https://www.cdc.gov/pcd/issues/2013/13_0113.htm>

[71] "Double Up Food Bucks." 2010. 1 Jul. 2016 <http://www.doubleupfoodbucks.org/>

[72] "90% 27% 95% 70% - Wholesome Wave." 2014. 1 Jul. 2016 <http://www.wholesomewave.org/wp-content/uploads/2014/07/2014_double_value_coupon_program.pdf>

[73] "Impact | Market Match." 2015. 1 Jul. 2016 <http://marketmatch.org/impact/>

[74] "Farmers Market Coalition Applauds Bipartisan Leadership on Senate ..." 2016. 1 Jul. 2016 <https://farmersmarketcoalition.org/farmers-market-coalition-applauds-bipartisan-leadership-on-senate-farm-bill/>

and time costs associated with healthy food. Rather than having to stretch the family budget on transit, a CSA provides the transit to bring the food to the door. By avoiding the need for spoilage, warehousing, and sales costs, a CSA allows the family (and the state) to pay only for the cost of production and distribution, a significant saving.

In addition, CSA's often come with simple recipe directions that can help families that would otherwise struggle to make use of the vegetables provided. Policy could require that CSA's receiving the incentive provide recipes in their deliveries.

Although current regulations from the U.S. Department of Agriculture prohibit payment directly online, forthcoming guidance from the 2014 Farm Bill is set to change that. Currently SNAP recipients can still pay in person for goods ordered online from a CSA.

The State of California could 1) allocate $5M be matched both by foundation and then federal dollars, creating $20M to match SNAP and WIC dollars, 2) ensure statute allows WIC dollars to be spent on a qualified CSA, 3) provide funding for county staff to market these financial incentives to affordable housing, schools and other relevant community centers that could serve as drop off points and 4) convene foundations, venture capitalists, CSA farmers, technologists and elected officials to focus momentum on the opportunity and encourage innovation.

Other states and counties can use our recommendation as an example.

Food markets serving low-income Americans are notoriously inefficient, creating substantially higher prices for lower-quality goods. Technology companies and non-profit providers using cutting edge software to serve farmers have the capacity to reduce transaction costs of marketing, ordering, storing and distributing CSA's. Smart policy can play a role in incentivizing this critical area of economic activity.

Digital Oases: Intermodel Rural Transportation Hubs and the Digital Commute

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Rural America faces unique challenges to the growth of its economy and to maintaining a healthy and educated workforce. Whereas rural regions of the United States possess resources with the potential for opportunity, rural residents earn significantly lower incomes than urban residents.[75] The rural economy once depended on farming, forestry, and mining. Now, however, manufacturing, services, recreation, retirement, and other non-farm activities are most prevalent in the rural labor market.[76] Rebuilding transportation infrastructure, and focusing on redefining twenty-first century public transit to include high speed broadband internet access, is an immediate priority to solving the issues caused by the changing labor market and the immediate problems facing rural America.

As the twentieth century drew to a close and the millennium came into view on the horizon, a number of economic evolutionary changes occurred which altered the model of American middle class growth.

1. Efficiency in agriculture reduced the demand for skilled farm-workers.
2. Less affluent nations, with significantly lower costs of living, acquired the technological sophistication to manufacture goods for a significantly lower labor cost.
3. American transportation infrastructure, the model for other nations to follow and from which they learned, began to decline as other nations were building the next generation of transportation infrastructure.
4. Public funding for innovation reduced as middle class tax revenue declined with wage stagnation.
5. Fuel costs increased and the transportation and manufacturing industries found themselves linked less by common prosperity interests and more by an over-reliance on unsustainable fossil fuels.

The commuter culture of the manufacturing industry employed far fewer, paid less money, and began to geographically concentrate wealth to urban centers. Those who remained in non-metro regions enjoyed fewer economic opportunities and stagnant wages. This phenomenon also resulted in transportation infrastructure concerns. The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) gave control of most Federal highway planning to the States, which, along with local governments, own 97 percent of roads. (USDA Economic Research Service. Agriculture Information Bulletin Number 795 January 2005)

The economy throughout much of the 1990s was strong. However, since the economic recession in 2008, states have faced varying levels of financial hardship. As highway grants from the American Recovery and Reinvestment Act (ARRA) came without any significant strings attached, states were at liberty to use the funds as they wished. In addition to the lack of increased national highway spending from 2008 to 2011, many people were led to believe that state governments used the funds to pay down their debt, or for other purposes, instead of appropriating the funds to transportation infrastructure.[77]

Today, rural America faces the obstacle of a declining population of working-age Americans.[78] Approximately 11 percent of the nation's physicians work in rural areas. However, almost 20 percent of Americans live there.[79] A report by the United States Department of Agriculture reveals that 83 percent of rural southern counties are considered to be in a state of "persistent poverty." A key factor of poverty and high unemployment is a loss of industry, specifically in the manufacturing sector. Often, small towns depend on a single factory or plant for most of their jobs.[80] Thus, rural America is encountering steady, long-term economic decline.

Furthermore, according to a report by the USDA, "total rural

[75] "Strengthening the Rural Economy - The Current State of Rural America." 2015. 1 Jul. 2016 <https://www.whitehouse.gov/administration/eop/cea/factsheets-reports/strengthening-the-rural-economy/the-current-state-of-rural-america>

[76] Whitener, Leslie A, and David A McGranahan. "Rural America-opportunities and challenges." Amber Waves 1.1 (2003): 15-21.

[77] "Economic Research | Fueling Road Spending with Federal Stimulus." 2014. 1 Jul. 2016 <http://www.frbsf.org/economic-research/publications/economic-letter/2014/august/recovery-act-federal-stimulus-highway-spending/>

[78] "Strengthening the Rural Economy - The Current State of Rural America." 2015. 1 Jul. 2016 <https://www.whitehouse.gov/administration/eop/cea/factsheets-reports/strengthening-the-rural-economy/the-current-state-of-rural-america>

[79] "Meeting the Primary Care Needs of Rural America: Examining the ..." 2013. 1 Jul. 2016 <http://www.ncsl.org/research/health/meeting-the-primary-care-needs-of-rural-america.aspx>

[80] Norris, A. "Green acres is the place to be? : Monthly Labor Review: U.S. Bureau ..." 2013. <http://www.bls.gov/opub/mlr/2013/beyond-bls/green-acres-is-the-place-to-be.htm>

population has declined slightly for several years, as slowing natural population growth fails to offset net migration away from rural areas. This is the first time rural population declined since data became available in 1950 that could detect such a trend. At the same time, long-term trends continue to concentrate the most highly educated members of the working-age population in urban areas where the personal economic returns to higher education are greater" (United States Department of Agriculture Economic Research Service Economic Brief Number 26 November 2014).

In a 2012 study by the Federal Reserve Bank of New York, using US Department of Labor Occupational Information Network (O*NET) data, it was determined that the most urbanized areas of the United States tend to specialize in skills-based occupations such as scientists, technicians, engineers, and executives. In these professions, according to the study, the ability to think, generate ideas, and solve problems is important. Furthermore, these occupations are most likely to benefit from physical proximity which accompany dense urban environments, such as enhanced information exchange and idea generation facilitated by face-to-face contact. Conversely, rural regions tend to show a higher percentage of occupations involving skills of machinists and makers. These are more "hands-on" occupations in the trades of assembly, maintenance, and repair. Particularly noteworthy is the correlation between increasingly rural areas and the cutback of occupations utilizing coordination, persuasion, and negotiation. These occupational skills are concentrated in urban centers and suburban perimeters, where extensive interaction and face-to-face contact are not impeded by isolation and distance. (Jaison R. Abel Todd M. Gabe Kevin Stolarick, 2012)

The Information Superhighway

As the United States looks to the future, the economic forecast cannot continue to prosper as manufacturers. Economic globalization is based on a premise of innovation ultimately being acquired by a labor market subject to markedly lower income expectations. For countries less technologically innovative, acquisition of existing technology often yields higher rates of productivity than would result from a similar investment in research and development.[81] Continuous creation of knowledge, and related jobs, are made possible by the collaborative efforts facilitated by high-speed broadband. Geographic location, regardless of how remote, is less significant.

But, to successfully implement such a model, rural America must look to a future built on the concepts of:

1. Projects that can be built nowhere but here, focusing on rebuilding the nation's transportation infrastructure.
2. Rethinking the concept of transportation and commuting entirely, shifting the paradigm of a workforce that must physically move itself and its innovations from one physical location to another. Rather, in this era of digital innovation, focusing on digital communication via high-speed internet connectivity which reaches every part of the country, as the new commute.
3. Re-connecting traditional means of transit to accommodate physical commuting in a more efficient, more accessible, more affordable, and more ecologically sensitive way.

[81] Kniivilä, M. "Industrial development and economic growth: Implications for poverty ..." 2007. <http://www.un.org/esa/sustdev/publications/industrial_development/3_1.pdf>

[82] "Employees Who Work At Home Are More Productive Than Office ..." 2014. 1 Jul. 2016 <http://www.forbes.com/sites/groupthink/2014/08/27/employees-who-work-at-home-are-more-productive-than-office-dwellers/>

By focusing on commuting digitally, a company based in San Francisco could seek and acquire talent in Mission, South Dakota. A company in Atlanta could have employees in Coffeeville Alabama and Holly Grove Arkansas. With studies showing that the office is no more productive a place than anywhere else a person can work, unless absolutely necessary, the concept of a corporation requiring a large, physical headquarters, furnished with all the expensive requirements of an office and limited to a workforce available within the parameters of daily commuting distance is no longer required. Additionally, such a concept is economically detrimental to the struggling economy of rural regions of the country.[82]

Certainly, this concept does not address every employment situation. Yet, taking for example, the issue of the growing aging demographic retiring to rural parts of the country and the subsequent need for nearby healthcare services. If healthcare providers can train, employ, oversee, and receive feedback from staff who are physically located in the regions where there is an underserved consumer base, why require the staff to commute daily to a main facility? The same model can be applied to financial services, technology innovations, sales forces, designers, writers, and anything else that does not require on-site, hands-on attention.

Intermodal Transit Hubs

Intermodal transit hubs, locations in which different ways to get around are centralized to allow for easier transportation, can already be found in some of our well known communities; New York City's Port Authority Bus Terminal, Los Angeles's Union Station, Washington DC's Union Station, and Philadelphia's Penn Station are just a few examples of large scale physical spaces offering a wide variety of methods by which the public can enter via one mode of transport and depart via another.[83]

Rebuilding transportation infrastructure, and focusing on redefining twenty-first century public transit to include high speed broadband internet access, is an immediate priority to solving the issues caused by the changing labor market and the immediate problems facing rural America.

These transport stations represent a rapidly evolving and developing concept, designed to provide a hub for interfacing and interconnecting a variety of intercity, regional, and local public transport systems, all within a single facility. Often combining both local/regional and intercity transport services, intermodal hubs include systems such as Amtrak, Greyhound, regional and local bus lines, shuttle vans, taxis, and park and ride facilities.

Furthermore, these places are commerce magnets, not only attracting business to their immediate vicinity, but also inside. A remarkable example of a commercially successful public transit hub is Paris's Les Halles.

[83] "Intermodal Surface Public Transport Hubs." 2008. 1 Jul. 2016 <http://www.vtpi.org/henry_marsh.pdf>

The Solution: Rural Transposition and Paradigm Shift

The critical question generated is: How does a solution to urban public transportation problems help solve the problem of diminishing career opportunities and declining prosperity of isolated, rural regions of the country?

Let us look at one example of an immediate need in non-metro regions for innovation, as well as related service-sector labor: the field of healthcare. The migration of workforce age Americans from rural areas for both higher paying occupations and the requisite educational requirements to pursue them has left alone an aging population who require primary medical care. Financial, professional and cultural factors influence where young doctors choose to practice. Most choose to locate themselves in more urban centers. Rural Americans ages 55 to 75 are expected to increase in population about 30 percent between 2010 and 2020, due, in part, to retiring baby boomers relocating from urban areas.[84]

In order to attract and retain medical talent to non-metro regions we must increase both ease of physical transportation to equipped facilities and digital connectivity. By opening information superhighways, primary care medical communication can be detailed and thorough. The need for on-site doctors can be reduced, and the ability for non-physician practitioners to consult in real time and administer medical attention can be improved.

Using the model above as a basis for the initial question, the answer is twofold. The first part is scaling urban intermodal transportation hubs to fit the needs of rural regions in America, along already established rail lines. This is not a new concept. A report was released at The United States Conference of Mayors Summit on A National Rail Policy for the 21st Century on January 17, 2001, by Boise, Idaho's Mayor,H. Brent Coles. In the report, entitled, Rail Stations at the Heart of America's Communities, the Mayor writes:

A public communications campaign to redefine an established norm, as ingrained as the daily commute by automobile, is a major undertaking, but one necessary for the growth and development of the nation's remote communities.

"In America's smaller cities, we have found that reinvestment in stations can be coupled with a focus on bridging the digital divide. Our E-Station project will pilot the concept of linking broad-band access, development of a computer literate workforce, and business incubators with the revitalization of historic railroad era structures. High-speed telecommunications lines connecting urban centers are often run along rail corridors passing directly through, but not surfacing at, many rural communities. E-Station will bring these lines out of the corridor and into a local access point, giving rural communities a physical link to high-speed telecommunications networks."[85]

That was 2001. Today, one needs only to look at a map of the 100 Gbps Energy Sciences Network (ESNet) to see it follows a remarkably similar platform to the major Amtrak rail lines running across the country. ESNet, Funded by the U.S. Department of Energy's Office of Science, is expanding its capacity and expects to carry over 100 petabytes of data per month in 2016. (Department of Energy Office of Science National Labs) This tested framework demonstrates that the potential for dissemination of world-leading digital capability already exists and merely requires a public demand for the technology to expand accessibility in places where it passes by or passes through.

The second part of the twofold solution is a public communication campaign to inspire the public's adoption of the digital commute concept. The current paradigm of commuting is physically traveling from point A to point B and then back to point A. Certainly, this is often an unavoidable necessity. However, the ever magnifying high-speed of internet connectivity means that more and more can be done without having to physically travel from place to place. Therefore, by developing public spaces within and around smaller, regional, rural, intermodal public transportation hubs along existing rail lines, and by dedicating resources to these spaces for open, affordable (or free) high speed internet technology, the paradigm of the commute can shift and expand to include digital commuting.

A public communications campaign to redefine an established norm, as ingrained as the daily commute by automobile, is a major undertaking, but one necessary for the growth and development of the nation's remote communities. To develop a nationally ubiquitous message would best be handled by a national advertising firm with a history of marketing success, per a request for proposal by a federal agency. Whereas this is a policy proposal conceived as transportation; and, whereas the investment and desired return would be in the area of transportation, the Department of Transportation would be the obvious choice to oversee the campaign.

Amtrak is a largely public operation. ESNet is a federally funded endeavor, in partnership with educational, and private organizations. The federal Department of Transportation is long overdue for investment in more than the upkeep and expansion of the overwhelmed urban system of roads and bridges. Undoubtedly, corporations looking to expand their consumer base by helping to develop population and economic growth from the ground up, would be interested in investment. The possibilities of capitalization are many. All of these partnerships, public, quasi-public, and private, may benefit from joining a coalition to tackle the public communication campaign to spread the fresh perspective on the daily commute.

Starting an Innovation Cascade

America's national conversation has turned to economic inequality. Resources are amassed in the urban centers. Money is a resource indivisibly linked to education, culture, and socio-economic mobility. Rural America, in large part due to its isolation and remote proximity to urban centers, is losing its human capital to metropolitan statistical areas with closer access to amassed resources.

It is necessary to infuse these regions with a tenable sense of belonging and empower the people with equitable access. By investing in a transportation plan that rebuilds America's rural train stations as twenty-first century, digital transportation hubs - digital oases - America can maintain the integrity of the frontier identity of rural America by re-empowering its residents. With a dedicated campaign to transform the concept of the daily commute from a car ride to an office to logging on to a laptop, the United States can once again lead the world, from coast to coast, in infrastructure development.

[84] "Meeting the Primary Care Needs of Rural America: Examining the ..." 2013. 1 Jul. 2016 <http://www.ncsl.org/research/health/meeting-the-primary-care-needs-of-rural-america.aspx>

[85] "Rail Stations: At the Heart of America's Communities." 2013. 1 Jul. 2016 <http://www.greatamericanstations.com/downloads/rail-stations-at-the-heart-of-americas-communities>

Factories to Foundations: How Rural America can Re-energize Its Workforce

by Andrew Regenstreich
Economic Development;
NLC New Jersey

According to a 2014 report from Tom Wheeler, chairman of the Federal Communications Commission, Americans living in urban areas are three times more likely to have access to Next Generation broadband than Americans in rural areas.[86] The ultimate effect on rural development is profound and ultimately unnecessary. A deeper dive into the history of rural America and their inherent built in advantages presents an incredible opportunity. The problem can be solved by utilizing existing infrastructure (currently broadband runs through most of middle America) and targeted investment by both the local and federal government. Broadband plays a central role in rural America's place in the 21st century economy.

The Case for Broadband
Small Businesses

In the last forty years there has been a shift away from manufacturing and industrial jobs to more service oriented jobs that are increasingly reliant on technology. Whether it's the financial sector, health care, consumer goods, or hospitality, the main drivers of jobs are companies that utilize technology. Concurrently, smaller companies, due to their ability to react quickly to change, have become prominent job providers and innovators. According to Entrepreneur Magazine "there are between 25 million and 27 million small businesses in the U.S. that account for 60 to 80 percent of all U.S. jobs. And, a recent study by Paychex, says that small businesses produce 13 times more patents that larger firms."[87] Small businesses clearly matter and the rules of business and economic growth have changed.

In order to compete, companies, and more importantly, the regions where they are located, need access to the best technology and easily available power sources. A major asset to this end is access to high speed broadband. A particularly interesting example is the growing importance of the "Internet of Things", or web connected objects. According to Gartner, a research firm, "by 2020, the Internet of Things will expand to reach 26 billion different connected devices".[88] This creates amazing potential for small business growth in the spheres of enterprise software, data analytics, and systems management.

Contributions to economic growth and accelerated innovation

In 2012 the Columbia Institute for Tele-Information (CITI) at Columbia University published a research paper aimed at capturing the impact of broadband on the economy. The report concluded that significant gains were made in economic growth and innovation in areas where broadband was easily accessible. In particular, "small business owners, service providers and farmers benefited from increased broadband connectivity."[89] Access to broadband technology, the report found, narrows the gap between those who reside in major American cities and already benefit from economies of scale, and those living in more rural communities. With increased connectivity, anyone can network, share the best practices, and adopt the most efficient business processes in a variety of areas. A farmer in Omaha can easily share farming techniques with his cousin living in Lincoln. This helps maximize our advantage as one uninterrupted economic engine - which benefits the country as a whole.

Additionally, more people online allows for the introduction of new consumer applications and services. Commerce and financial innovation, as well as the support systems they require, are good examples of new and innovative applications of old technologies. Accenture, a consulting firm, showed an investment increase of 67% from 2015 for financial technology firms.[90] Alibaba, the world's biggest E-Commerce site, anticipates a 48% increase in revenue in its first forecast since going public.[91] Consumers are telling investors how they want to do their banking, invest their money, and shop for goods and services. The old paradigm is shifting. No longer is it assumed that Joe Smith will deposit money on his way to pick up groceries followed by a quick trip to the local electronics store to buy a new TV. In reality, he will probably order groceries at work from a delivery service, order a new TV from Amazon, and use bitcoin to conduct the transactions. This all presents opportunity for companies and municipalities. Assuming they are willing to change and adapt.

One example of broadband access directly affecting job creation in rural America can be found when looking at Reflective Group. Based in Baldwin City, Kansas this information technology services company has a staff composed almost entirely of people under the age of 40, bringing next generation jobs to rural America while incentivizing the young workforce to stay in their rural communities.

Expand access and train a workforce

At the forefront of most all projects is the issue of funding. This is no different. In order to expand access and skills, we will need serious investment of time and money. To address this, we recommend the creation of an Infrastructure Bank that would invest heavily in Passive Optical Networks telecommunications technology. The benefit of a Passive Optical Network is the reduction in fiber optic cables needed to reach the maximum amount of customers. Fiber optic cables are split into multiple cables that can reach multiple customers. The speed by which data is transmitted increases dramatically, and thus greatly increases productivity. The Infrastructure Bank could pilot this program in one or two communities, to quickly implement and assess results. A mixture of public and private sources would contribute to funding of the Bank. In turn the Bank could also work with existing State Infrastructure Banks or prive-public partnerships and thereby bypass the need to create more bureaucracy in states where these models exist.

In order to take advantage of the Infrastructure Bank, or any addi-

[86] "Closing the Digital Divide in Rural America | Federal Communications ..." 2015. 1 Jul. 2016 <https://www.fcc.gov/news-events/blog/2014/11/20/closing-digital-divide-rural-america>

[87] "Small Businesses = Big Impact - Forbes." 1 Jul. 2016 <http://www.forbes.com/sites/rebeccabagley/2012/05/15/small-businesses-big-impact/>

[88] "How Companies Can Take Advantage of the Internet of Things | US ..." 2015. 1 Jul. 2016 <http://www.usnews.com/opinion/economic-intelligence/2015/02/18/how-companies-can-take-advantage-of-the-internet-of-things>

[89] "The Impact of Broadband on the Economy: Research to Date and ... - ITU." 2013. 1 Jul. 2016 <https://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_Impact-of-Broadband-on-the-Economy.pdf>

[90] "Global Fintech Investment Growth Continues in 2016 ... - Newsroom." 2016. 1 Jul. 2016 <https://newsroom.accenture.com/news/global-fintech-investment-growth-continues-in-2016-driven-by-europe-and-asia-accenture-study-finds.htm>

[91] "Alibaba Expects 48% Revenue Growth in First Forecast - WSJ." 2016. 1 Jul. 2016 <http://www.wsj.com/articles/alibaba-says-closely-watched-sales-metric-may-not-remain-the-standard-1465877128>

tional funding for broadband access development, we recommend a concurrent educational component which will provide the skilled workforce the necessary expansion of broadband. We recommend a pilot a program that would provide both for a telecommunications upgrade (Passive Optical Networks) and an increase of funding for a Community College in a rural community. Community Colleges have been one of the best sources for economic advancement for lower and moderate income individuals since the 1960s. This is the access point for training; the government should provide funding that will provide the skills and training to the people who need it most.

In addition to investing in the infrastructure and educational component, we recommend another aspect to the pilot program. Google and Facebook have both been strong proponents of access to wireless technology. We recommend another public-private program to strategically place wireless routers in downtown areas throughout Cumberland County in New Jersey. The money would come from the Cumberland County Board of Freeholders and an investment from the technology giants. We feel a combination of Passive Optical Networks, forward thinking education, and wireless access points would provide a strong foundation for both the county's residents and any potential new businesses.

According to a report by Dr. Raul Katz, by 2009 there were 1.8 billion Internet users and 471 million broadband subscriptions. Between 2004 and 2010, telecommunications and cable TV companies in the United States invested over USD 97.7 billion in broadband deployment.[92] There is a reason for this: there is a clear connection between connectivity and economic output.

Rural communities would see an acceleration of innovation due to the inevitable introduction of new applications and services; They would see more efficient business processes enabled by high quality broadband which will, subsequently, increase productivity and would have the ability to process information and provide services remotely. This would make it possible to attract employment from other regions through outsourcing. These effects act simultaneously, whereby the productivity effect and potential loss of jobs due to outsourcing are neutralized by the innovation effect and gain of outsourced jobs from other regions. We can't afford not to act.

Preserving Agricultural Land

by Kimberly Dudik
Montana State Representative; NLC Montana

Every year, all states lose acres of farmland to development, totaling more than a million lost acres every year. This poses a significant risk to communities and our food supply because a majority of vegetables, fruits, nuts, and berries are grown near urban areas, areas that are at great risk of being developed. This loss of agricultural land has prompted states to react in a variety of ways in an attempt to encourage preservation of traditional agricultural land.[93]

This paper elaborates on these issues in general then examines them in particular as applied in Montana, concluding with suggestions about what additional steps could be taken. Our hope is that the programs in Montana and the suggested additions serve as examples for what other states can do to preserve agricultural land.

Scope of the problem

Preservation of agricultural land is important. This finite resource, with limited prime agricultural soils, serves as an important part of states' economies. The economic impact is felt from jobs associated with farm, ranches, food processing, and other industries related to food production. The scenic nature of agricultural land attracts tourists to the open, aesthetic space and feelings these spaces evoke as well as the wildlife viewing they provide. Farming and ranching in places such as Montana is part of the state's heritage. Agricultural land, with their rich resources and benefits provide more benefit than the cost associated with the community resources they require.[94]

Disappearing agricultural land is a problem in every state with more than one million acres of farmland being lost annually. This affects the ability of the United States to maintain adequate and healthy food production, especially when considering the large amount of food grown near urban areas that are especially at risk of losing farmland; 78 percent of melons and vegetables are grown near urban areas and 91 percent of berries, nuts and fruit are grown near urban areas.[95]

This loss of agricultural land has prompted many states to create programs and laws aimed at preserving traditional agricultural land because of its many benefits. Although federal programs exist that may also deal with this issue, including USDA Rural Development Grants, Environmental Quality Incentives Program, National Institute of Food and Agriculture Cooperative Extension System, this paper concerns the programs and actions States may take independent of these federal programs.[96]

Approaches to address the problem

States have taken a variety of approaches to address the issues of disappearing agricultural land. These approaches include Conservation Easements and Land Trusts, Financial Assistance, Right-to-Farm Laws, State Acquisition of Private Land, Tax Provisions and Credits, Farm Viability Programs, and Agricultural Planning and Zoning.[97]

Conservation Easements and Land Trusts

California, Connecticut, New Jersey, Ohio, Pennsylvania, and Washington, have implemented conservation easements on land that limits the use and development of land for nonagricultural purposes for a certain length of time. A private entity or the state gives the landowner income by paying for the development rights of the land and also preserving the open space nature of the land. The landowner retains the right to farm the land and other land-related uses even after selling the conservation easement. A land trust is a similar situation where states provide support to land trusts that administer conservation easements or other agricultural land preservation strategies. States also provide support to public and private land trusts that sometimes administer conservation easements and other farmland preservation approaches.[98]

Financial Assistance

Minnesota, Massachusetts, and Delaware, have taken the ap-

[92] "The Impact of Broadband on the Economy: Research to Date and ... - ITU." 2013. 1 Jul. 2016 <https://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_Impact-of-Broadband-on-the-Economy.pdf>

[93] "Farmland Preservation - National Conference of State Legislatures." 2013. 28 Apr. 2016 <http://www.ncsl.org/research/agriculture-and-rural-development/farmland-preservation-2012.aspx>

[94] Ibid.

[95] Ibid.

[96] Ibid.

[97] Ibid.

[98] Ibid.

proach of providing grants and loans as financial assistance to farmers to encourage continuation of agricultural use of land, farming activities, and increase the economic viability of farming.[99]

Right-to-Farm Laws

A different approach is taken by states, such as New Jersey, that pass Right-to-Farm laws to limit nuisance claims against farmers that local residents, developers, and business owners may bring. The theory behind these laws is that farming activities may continue without concerns regarding liability resulting from lawsuits that may otherwise be result with development activities. Farming activities in place prior to land development are protected in general by these laws.[100]

State Acquisition of Private Land

Connecticut and Missouri, have taken another approach to preserve farmland from development and ensure the land will be used for agricultural purposes . This approach involves the state purchasing land and then leasing or selling the land to private farmers for agricultural purposes only. States have increasingly passed bonds specifically for preservation of agricultural land, Maine and Rhode Island.[101]

Tax Provisions and Credits

Providing tax credits preserves agricultural land. All states have a program to lessen the amount of taxes farmers must pay in local real property taxes. A differential assessment may be one that values and taxes farmland based on its current agricultural use value rather than its higher fair market value. At least fifteen of states have permit landowners to receive a tax credit if they donate land to private or public entities for conservation purposes. States can even designate and identify the type of land that qualifies as agricultural land for conservation purposes, as Virginia, North Carolina, New Mexico, Maryland, Massachusetts, and California have done. In addition, states may offer a credit against school taxes on agricultural land as New York and Iowa have done. States may also permit farmers to offset local property taxes by claiming state income tax credits, as Wisconsin, New York, and Michigan have done.[102]

Farm Viability Programs

Existing farmers in America are older and as a whole growing older at a fast rate. A majority of farmers are between 45-64 years of age and the group over 65 years of age is growing at the fastest rate. Because of this aging population, some states, Virginia and Missouri, are trying to nurture the next generation of farmers by providing programs that encourage farming skills and access to land needed by farmers so they are economically competitive. These programs can provide technical assistance, grants, financial and market planning, and on-farm practices or capital projects that will improve individual agricultural business. The theory is that enhanced agricultural profitability will occur with enhancement of existing resources and services.[103]

Agricultural District Programs are another tool that can be utilized to stabilize the available land base and support farming by providing an attractive incentive package to farmers. They allow farmers to form special areas that protect and encourage commercial agriculture. A farmer will voluntarily enroll in the program and receive a package of benefits that can include tax relief, eligibility for conservation easement programs, or protection from local regulation in exchange for using the land for agricultural purposes. As of 2012, there were 19 agricultural district programs in 16 states, including California, New Jersey North Carolina, Minnesota, Ohio, and Virginia. Enrollment in an agricultural district is voluntary, making the programs popular with farmers.[104]

Exciting opportunities exist to not only preserve agricultural land but also increase economic opportunities for individuals

Agricultural Planning and Zoning

Local governmental entities can make an impact on preservation,planning, and zoning regulations. Zoning regulations can cut both ways for agricultural use, creating difficulties for ranchers and farmers but also creating clarity and certainty regarding agricultural purposes. California, Delaware, Iowa, Kentucky, Minnesota, New York, Ohio, Oregon, Pennsylvania, Virginia, and Washington, have used their power to require localities to conserve agricultural land. State authorities can require local entities to create plans that protect and incorporate agricultural land. They can set limits to the level of development permitted. Some counties will create committees or boards to determine the amount of local farmland and designate the areas to be protected. Tools utilized to protect these areas include such provisions as zoning requirements regarding well development and density bonuses for development.[105]

Preservation of Agricultural Land in Montana

Montana has utilized various tools to preserve agricultural land. Montana is the fourth largest state with a land area of 147,046 square miles and a small population of approximately one million people.[106] [107] Montana has a traditional agricultural past but is rapidly moving into the future. Large areas of agricultural land, especially that surrounding the larger cities, is rapidly being developed, creating the perfect environment for utilization of measures to preserve agricultural land.

Conservation Easements and Land Trusts and State Acquisition of Private Land

The primary tool in Montana for preserving agricultural land is a conservation easement. Both the State and private organizations hold conservation easements. The State has acquired private land and holds some conservations easements, mainly through the Department of Fish, Wildlife, and Parks totaling approximately 456,000 acres although not all of this land may be used for agriculture.[108] Two of the other main conservation easement organizations in Montana are the Montana Association of Land Trusts and

[99] Ibid.

[100] Ibid.

[101] Ibid.

[102] Ibid.

[103] Ibid.

[104] Ibid.

[105] "Farmland Preservation - National Conference of State Legislatures." 2013. 2 Jul. 2016 <http://www.ncsl.org/research/agriculture-and-rural-development/farmland-preservation-2012.aspx>

[106] "Montana Geography from NETSTATE." 2002. 2 Jul. 2016 <http://www.netstate.com/states/geography/mt_geography.htm>

[107] "Montana - Census.gov." 2016. 2 Jul. 2016 <https://www.census.gov/quickfacts/table/PST045215/30>

[108] "Montana Conservation Easement Summary by County December 12 ..." 2014. 2 Jul. 2016 <http://mtnhp.org/stew/20141212_Ease_Sum_County.pdf>

the Montana Land Reliance. The total number of conservations based as of March of 2016 was 2,348,981 acres.[109] [110]

Financial Assistance

The Legislature also provides assistance with agricultural work by appropriating money for four Food and Agriculture Development Centers that help people and businesses develop products. Following this funding, some of the businesses and people go on to get funding for specific products or projects through the Growth Through Agriculture program, described in Farm Viability Programs below.

Right-to-Farm Laws

Although Montana does not have any specific Right to Farm legislation, it does have a statutory section that provides cities, towns, and counties cannot "adopt an ordinance or resolution that prohibits any existing agricultural activities or forces the termination of any existing agricultural activities outside the boundaries of an incorporated city or town."[111] Further direction is given regarding how "zoning and nuisance ordinances may not prohibit agricultural activities that were established outside the corporate limits of a municipality and then incorporated into that municipality by annexation."[112] Zoning is explored in more depth below.

Farm Viability Programs

The Growth Through Agriculture Grant/Loan Program is a grant and loan program the Montana Legislature established to diversify and strengthen Montana's agriculture industry through encouraging the development of new agricultural processes and products. The program provides two categories of funding. In the 2015 legislative session, Agriculture Director Ron de Yong reported to the Senate Agriculture Committee that the program provided more than $450,000 to 40 businesses and individuals during fiscal year for value-added agriculture products. The funding through this program is in two categories.[113]

Category 1 is a grant, loan, or both. A 7-member Agricultural Development Council, appointed by the Governor, screens grant requests at meetings two to three times per year. This grant amount per application may be up to $150,000 (grant of $50,000 and loan up to $100,000). Examples of programs funded by this include equipment purchase, promotion and advertising, or feasibility studies.[114]

Category Two funding is provided as mini grants with an application process two times per years and mini-loans accepted on an open-cycle basis. This funding is determined through the Montana Department of Agriculture administratively. Funding provided through the Growth Through Agriculture program requires a matching fund investment of at least $1 for every $1.[115] The mini grants are to encourage agricultural and economic development through educational, marketing, promotional, travel, and other business-related activities. The related mini loan program is intended to support costs associated with construction, infrastructure, small processing equipment, and inventory/working capital costs (not including payroll).[116]

Tax Provisions and Credits

Montana law provides tax assistance in various forms for users of agricultural land. The 2001 Legislature created farm and ranch risk management accounts as a tool for family farms to deal with uneven and uncertain income. This provision permits individual or family farm corporations to establish an account that they can deposit up to 20% of their net agriculture income into each year, up to $20,000, that is excludable from adjusted gross income.[117] The funds are taxable when withdrawn, which must be done within five years of deposit. This avenue has not been utilized much, with less than 10 deposits to these accounts since 2004 (and all made by non-residents).[118]

Taxpayers are permitted to exclude up to $50,000 resulting from the sale of at least 80 acres to a beginning farmer.[119] The idea behind this incentive is that it provides retiring farmers incentive to sell land to someone who wants to keep utilizing it for agriculture rather than convert it to a different use. In order to use this provision, the taxpayer's land sale must be approved by the Montana Department of Agriculture. This exclusion is used by less than ten taxpayers annually.

When valuing agricultural property for property tax purposes, the law specifically states that when valuing agricultural land its market value can vary based on "speculative purchases that do not reflect the productive capability of agricultural land, it is the legislative intent that bona fide agricultural properties be classified and assessed at a value that is exclusive of values attributed to urban influences or speculative purposes."[120]

Agricultural Planning and Zoning

With planning development and zoning of property, especially with subdivision review, the preservation of agricultural land and agricultural uses is supposed to be considered. The "needs of agriculture, industry, and business" are to be recognized in future growth.[121] Agricultural use of land by owners is in general not to be prevented.[122]

Growth policies, which guide zoning regulations adopted by local governments are to include infrastructure plans that describe how and where projected development could adversely impact agricultural land, agricultural production, and availability of water for agricultural users and facilities.[123]

Montana has made a concerted effort to protect agricultural land. In 1995, the legislature passed a law stating "the legislature finds that agricultural land and the ability and right of farmers

[109] Ibid.

[110] "Easement Holders Statewide March 2016." 2016. 2 Jul. 2016 <http://mtnhp.org/stew/20160308_Ease_Sum_State.pdf>

[111] "MONT CODE ANN § 76-2-903 - FindLaw." 2009. 2 Jul. 2016 <http://codes.lp.findlaw.com/mtcode/76/2/9/76-2-903>

[112]Ibid.

[113] "GROWTH THROUGH AGRICULTURE GRANT/LOAN PROGRAM ..." 2016. 2 Jul. 2016 <http://agr.mt.gov/agr/Programs/GrantsLoans/GTA/pdf/Project_Summary_FY_2016.pdf>

[114] Ibid.

[115] Ibid.

[116] Ibid.

[117] "15-30-3003. Montana farm and ranch risk management account ..." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/15/30/15-30-3003.htm>

[118] "Tax Expenditures - Department of Revenue." 2015. 2 Jul. 2016 <https://revenue.mt.gov/Portals/9/publications/biennial_reports/2012-2014/BiennialReport14-TaxExpenditures.pdf>

[119] "80-12-211. Income tax deduction for land sale to beginning farmers." 2016. 2 Jul. 2016 <http://leg.mt.gov/bills/2014/mca/80/12/80-12-211.htm>

[120] "15-7-308. Disclosure of information restricted -- exceptions. - Montana ..." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/15/7/15-7-308.htm>

[121] "76-1-102. Purpose." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/76/1/76-1-102.htm>

[122] Ibid.

[123] "76-1-113. Effect of chapter on natural resources." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/76/1/76-1-113.htm>

and ranchers to produce a safe, abundant, and secure food and fiber supply have been the basis of economic growth and development of all sectors of Montana's economy."[124] The importance of sustaining this was then recognized by stating "in order to sustain Montana's valuable farm economy and land bases associated with it, farmers and ranchers must be encouraged and have the right to stay in farming."[125] The Legislature stated its intent "to protect agricultural activities from governmental zoning and nuisance ordinances."[126]

Specific guidance was provided regarding an agricultural activity as "a condition or activity that provides an annual gross income of not less than $1,500 or that occurs on land classified as agricultural or forest land for taxation purposes."[127] Further, the activity needs to include all aspects of the activity. [128]

Annexation laws protect agricultural land tracts. When a proposal for a new city or town is made by its inhabitants, agricultural land tracts larger than 160 acres cannot be included in the proposed city or town unless the owner consents in writing.[129] Restrictions for annexation exist for land that is wholly surrounded by the city in that this land, when it is used for agriculture, cannot be forcibly annexed.[130]

Additional Opportunities to Preserve Agricultural Land in Montana

Montana has implemented substantial policies to promote preserving agricultural and economic growth for farmers. However, some areas exist where additional assistance could occur. One area that localities could use clarification on is the process for subdivision review that must occur and how mitigation for agricultural land should be done. The current law says this must occur but specification for what must occur is not included. This would provide certainty for counties, landowners, and developers when development of agriculture land occurs.

Additional support could be implemented in the law, possibly through tax incentives, to encourage more community supported agriculture. This already exists in Montana and when individuals in a community "pledge support to a farm operation so that the farmland becomes, either legally or spiritually, the community's farm, with the growers and consumers providing mutual support and sharing the risks and benefits of food production."[131] Members cover anticipated costs and they receive shares of the farm's production in return. A more esoteric benefit is that the members will also be more connected and satisfied with their connection with the land and food production. This sort of direct sale to community members permits farmers to have working capital to operate their farm in advance of the growing season, they have financial security and receive better prices for their crops, and they are also relieved of many of the tasks having to market their goods.[132]

Eating more locally grown food, through farm-to-school programs, food circles, and farmers markets are ways to encourage local production and consumption of food that will make sustaining agriculture food production more attractive. Tax incentives or direct cash subsidies could also be offered for participants in these programs (be they consumers or producers of food) and also for sustainable food production to incentivize land use in this way.[133]

Encouraging the development of classification as "Montana Beef", "Montana Wheat", or other specific classification for Montana-made food could be used to create a niche market for these foods that would make them more sought-after also, especially if high standards were utilized for these classifications. This could expand the market for Montana food production and provide economic growth in this area, correlating with people wanting to utilize agricultural land for food production because the market would be favorable for these goods.[134]

This could expand the market for Montana food production and provide economic growth in this area

One last way to encourage more consumption of locally grown food (produce or meats) is to implement a law that would require state governments to give preference to purchasing locally-grown food. For example, the state governments (including schools, government agencies, and universities) could be required to purchase at least 75% of their food locally when it is available to provide a larger and certain market for locally grown food.[135]

Conclusion

Much has been done in Montana to encourage preservation of agricultural land but, as discussed above, additional opportunities exist to further promote this preservation. Exciting opportunities exist to not only preserve agricultural land but also increase economic opportunities for individuals who want to participate in local food production.

[124] Overstreet-Adkins, Ariel. "Extraordinary Protections for the Industry that Feeds Us: Examining a Potential Constitutional Right to Farm and Ranch in Montana." Mont. L. Rev. 77 (2016): 85-211.

[125] "76-2-901. Agricultural activities -- legislative finding and purpose." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/76/2/76-2-901.htm>

[126] Ibid.

[127] "76-2-902. Definitions." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/76/2/76-2-902.htm>

[128] Ibid.

[129] "7-2-4101. Petition to organize city or town." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/7/2/7-2-4101.htm>

[130] "7-2-4503. Restrictions on annexation power." 2013. 2 Jul. 2016 <http://leg.mt.gov/bills/mca/7/2/7-2-4503.htm>

[131] "Crossroads Community Farm, LLC » What is CSA?." 2012. 7 Jul. 2016 <http://www.crossroadscommunityfarm.com/csa-information/the-csa-concept/>

[132] "Community Supported Agriculture - Alternative Farming Systems ..." 2015. 2 Jul. 2016 <http://afsic.nal.usda.gov/community-supported-agriculture-3>

[133] "Community Supported Agriculture - Alternative Farming Systems ..." 2015. 2 Jul. 2016 <http://afsic.nal.usda.gov/community-supported-agriculture-3>

[134] "Cottage Food Laws." 2015. 2 Jul. 2016 <http://blogs.harvard.edu/foodpolicyinitiative/files/2013/08/FINAL_Cottage-Food-Laws-Report_2013.pdf>

[135] Denninga, Brannon P, Samantha Graffb, and Heather Wootenc. "Laws to require purchase of locally grown food and constitutional limits on state and local government: Suggestions for policymakers and advocates." Journal of Agriculture, Food Systems, and Community Development 1.1 (2010): 139-148.

The 21st Century Classroom

"So, I ask you to join the great endeavor to not just reform education but to transform it. I challenge you to put your talent and ingenuity to work to equip 21st century students with 21st century skills."

Arne Duncan, Former U.S. Secretary of Education, March 3, 2010

In order to thrive in today's global marketplace, the country must pursue new methods and opportunities — and perhaps nowhere is such innovation as important as in our approach to education. Opportunities to improve K-12 education exist in the classroom, school administration, and the school district offices. There are also many possibilities to improve the education received in postsecondary institutions. By innovating our schools we can work to build a competitive workforce that can thrive in this ever-changing economy.

Project-Based Learning

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In classrooms across the country, different techniques and pedagogies are continually applied in hopes of helping students excel. One of these techniques being applied in innovative school districts is known as Project-Based Learning (PBL), also referred to as problem-based learning. This approach is one where students look at real-world problems and challenges to apply the content they learn in the classroom. For example, in one school students used the web based version of the Angry Birds game to teach physics concepts such as momentum and velocity. This method was started in medical schools and has expanded to both undergraduate programs as well as the K-12 school system. Through this approach, students apply critical thinking, communication, and creativity to solve problems. Instead of just reading a text and thinking in terms of theory, students can take what they have learned and apply it to understand the content in a more well-rounded capacity. In order to compete in the new economy students must not only master the content area, but also gain these critical skills for success in the real world.

Research and Examples of Success

Studies have been completed across the world to determine the efficacy of project-based learning. Because of the broad ability to apply PBL differently in every classroom, the research varies in the outcomes evaluated. These various outcomes include the effects of PBL on cognitive and psychomotor achievements, affective domain, learning outcomes, and increase in knowledge, among others.

In a 2008 study, researchers observed ninth graders in a charter school to determine whether PBL would increase students' knowledge of scientific investigation and foster positive attitudes about the content. In tests given before and after engaging in project-based learning, students demonstrated increased content knowledge and understanding of the processes of scientific investigation.[136] Another study looked at a different content area. In a 2004 study in Turkey, researchers sought to determine the effects of PBL on learning outcomes for fifth grade social studies students through achievement testing. They found "...a significant correlation between the academic successes of experimental and control groups."[137]

One example of success is Manor New Technology High School outside of Austin, Texas where every subject is taught using project-based learning. While there was no research conducted to study outcomes, this school saw tremendous success. A small highschool of less than 200 students, this school has experienced a 14 percent growth in math, a 10 percent growth in reading, and an 11 percent growth in science on state standardized testing. Of the first two classes to graduate, 96 percent of students were admitted to college, and more than half of the admitted students were first-generation college students. While achieving this success, the school had lower than average per-pupil expenditures and was a majority minority school.[138] (Vega, 2012).

[136] Baumgartner, E. "A case study of project-based instruction in the ninth grade: a ..." 2008. <http://www.tandfonline.com/doi/pdf/10.1080/13504620801951640>

[137] Gültekin, Mehmet. "The Effect of Project Based Learning on Learning Outcomes in the 5th Grade Social Studies Course in Primary Education." Educational Sciences: Theory & Practice 5.2 (2005).

[138] Vega, V. "Research-Supported PBL Practices | Edutopia." 2012. <http://www.edutopia.org/stw-project-based-learning-best-practices-new-tech-research>

Another study looked at the effect project-based learning had on secondary mathematics students in both academic skill development and motivated strategies for learning (i.e., cognitive, social, and motivational). Collecting both quantitative and qualitative data, researchers observed eighth and ninth-grade students of both the PBL and the control high schools to determine the effect. The results of this study found "that while race was a factor in mathematics achievement in the control school, it was not in the PBL environment."[139] The authors found that, in the

A small high school of less than 200 students, this school has experienced a 14 percent growth in math, a 10 percent growth in reading, and an 11 percent growth in science on state standardized testing.

PBL school, race did not affect performance , while in the control school, white student outperformed all other racial groups. The difference in performance was approximately 4 points in mathematics achievement measured in algebra- and geometry-assessment scores.

Researchers at University of Illinois, Urbana-Champaign completed a study to demonstrate how PBL can develop students' reasoning and decision-making skills. In 36 classrooms across eight urban schools, students engaged in PBL demonstrated better decision-making skills than the other research groups. According to the researchers, "PBL students considered more than one side of a dilemma, used more comprehensive reasoning, and more frequently evaluated the importance of the assumptions underlying their decision making."[140] (Mergendoller, 2016)

Recommendations

Project-based learning creates success when applied and implemented properly. Manor New Technology High Schools administrators have a step-by-step process for effective project-based learning. One of their tools to ensure success is to introduce each project with an "entry event." This is used to engage the children in the activity and the content and to set expectations.[141] Another similar best practice is to build the school culture so that students are interested in this type of learning and growth. Much of the research showed that students' attitudes towards learning was affected by project-based learning activities. Research has shown that when a child's attitude towards learning is positive they are more likely to be successful.

One best practice is to continually assess students for competency in every subject and content area. Not only does this help ensure content is aligned with appropriate standards, it also ensures that students are learning. Teachers should use formative and summative assessments of knowledge, understanding, and success skills. Additionally, self and peer assessment of team and individual work should be included in the assessment of student learning. Assessment should also be continual so teachers and students can give feedback throughout the learning process. This allows for space throughout the lessons to make appropriate adjustments if needed.

As to any approach, there are always some pitfalls to avoid. One of these pitfalls is allowing students in groups to not communicate effectively. Teachers must help groups to communicate and to hear ideas from everyone and allow them to be open. One study found that when groups ignored or rejected proposals from others they were less successful. Excessive rigidity in time management and planning creates another pitfall.

Conclusions

Project-Based Learning has been shown to be effective in not only in both rural and urban areas and but also with both high performing and low performing students. This method is not a perfect solution, but can be one tool in our toolbox to combat the inequities in our system, shrink the achievement gap, and prepare students to innovate throughout their lives. With this teaching style students can enhance their creativity as well as gain critical thinking and communication skills — crucial lessons to prepare them for the world of tomorrow.

Efficient Procurement Process for New Education Technologies in Every School System

by Nasir Qadree
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Technology is changing the way we work, play, and learn and yet the way we provide access to innovative learning is far behind. In order to provide the opportunity that new technology affords, we need to be proactive and efficient in the relationship between educators and tech tool providers.

Today, U.S. public schools roughly spend $70 billion on curriculum, technology, and other class support. This is nearly 30-40% of their budget, with a large chunk going to education technology.[142] [143]

Our U.S. education system has yet to establish the best practices for purchasing education technology. Many entrepreneurs have contacted Village Capital, a Washington, DC venture development program and impact investment firm, and have shared that navigating procurement regulations is difficult, time consuming and overwhelming.

This paper identifies how state and local level education commissioners can develop a clear, new process by which entrepreneurs can build the technology platforms needed by students and instructors. Let us take a deeper dive.

Improving Ed-Tech Purchasing

Though purchasing education technology platforms may seem like a bureaucratic, back-office business practice, an effective and nav-

[139] Holmes, Vicki-Lynn, and Yooyeun Hwang. "Exploring the effects of project-based learning in secondary mathematics education." The Journal of Educational Research (2016): 1-15.

[140] "Research Brief: PBL Helps Students Become Better Decision Makers ..." 2016. 4 Jul. 2016 <http://bie.org/blog/research_brief_pbl_helps_students_become_better_decision_makers>

[141] "A Step-by-Step Guide to the Best Projects | Edutopia." 2012. 4 Jul. 2016 <http://www.edutopia.org/stw-project-based-learning-best-practices-guide>

[142] "Budget Fact Sheet - U.S. Department of Education." 2015. 8 Jul. 2016 <https://www2.ed.gov/about/overview/budget/budget16/budget-factsheet.pdf>

[143] "Budget Summary - U.S. Department of Education." 2015. 8 Jul. 2016 <http://www2.ed.gov/about/overview/budget/budget16/summary/16summary.pdf>

igable procurement process is vital to every school's fundamental mission. Students and teachers need readily available technologies that promote easy, healthy learning; a clear process through which schools discover, acquire and evaluate learning technologies is crucial to education innovation. However, there is an ongoing challenge: there are more than 14,000 school district leaders in the U.S. each with unique needs and procedures.[144] With a growing and overwhelming number of products in the edtech market, there is a lack of information on which are products most effective.

Current purchasing practices were designed for print-based resources, not modern technology. The result is that, often, teachers and students lack the best learning tools to meet modern-day needs. We can do more to ensure that the education system provides updated and personalized learning materials.

What started as an observation is now being transformed into a new category of entrepreneurship. Jennifer Medbery, Founder and CEO of Kickboard, a Village Capital portfolio company, offers educational software that allows teachers to measure student performance to improve educator instruction.[145] Medbery is a great example of an entrepreneur navigating the procurement process. She has developed relationships with heads of curriculum, as well as district, and school leaders. She has succeeded in understanding the needs of school districts to harness partnership; finding solutions that help harness the power of data to eventually support data-driven teaching practices has proven to build a culture of performance in and across classrooms. Jen's approach considers individual district challenges. She recommends additional approaches to tackling student data. In a report in an EdTech Times article, she said "to have the most impact, they (teachers) need a tool that also empowers kids to own their data, not just teachers, school staff and parents."[146] It is imperative that the educational community enact legislation that provides educators with such tools. Widespread access to these tools will improve learning performance, classroom efficiency, and will more easily create a personalized student experience.

Organizations across the country are working tirelessly to improve Edtech purchasing. Digital Promise and IDEO collaborated to find ways by which we can further develop the education technology market in K-12 districts.[147] Their main focus is making the procurement process of edtech platforms more accessible. Digital Promise and IDEO have found that schools are eager to participate in edtech product development. This will create mutually beneficial relationships between educators and entrepreneurs, and has to potential to create startups with direct access to teachers, students, and administrators, enabling them to develop the most relevant products.

Organizations like Chicago-based Leap Innovations connects education entrepreneurs with traditional and charter schools, with the goal of helping them pilot their innovations.[148]

Connecting educators and innovators has the potential to create new, personalized learning technologies and innovative practices that can be implemented in the classroom and beyond. LEAP serves as a national hub for a new, collaborative ecosystem of the best and brightest education innovators, digital entrepreneurs, and thought leaders committed to reinventing education of our country.

We have a responsibility to invest in these projects. The education system is one that evolves with technological advancements, and we're lucky that these advancements create technologies that cater to the needs of our nation's students and teachers. It is imperative, however, that we do everything in our power to foster a relationship between entrepreneurs and educators to create the most effective education technologies. Progressives have always been at the forefront of education reform, and we must continue this pattern with the understanding that edtech is the new frontier.

Assessing the Needs of K12 Students

Edtech product selection is determined by results - results being the academic success that those products have proven. However, the formal and systematic processes used to identify the needs of the classroom are not concretely established, and are rarely used. Thus, it is difficult to determine which products are needed, and which products, already used, are most efficient.

The implementation of Common Core State Standards (CCSS) has made finding solutions tailored to the specific needs of districts, schools, teachers and students, of utmost importance. While these new standards establish common academic expectations, school leaders and teachers must still determine which curriculum, lessons and resources are the most appropriate for their students. Schools must also identify the products and services necessary to support their transition to these new standards and the accompanying assessments. It is imperative that individual districts still hold a level of autonomy, while staying true to the standards of CCSS. Technological entrepreneurs should be welcome to form relationships with individual districts, so long as they follow the guidelines set forth by the CCSS, and the procurement processes therein.

To continue developing the knowledge economy we need to ensure, as is done in other sectors, that we maintain the level of innovation necessary to improve the efficacy and efficiency of our learning systems

What are Stakeholders Saying?

Studies found that school leaders are the least satisfied with teacher involvement in decision-making. Education Technology directors do not trust the data provided by technology companies. Superintendent's report funding as the key challenge to edtech procurement. Progressives have the responsibility to promote increased involvement on the happenings of the classroom. We must foster a relationship of trust and transparency between Education directors and technology companies. We must push for needed funding so schools can obtain the necessary technologies to increase classroom productivity. We must pass these practical barriers in order to revolutionize our nation's education standard, and provide educators the needed technologies that our students deserve.

Concerns from Education Entrepreneurs

Entrepreneurs are extremely frustrated with the process by which schools obtain new technologies. According to Improving Edtech

[144] "School Districts - People and Households - U.S. Census Bureau." 2011. 8 Jul. 2016 <https://www.census.gov/did/www/schooldistricts/>

[145] "Kickboard." 2012. 8 Jul. 2016 <https://www.kickboardforschools.com/>

[146] "Q&A with Jennifer Medbery, founder and CEO of Kickboard |." 2013. 8 Jul. 2016 <http://edtechtimes.com/2013/01/10/qa-with-jennifer-medbery-founder-and-ceo-of-kickboard/>

[147] "Evolving Technology Procurement in Schools, with IDEO – Digital ..." 2016. 8 Jul. 2016 <http://digitalpromise.org/2014/04/02/evolving-technology-procurement-in-schools-with-ideo/>

[148] "About Us - Leap Innovations." 2014. 8 Jul. 2016 <http://www.leapinnovations.org/about-us>

Purchasing, a study by Digital Promise, only 4% of providers say today's procurement processes meet contemporary needs.[149] Their concerns include standing out in a crowded market, the limited information on what teachers need, and the little information on how to conduct business with districts. They are frustrated by policy that varies from district to district, and the lengthy timelines for purchases. Districts must care about the challenges of these companies. Nearly two-thirds of companies say product development is directly influenced by procurement rules. Often, edtech companies with innovative solutions have to choose sales and compliance over research and development. Making the procurement process more easily navigable must be made a priority, otherwise it is our students who will lose.

Assessing the Costs, Impact, and Benefits of Education Technology

Educational technology is often cited as the means by which we can improve educational outcomes while simultaneously reducing costs. It has been argued that this new technology will lead to greater quality and efficiency in learning and instruction. However, research that attempts to assess the costs and benefits of educational technology is limited, making it difficult for educators and policymakers to make informed decisions.

Put simply, the traditional education system is inherently inefficient. Today, the link between rising education expenditure and educational performance is a travesty, but a strong relationship between Edtech entrepreneurs and educators can effectively reduce the price tag. This is a clear opportunity to improve the traditional education system, while decreasing its rising costs.

Investing in EdTech - and improving the procurement process - is important

Despite progress, schools have been slower to adapt to technological advancements than customers in other fields. Students still don't have individual learner profiles which follow them around from school to school and capture their strengths, weaknesses, and learning preferences as they like electronic medical records in healthcare. We currently don't have a great sense of how to collect, analyze, and interpret student data, like we do for consumer data in e-commerce. Most learning management systems don't have robust predictive algorithms to truly personalize learning such as the ones powering Netflix, Apple TV, or Amazon's recommendation engine.

Our students are entering the the knowledge economy, defined as an economy in which growth is dependent on the quantity, quality, and accessibility of the information available. In this knowledge economy, students will need the absolute best resources to prepare them for college and an eventual career.

We are doing students a disservice if we are not earmarking dollars to enhance academic achievement. Without up to date learning environments we lose our ability to develop skilled workers, build competitive advantages as a nation and generate growth. To continue developing the knowledge economy we need to ensure, as is done in other sectors, that we maintain the level of innovation necessary to improve the efficacy and efficiency of our learning systems.

Connecting educators and innovators has the potential to create new, personalized learning technologies and innovative practices that can be implemented in the classroom and beyond.

Conclusion

Recognition of technology's potential to personalize learning has led a number of schools and districts to seek an ever-growing pool of educational products. In a rush to implement these new, exciting technologies, leaders often make uninformed purchasing decisions. They end up paying too much, getting too little, and then discovering that nothing works. In order to prevent inefficient spending, and to create the best conditions for high-quality learning, school leaders should follow the smart buying process laid out in this guide:

According to the Smart Series Guide to EdTech Procurement, the 12 keys to Smart EdTech Procurement begin with clear goals, and continue with purchasing decisions that keep the educational goals at the center.[150] When strategic purchases are well thought-out, they deliver higher impact and more successful implementation. Quality of implementation is linked to a number of variables including change management, school culture and support from strong leadership. State, district and school-level education leaders are shifting towards higher standards with the new generation of assessments and an explosion of EdTech solutions. The combination of these factors can be overwhelming, but a common thread bridges them together. Each presents the potential to personalize learning and bring high-quality educational opportunities to students in a way never before seen. With all on board, this process can be seamlessly integrated into our school systems to raise a new generation of efficient, eager learners.

[149] "Improving Ed-Tech Purchasing - Digital Promise." 2016. 8 Jul. 2016 <http://digitalpromise.org/wp-content/uploads/2014/11/Improving_Ed-Tech_Purchasing.pdf>

[150] Bailey, J. "EdTech procurement - The Learning Accelerator." 2015. <http://learningaccelerator.org/media/e84c8453/Procurement-Guide-FINAL.pdf>

Investing in New Technologies

"I'm most grounded on the role of technology. Ultimately to me it's about the human capital and the human potential and technology empowers humans to do great things. You have to be optimistic about what technology can do in the hands of humans."

Satya Nadella, Chief Executive Officer, Microsoft Corporation, USA
World Economic Forum, December 2015

These great United States of America face a serious challenge to meeting our infrastructure and energy needs. And with 21st century economic advances and the creative American entrepreneurial spirit, we are well poised to overcome these challenges. We must be creative in our technologies, our implementation, and our funding, to see the next generation of job growth and new technologies for a sustainable future. Pairing innovated infrastructure with innovative funding models allows us to unlock a true progressive American exceptionalism.

Policy Frameworks to Foster Energy Innovation: A Comparison of Planned Approaches

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Energy innovation has been a theme of human history beginning with the discovery of fire. We use vast energy sources to power locomotion, light bulbs, and ultimately our lives. We have used the burning of coal and petroleum to advance our society's opportunities and comforts since the industrial age. Resourceful inventors even used plant-based oils to fuel the original automobiles. In the past few decades, however, the need to increase efficiency and decrease the environmental damage of our energy sources has driven unparalleled advancements in energy innovation. Energy from solar power, wind, biomass, hydropower, and even landfill gas, are not only technically viable but are also increasingly cost-competitive with their conventional substitutes. There is still a major policy hurdle to be overcome for renewables to reach widespread deployment, which is distributed electrical generation.

Distributed generation systems incorporate electricity that is created near the point of use, as opposed to generation at a centralized power plant with transmission across the electric grid. Renewable energy sources generated by utility customers can be sent onto the electric grid using interconnection techniques and through net-metering policies; however, it is most efficient to use electricity close to the generation site. According to the Energy Information Administration, the U.S. loses an estimated 6% of electricity generated through the process of transmission and distribution.[151]

States and municipalities can improve energy efficiency and increase access to renewable energy generation through several policy mechanisms. Many local governments have created net-metering policies, several local financial incentive programs are available, and it is fairly common for third-party ownership structures to be allowed.[152] Some states are beginning to address the bigger picture of renewable energy delivery with distributed generation policy frameworks. Two such cases are New York and Minnesota.

New York: Reforming the Energy Vision

In April 2014, the New York Public Service Commission released the Reforming the Energy Vision (REV) proposal calling for "a fundamental reconsideration of our regulatory paradigms and markets, examining how policy objectives are served both by clean energy programs and by the regulation of distribution utilities".[153] As described in the initial announcement, the Public Service Commission is planning to consider "changes in current regulatory, tariff, and market designs and incentive structures…" in order to achieve clean energy goals.[154] The proposal called for a broad transformation of the state's electric industry by the year 2030, with the stated the goals of 50% electric generation from renewable sources, 40% reduction of greenhouse-gas (GHG) emissions beyond 1990 levels, and 23% decrease in energy consumption in buildings from 2012 levels.[155] REV now encompasses an extensive list of initiatives covering the areas of renewable energy, energy efficiency, clean energy financing, energy infrastructure modernization, innovation, transportation, and sustainable and resilient communities.[156]

The New York State Energy Research and Development Authority

[151] "How much electricity is lost in transmission and distribution in the ..." 2015. 12 Jun. 2016 <https://www.eia.gov/tools/faqs/faq.cfm?id=105&t=3>

[152] "Renewable Energy: Distributed Generation Policies and Programs ..." 2015. 12 Jun. 2016 <http://energy.gov/eere/slsc/renewable-energy-distributed-generation-policies-and-programs>

[153] "Reforming the Energy Vision (REV) - New York State Department of ..." 12 Jun. 2016 <http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/26be8a93967e604785257cc40066b91a/$FILE/ATTK0J3L.pdf/Reforming%20The%20Energy%20Vision%20(REV)%20REPORT%204.25.%2014.pdf>

[154] "about the initiative - New York State Department of Public Service." 2015. 12 Jun. 2016 <http://www.dps.ny.gov/REV/>

[155] Ibid.

[156] Ibid.

(NYSERDA) administers the NY Prize as part of the REV Sustainable and Resilient Communities initiative. Now accepting proposals for stage two of the program, NY Prize is making $40 million available to communities for building their own local energy system, or microgrid.[157] These standalone electricity systems represent an implementation of a decentralized utility grid and are able to provide power to customers in the event of an outage in the larger system. In stage one of the NY Prize, funding for engineering feasibility studies was competitively awarded to 83 communities across 10 regions in the state.[158] Hurricane Sandy had caused power outages in many of the recipient towns and villages. The proposed micro-grids would generate reliable power for necessary public facilities and many incorporate various renewable energy sources such as solar, wind, fuel-cell, combined heat and power. Also part of the microgrid planning is on-site power storage, advanced transmission and distribution, and other innovative smart-grid technologies.[159]

Another driver in support of REV objectives and reforms is the Clean Energy Standard, which is being designed to enable cost-effective compliance with the State energy goals. As currently envisioned, the standard "will properly value the environmental attributes of clean distributed resources and thereby enhance their market penetration" (STAFF WHITE PAPER ON CLEAN ENERGY STANDARD, Case 15-E-0302, January 25, 2016).

NY Prize is making $40 million available to communities for building their own local energy system, or microgrid

Throughout the summer of 2016, the New York Department of Public Service is soliciting public input on the proposed Clean Energy Standard, as a complementary policy in support of REV. Comments are being requested regarding a Zero Emissions Credit, Customer Service Metrics for Gas and Electric Companies, REV Utility Codes of Conduct, the Clean Energy Standard Cost Study, and Energy Storage. Utilities are also being asked to file Distributed System Implementation Plans as well as Proposed Tariffs Describing Fees to Enable Community Choice Aggregation Programs.[160]

Additional REV initiatives range from Clean Energy Financing to Innovation and Research & Development. In order to realize the broad vision of energy reform, the State of New York is developing a multi-faceted approach in partnership with local communities, universities, and industry. Along with building an integrated energy network, the REV is aiming to provide economic development opportunities and affordable energy benefits via the NY Green Bank, which will invest $1 billion of public and private sector financing towards clean energy projects. The K-Solar initiative will save electricity costs by providing reduced cost solar installations for over 800 K-12 schools. Other initiatives include REV Business Model Demonstrations, Energy Efficiency Measures in Affordable Housing, Clean Fleets NY and ChargeNY to install electric-vehicle charging stations.[161]

[157] "NY Prize All Programs - NYSERDA." 2015. 13 Jun. 2016 <http://www.nyserda.ny.gov/All-Programs/Programs/NY-Prize>

[158] "NY Prize Opportunity Zones Map - NYSERDA." 2015. 13 Jun. 2016 <http://www.nyserda.ny.gov/All-Programs/Programs/NY-Prize/Opportunity-Zones-Map>

[159] "NY Prize - NYSERDA." 2014. 13 Jun. 2016 <http://www.nyserda.ny.gov/All-Programs/Programs/NY-Prize>

[160] "Distributed Generation Information - New York State Department of ..." 2011. 19 Jun. 2016 <http://www.dps.ny.gov/distgen.htm>

[161] Ibid.

New York is certainly taking steps to becoming a leader in distributed energy generation. As industry publication Utility Dive noted, "if 2015 was the year that New York's Reforming the Energy Vision (REV) initiative captured the imagination of the utility sector, 2016 could be the year some of its dreams start to materialize".[162] It will be interesting to follow the state's progress as the Clean Energy Standard is finalized and the various initiatives are implemented.

Minnesota

Minnesota is developing a distributed energy resource program similar to that of New York. More limited in scope, the state is focused on information gathering and ongoing assessment of programs focused on siting and interconnection. Minnesota has set goals to generate at least 30% of its electricity from renewable sources by 2030.[163] The state has a strong track record of policy support for an innovative energy landscape, following the introduction of a mandatory renewable energy standard in and an several financial incentive programs available to both residential and commercial utility customers.

In 2014, GreenTech Media noted that Minnesota was a top leader in "leading the distributed energy revolution" due to its Value of Solar Tariff (VOST) policy as an alternative to net-metering utility customers' solar grid interconnection.[164] The state legislature mandated the Department of Commerce to develop methodology, which the Minnesota Public Utility Commission approved for utility adoption on a voluntary basis.[165] There have not yet been any adoptions of the VOST policy, which would incorporate several grid factors when calculating the utility's value of customers' distributed solar photovoltaic systems.[166] Utilities in Minnesota still utilize a net-metering approach which provides customers with a small solar power system a credit on their electricity produced and customers with large systems are either credited the kWh's saved or the utility's avoided cost.[167]

In the meantime, a public-private effort, the e21 Initiative, aims to transition the regulatory model in Minnesota towards sustainability and carbon-neutrality. This partnership is being led by the Great Plains Institute and includes Xcel Energy, Minnesota Power, Center for Energy and Environment, George Washington University Law School, and others.[168] Currently in its second phase, the e21 Initiative has worked since 2014 to develop utility regulation recommendations such as performance-based ratemaking, grid modernization, and expanded distribution plans from utilities.

The Phase I Overview report described the group's objectives as follows:

"The Initiative aims to update the way Minnesota regulates utilities in two fundamental ways:

1. Shifting away from a utility business model that provides consumers few options (everyone gets the same grid electricity pro-

[162] "REV in 2016: The year that could transform utility business models in ..." 2016. 10 May. 2016 <http://www.utilitydive.com/news/rev-in-2016-the-year-that-could-transform-utility-business-models-in-new-y/412410/>

[163] "Programs." 2015. 19 Jun. 2016 <http://programs.dsireusa.org/>

[164] "5 States Leading the Distributed Energy Revolution | Greentech Media." 2014. 19 Jun. 2016 <http://www.greentechmedia.com/articles/read/5-states-leading-the-distributed-energy-revolution>

[165] "Value of Solar Tariff - Programs." 2015. 19 Jun. 2016 <http://programs.dsireusa.org/system/program/detail/5666>

[166] Ibid.

[167] "Net Metering - Programs." 2015. 2 Jul. 2016 <http://programs.dsireusa.org/system/program/detail/282>

[168] "e21 Initiative | Great Plains Institute." 2015. 2 Jul. 2016 <http://www.betterenergy.org/projects/e21-initiative>

duced largely with coal, natural gas or nuclear power at large central stations) toward one that offers consumers more options in how and where their energy is produced and how and when they use it; and,

2. Shifting away from a regulatory system that rewards the sale of electricity and building large, capital-intensive facilities (e.g., power plants) toward one that rewards utilities for achieving an agreed-upon set of performance outcomes that citizens and ratepayers want (e.g., energy efficiency, reliability, emissions reduction, predictable rates etc)."[169]

Phase II of the e21 Initiative will focus on evolving the utility business model and the statutory and regulatory frameworks in Minnesota. Timelines are not published at this time but the policy categories include: Energy Efficiency, Energy Infrastructure, Fossil Energy, International, Collaboration, Renewable Energy, Sustainable Communities, and Transportation.[170]

Conclusion

Technological innovation in the renewable energy industry has substantially decreased the cost of distributed energy resources and increased the market penetration throughout the United States. Unlike other areas of technical advancement, however, the national electricity delivery system is a complex, capital-intensive infrastructure with complex, widely varying regulatory frameworks. The federal government has been very involved with research and development, deployment and commercialization of renewable energy technologies but it is up to state and local governments to develop the policies to fully support their implementation.

The current secretary of the U.S. Department of Energy, Ernest Moniz, recently commented that large scale clean energy is approaching a "phase change" due to two main factors: inspiration from climate change as seen in the 2015 Paris Agreements and the cost-competitiveness of renewable power purchase agreements.[171] Last year, financial services company, Lazard released a levelized cost of energy analysis and reported a drop in utility-scale solar prices of 82% over the past six-years; wind energy had a 61% decrease in cost over the same period.[172] In the meantime, corporate social responsibility programs are making increasingly ambitious commitments to reduce their carbon foot-print. From Mission Innovation to the Breakthrough Energy Coalition and Sustainable Energy for All, the private sector is contributing towards global climate change mitigation efforts by investmenting in innovative energy technologies.

Local communities stand to benefit from the adoption of renewable and distributed energy resources at yet another critical level resiliency. As the Gulf Coast learned during Katrina and the Atlantic seaboard learned during Sandy, a centralized electricity distribution system has inherent vulnerabilities during disaster situations. A state that develops regulatory frameworks to support microgrids is fostering energy innovation as well as protecting its citizens from black-out situations and ensuing chaos. As an added bonus, distributed energy generation generates economic opportunities in the growth of the renewable energy industry that involves the technology, manufacturing, and construction sectors.

[169] "e21 Initiative Phase I Overview - Great Plains Institute." 2015. 19 Jun. 2016 <http://www.betterenergy.org/sites/www.betterenergy.org/files/e21Initiative_PhaseI_Overview.pdf>

[170] Ibid.

[171] "Renewable Energy Is Now Inevitable, Energy Secretary Says ... - Forbes." 2 Jul. 2016 <http://www.forbes.com/sites/jeffmcmahon/2016/06/03/renewable-energy-inevitable-energy-secretary-says-because-of-plunging-prices/>

[172] "Levelized Cost of Energy Analysis - Lazard." 2015. 7 Jul. 2016 <https://www.lazard.com/media/2390/lazards-levelized-cost-of-energy-analysis-90.pdf>

Powering America Forward: Innovation in Infrastructure Financing

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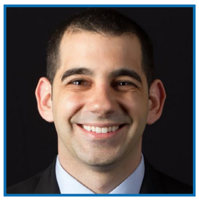

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In 2013, the American Society of Civil Engineers gave America's infrastructure a grade of 'D+,' and warned that over $3.6 trillion of investment is needed before 2020 to move the grade to a 'B.'[173] Infrastructure is a wide range of fixed assets that power our economy, and includes everything from roadways to mass transit, waste treatment to water delivery, and seaports to inland waterways. Reinvesting in America's infrastructure will require economic innovation in the form of innovative infrastructure financing which will include State Infrastructure Banks (SIBs) and the newly created Infrastructure Prizes (Infra-Prize).

State Infrastructure Banks

State Infrastructure Banks (SIBs) are Federal and state-sponsored surface transportation infrastructure funding pools that offer loans and credit for projects. SIBs do not own infrastructure assets, rather they act as lenders and guarantors for project sponsors.

Operation and Benefits of SIBs

Between 1995 and 2012, more than 30 states and Puerto Rico established SIBs.[174] In that time, SIBs financed over $7 billion worth of infrastructure projects.[175] 2015's SAFETEA-LU expanded eligibility for SIBs to all states, territories, and the District of Columbia for Highway, Transit, and Rail projects. Federal and matching state funds incentivize efficient use of Federal resources while simultaneously giving states flexible transportation dollars.[176]

[173] "American Infrastructure | 2013 Report Card for America's Infrastructure." 2015. 2 Jul. 2016 <http://www.infrastructurereportcard.org/executive-summary/>

[174] "FHWA Office of Innovative Program Delivery: Innovative Finance." 2010. 6 Jul. 2016 <http://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_credit_assistance/sibs/>

[175] "State Infrastructure Banks | CSG Knowledge Center." 2011. 6 Jul. 2016 <http://knowledgecenter.csg.org/kc/content/state-infrastructure-banks>

[176] Ibid.

SIBs allow states to:
- Directly lend to infrastructure projects;
- Sell capital market backed bonds, allowing proceeds to finance additional projects;
- Borrow with lower interest rates;
- Fund infrastructure projects that cross jurisdictional boundaries;
- Establish "revolving" financing, where repayment on one loan leads to the ability to create another.

In the traditional funding model, delays created by political conflicts and bureaucracy delay vital transportation projects. These delays also erode public support and increase costs. SIBs overcome this hurdle by providing credit and loans more predictably and timely. For example; the Kansas Transportation Revolving Fund's approval process is approximately 60 days from application to loan agreement, as opposed to some projects which take months or years to gain financing approval.[177]

Employing SIBs as a "Grand Bargain" Approach

One way to build support for SIBS is the "Grand Bargain" approach. It is a political "bargain" for increased capital for SIBs in exchange for more robust investigation on the benefits of the infrastructure projects. At the state level, stakeholders would commit additional capital to SIBs through one-time legislative appropriations or modest increases in fees associated with transportation. At the same time, state would conduct rigorous analysis and implement transparent project selection criteria so all stakeholders are clear about what benefits the additional infrastructure expenditure is generating.

The way forward for SIBs

States or metropolitan regions that do not have SIBs should immediately consider establishing a commission to investigate the feasibility of creating their own SIB. The commission, with public hearings, experts, representatives of SIBs from other states will inform citizens on best practices, public sentiment, and action steps.

States or metropolitan regions that do have SIBs should take an immediate step to set up a commission to investigate the feasibility of the "Grand Bargain." This commission should partner with local chambers of commerce and citizen groups to build coalitions to support the expansion of SIBs.

Public Private Partnerships

Another similar innovative technique to funding infrastructure projects can be found in Public Private Partnerships (P3s). Here, local and state governments work with private entities to collect, create, fund, and manage projects. Critical components of P3s include an efficient timeline for turning around project start and completion. As aforementioned, delays in infrastructure projects are often due to undue bureaucracy and have very serious adverse effects on projects. Another key component of the P3 structure is allowing public opinion to be considered in project approval lending transparency to the approval process.

While we focus on the importance of innovation in infrastructure funding, we should note that it's been shown that P3s also lead to higher quality goods and services.

One successful entity that does so is the West Coast Infrastructure Exchange.

West Coast Infrastructure Exchange

The West Coast Infrastructure Exchange (WCX) is a 501(c)(3) organization that was created in 2012 by the Governors and Treasurers of the west coast states and the Premier of British Columbia as a step in the solution to our need to provide the financing needed for infrastructure projects.[178] WCX connects private investors with investors in the public sector to discuss and agree on infrastructure projects in California, Oregon, and Washington here at home and also British Columbia in Canada. WCX funds projects that must meet several criteria by using what they called a Performance Based Infrastructure Project Screening Criteria. As we might expect, costs, performance, and complexity are key metrics. These screening criteria assure climate impact, policy hurdles, and project timelines are done timely and efficiently. Moreover, WCX also provides trainings

Reinvesting in America's infrastructure will require economic innovation in the form of innovative infrastructure financing

to public entities on the importance, usage, and successes of using such a metric.

WCX funds projects that must meet several criteria by using what they called a Performance Based Infrastructure Project Screening Criteria. Alongside key metrics of costs, performance, and complexity are key metrics, much to our contentment WCX also considers climate impact and policy hurdles as well as project timeline assuring that projects are done timely and efficiently. WCX accounts for the projects life full life cycle and allows public ownership of infrastructure.

Private funding is largely expected from capital groups and therefore, indirectly, Public Pension Funds.

> *Workers in the US and Canada want to see more of their pension funds put safely to work at home, helping rebuild our domestic infrastructure, expand our economy, and rebuild the middle class by creating new and lasting jobs. SEIU supports the establishment of the West Coast Infrastructure Exchange (WCX), which promises to bridge the gap between investors and domestic infrastructure needs while protecting the interests of working people and our environment." — Mary Kay Henry, President, SEIU National*

Kentucky Passes P3 Bill

More recently, the Commonwealth of Kentucky extended their infrastructure rules to codify the existence and operation of their own P3. In April of this year, the Commonwealth of Kentucky passed billed HB309 which among other things created a process for allowing local governments to solicit proposals that will then be reviewed by the Kentucky Local Government Public-Private Partnership Board and funded in collaboration with private entities.[179] State authorities made clear that public hearings on projects will be held prior to decisions and that decisions on proposals will be efficient, with deadline of 30 days for unsolicited proposals and 90 days for solicited.

The state is hopeful that P3 funding will help tackle projects initially out of reach to local governments. While we often think about transportation, the state can also seek out projects for P3 funding

[177] Puentes, R. "Banking on Infrastructure - Brookings Institution." 2012. <http://www.brookings.edu/~/media/research/files/papers/2012/9/12-state-infrastructure-investment-puentes/12-state-infrastructure-investment-puentes.pdf>

[178] "Strategic Plan - West Coast Infrastructure Exchange." 2013. 7 Jul. 2016 <http://westcoastx.com/assets/documents/WCX_CH2MHill-report.pdf>

[179] "HB309." 2016. 7 Jul. 2016 <http://www.lrc.ky.gov/record/16RS/HB309/bill.pdf>

that will maintain their State Parks. For this year, the state has a budget of $18 Million for deferred State Park maintenance. P3s allow the opportunity to have transparent processes for allocating funding and timelines that can support a project's success.

Infra-Prize

The Infrastructure Prize (Infra-prize) is a public-private incentive competition that will be an avenue for creating new technologies, materials, and concepts to tackle pressing infrastructure problems. While SIBs are designed to finance projects, Infra-Prize is better suited to create incentives to jumpstart and mainstream new technologies, such as better ways to replace deteriorating water pipes, repair rusting bridges, or fill potholes with long lasting materials.

Infra-prize will create competitions to tackle specific infrastructure issues. The competition will uncover innovative ideas by tapping collective knowledge and open competitions, engaging large corporations, universities, small businesses, start-ups, and individuals.

A key piece of the infra-prize is how we using the winning technology. Traditionally technology developed to solve many of problems has had a hard time breaking into the market. A strength of the infra-prize will be how we move the technologies forward. An Infra-prize organization can partner with governments to help accelerate the testing, deployment and commercialization of the technology. By creating the right incentives, partnering with companies to use the intellectual properties, promoting a powerful environment, and focus, we can solve our challenges sooner rather than later. We will look to not marginally improve the technology of today but to exponentially improve them.

Many of these ideas are inspired by Dr. Peter Diamandis, with X-Prize and his book Bold (2015). We look to use his work as an inspiration to see how we can create incentives that will change and move our communities forward through infrastructure development.

Reasons to Support a Prize

Incentive prizes have proven to be an important catalyst in overcoming challenges through financial award, global recognition, and commercialization assistance. One of the most famous incentive competitions you may not recognize is the Orteig Prize. In 1927 Raymond Orteig offered a $25,000 prize for the first team to cross the Atlantic on a flight between New York and Paris. The winner of this prize was a man named Charles Lindbergh and his airplane named The Spirit of St. Louis. This competition pushed the envelope of flight with later gave birth to the airline industry.[180]

Today incentive prize competitions have been an important pillar in innovation. Two major players in this field that use incentive prizes is the Pentagon's Defense Advanced Research Projects Agency (DARPA) and the X-Prize. X-Prize began with offering the Ansari X-PRIZE for Suborbital Spaceflight. Within 8 years a team won the $10 million prize[181] and now that same technology was used to jump start companies in the private space industries. Xprize is currently looking to tackle adult illiteracy, a remote medical diagnosis, and capturing CO2, along with other initiatives.[182] In 2009 the DARPA Network Challenge explored the roles the Internet and social networking play in the real-time communications, wide-area collaborations, and practical actions required to solve broad-scope, time-critical problems.[183]

Using the same ethos, we hope to create the same prizes that will address our pressing infrastructure issues of today and the future. And one of the best parts of these competitions, aside from the ground breaking results it can bring, is that incentive prizes represents a true democratization of problem solving. It doesn't matter on your race, gender, education, location or any other way we can label one another. Results are objective and the best results always win.

Funding

There are types of sources that are ideal for an incentive competition. But before we dive into this, there is one key factor that makes incentive prizes so attractive to investors, donors and sponsors, and that is the Intellectual Property (IP). The goal in mind for Infra-Prize will be to create materials, processes, tools and other tangible items that can immediately be used for infrastructure purposes. Each winning team will certainly have some sort of intellectual property that has value in a commercial use. And that value will be important.

Depending on how the contest is structured, the intellectual property could be used to as a way to attract sponsors, donors and everyday folk that want to see change. The IP can be held by the winning team and licensed out, it could be held by the sponsor of the prize, or it can even be open source IP that could open to the world. Each Incentive Prize competition will be unique as to how this is handled but provides leverage in getting funding.

Suggested funding approaches include:

- Private Sources - Finding private donors or a group that have an affinity to a certain will be an important source from us. We can certainly tap into a groups that support causes like safe driving, clean water, and other great groups.
- Corporate sponsors - Certain prizes will be very appealing due to a significant monetary incentive of taking the IP down a commercialized road. Many corporations that may not have the capacity for research or the stomach to take risks, may view this as a worthwhile investment
- Crowdsourcing - We certainly cannot talk about incentive prizes, and so tapping into the talents of millions to discover change, without talking about crowdsourcing. By establishing the right community and creating the proper media, we can tap into the billions of dollars raised through crowd sourcing to support our competitions.

Mechanics - Overview of Plan and Structure

In one way to model the mechanics of Infra-Prize is seen in Peter Diamandis's book Bold which is the structure that Peter uses for X-Prize.

1. Find the problem you want to solve.
2. Determine the guidelines and metrics.
3. Create the name, purse amount, duration and intellectual property rules.
4. Refine rules and prize.
5. Launch prize and register teams.
6. Operate the challenge.
7. Judging, awarding and publicizing.

As a way to help leaders that are bold enough to take on incentive prizes, X-Prize introduced HeroX, which is an incentive competition platform which helps address the mechanics operations running an

[180] "Raymond Orteig - The Philanthropy Roundtable." 2014. 6 Jul. 2016 <http://www.philanthropyroundtable.org/almanac/hall_of_fame/raymond_orteig>

[181] Ibid.

[182] "Active Prizes - Prizes | XPRIZE." 2014. 6 Jul. 2016 <http://www.xprize.org/prizes>

[183] "DARPA NETWORK CHALLENGE." 2012. 6 Jul. 2016 <http://www.eecs.harvard.edu/cs286r/courses/fall10/papers/ProjectReport.pdf>

incentive prize competition.

Guiding Principles

At the heart of Infra-prize as a tool for providing America's Infrastructure needs is incubating exponential technologies that will help us leapfrog the current rate of development. When we look to support a new technology, it will be designed two sets of goals.

Primary

- Substantial improvement in the technology, quantified and qualified by the competition panel.
- Decreased overall costs of implementation and lifetime maintenance of project.
- Improved quality and safety.

Secondary

- Creates a positive environmental impact.
- Creating innovative technologies.

Financial Services for the Common Good

"Challenge yourself to a greater meaning in life. Become a force for good. Seize the opportunity afforded to you as a business leader to change our country and our world for the better."

Secretary Penny Pritzker, U.S. Department of Commerce

The innovation economy has to date, silently disrupted the financial sector. Here is where we have major potential to impact day-to-day business for many individuals. Everything from how businesses are financed to how individuals collect payments is being transformed by new app technologies. Pairing this with the training to fully access innovative financial platforms spurs growth for the individual, for small businesses, and across the global scale.

Increasing Access to Financial Services to Boost Economic Growth

by Joseph Pileri
Clinical Teaching Fellow,
Georgetown Law Social
Enterprise Clinic;
NLC Los Angeles

A young woman in Mali sells mangoes at her local market every weekend. Her mangoes are the best – people from all the surrounding villages come to buy from her. Her fruit is in fact so popular that a distributor has offered to take her mangoes to other cities to sell if she can double her output. Land is available, but she has very little money saved to buy the land. The distributor has told her that he prefers to pay her via a mobile payment system, but she has always done business in cash only.

Meanwhile, a young man lives in a neighborhood in Los Angeles that has few banks. Few people he knows have ever opened a checking account; his neighbors all contribute a couple hundred dollars each month to a savings group. He has borrowed from the savings group for large purchases in the past, but now he wants to start a business selling handmade goods his grandmother taught him to make. With no credit history and no experience with banks, he has no idea how to get enough money to start his business.

Both these would-be entrepreneurs suffer from a lack of access to financial services. Around the world, the lack of access to financial services, such as checking accounts, mobile banking, business loans, and others, inhibits economic growth, entrenches poverty, and prevents people and communities from accessing global markets as consumers and producers. Access to financial institutions encourages investments and deepens markets.[184] These institutions allow people to increase income, build enterprises, and reduce exposure to catastrophic events.[185] Solving this problem will require creative policy solutions that modernize regulatory schemes and use technology to bring millions of people at home and abroad into the modern global economy.

Who are the "Unbanked?"

In 2013, the Federal Deposit Insurance Corporation ("FDIC") surveyed U.S. households and found that 9.6 million households were "unbanked" and that another 24.8 millions households were "underbanked."[186] "Unbanked" households are those households that do not have an account at an insured institution; "underbanked" households are those with bank accounts but who also use alternative financial services outside the banking system, examples of which are described below.[187] In the U.S., fees for check cashing, bill payment, and money order services, a limited ability to accumulate wealth and assets, and an inability to access formal lending

[184] Rojas-Suarez, L. "WP - Are SWFs' investment politically biased? - OECD." 2010. <https://www.oecd.org/dev/pgd/45965165.pdf>

[185] "Access to financial services in developing countries - Rabobank." 2013. 2 Jul. 2016 <https://economie.rabobank.com/PageFiles/3584/access_tcm64-75165.pdf>

[186] "FDIC: 2013 FDIC National Survey of Unbanked and Underbanked ..." 2009. 2 Jul. 2016 <https://www.fdic.gov/householdsurvey/>

[187] "2013 FDIC NatIoNal Survey oF uNbaNkeD aND uNDerbaNkeD." 2014. 2 Jul. 2016 <https://www.fdic.gov/householdsurvey/2013execsumm.pdf>

markets."[188][189]

Estimates of the number of people in the developing world without access to financial services range from two[190] to four[191] billion – numbers that approach or even exceed half the world's adult population. While these people are spread throughout the societies in which they live, being unbanked has a particularly profound effect on women and rural populations.[192][193] This further exacerbates the gap in wealth between these and other groups and serves as one more barrier to these groups sharing in the prosperity of a global economy. That is not to say, however, that these people do not participate in the economy. Quite the contrary – these individuals often start small business or microenterprises like our young mango grower. Those microenterprises in turn suffer from high cost of credit in the absence of formal financial institutions and are prevented from expanding and reaching new markets.

Estimates of the number of people in the developing world without access to financial services range from two to four billion – numbers that approach or even exceed half the world's adult population.

As we have seen, alternative financial services are used the world over in the absence of formal financial institutions.[194] One such alternative – informal savings group – is mentioned above. Informal savings group, sometimes called "susus," involve groups of family members or friends depositing a certain amount of money into a central pot each week. The pot is then given to one member of the group.[195] In regions like Subsaharan Africa, nearly half of unbanked individuals use these methods to save money and manage their financial needs.[196] Other alternative services include specialized microfinance instructions, financial cooperatives, low-capital rural banks, state development and agricultural banks, postal savings banks, and others.[197] These institutions serve an important role in the financial lives of hundreds of millions, but many ultimately fall short in providing stability and financial opportunity when compared to the formal financial sector.[198]

Why does this Problem Persist?

The deleterious effects of being "unbanked" are undeniable. Why, then, does this situation persist? In 2010 the Organization for Economic Co-operation and Development looked at this situation and identified five major obstacles to increasing access to financial institutions in the developing world. One, places with lower socio-economic indicators have less developed financial cultures than elsewhere and more people who cannot afford the initial costs of entering the formal financial sector. Two, macroeconomic instability slows the provision of financial services and erodes public trust in financial institutions. Three, financial institutions often employ poor methods and practices in conducting their operations. Four, countries with low-quality public institutions see a greater lack of access to financial resources. Finally, poor or inadequate regulations discourage financial market development, hinder the adoption of safe financial products, promote inefficiencies and threaten the stability of the financial system.[199]

In the United States, the FDIC similarly found that rules like minimum account requirements and account fees prohibit people from using traditional banking services, while large numbers of Americans lack trust in financial institutions.[200]

Solutions

As we have already mentioned, solving this problem will require a variety of creative policy solutions to bring millions of people at home and abroad into the modern global economy.

Modernizing Regulatory Schemes

The regulatory systems of both the U.S. and the developed world were created in response to traditional financial institutions and neither recognizes nor facilitates alternative systems. Regulatory reforms are needed to do just that. These reforms can take a variety of forms - advocates in the U.S., for example, have proposed allowing the Postal Service to provide basic banking services as an alternative to costly products such as payday loans and check-cashing services.[201] Others push for linking formal and informal banking services like susus in the developing world as part of broader financial regulatory reform.[202] As reforms progress, policy makers would be wise to keep in mind the financial systems that their constituents actually use and create regulations that reflect and legitimize that reality.

Increasing Technology

Technology, particularly mobile, can connect people and enterprises with financial institutions in traditionally underserved areas. Digitizing payments, supporting mobile banking initiatives and formalizing savings are three examples of technology-driven initiatives that can benefit the unbanked. One, converting cash wages to digital

[188] "Estimating the Cost of Being Unbanked - The Federal Reserve Bank of ..." 2013. 2 Jul. 2016 <https://www.bostonfed.org/commdev/c&b/2007/spring/article9.pdf>

[189] "Spikes and Dips: How Income Uncertainty Affects Households — U.S. ..." 2014. 2 Jul. 2016 <http://www.usfinancialdiaries.org/issue1-spikes/>

[190] "Global Findex - World Bank." 2015. 2 Jul. 2016 <http://www.worldbank.org/en/programs/globalfindex>

[191] "Access to financial services in developing countries - Rabobank." 2013. 2 Jul. 2016 <https://economie.rabobank.com/PageFiles/3584/access_tcm64-75165.pdf>

[192] Triki, T. "Financial Inclusion in Africa - African Development Bank." 2014. <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Financial_Inclusion_in_Africa.pdf>

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[196] "Global Financial Development RepoRt - Social Performance Task Force." 2 Jul. 2016 <http://sptf.info/images/wg%20outreach%20regulators_worldbank_financial%20inclusion%20report.pdf>

[197] "Access to financial services in developing countries - Rabobank." 2013. 2 Jul. 2016 <https://economie.rabobank.com/PageFiles/3584/access_tcm64-75165.pdf>

[198] "Access to financial services in developing countries - Rabobank." 2013. 2 Jul. 2016 <https://economie.rabobank.com/PageFiles/3584/access_tcm64-75165.pdf>

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payments (and necessarily assisting people in setting up accounts to receive these payments) has the potential to move millions into the formal banking sector and improve the security, transparency, and efficiency of those payments. Two, once people are using digital bank accounts person-to-person payments can be made via mobile phone, which has the potential to be more secure and cheaper than cash payments or using wire transfer services. Finally, converting people to using formal savings accounts can safeguard investment returns as compared to other informal methods.[203]

The Role of Financial Literacy

Financial literacy is invaluable to any initiative aimed at closing the global financial services gap. Lack of financial literacy is often a barrier to opening a banking account, and the initiatives referenced above will depend on having users who understand how financial services operate to succeed. Users will need to be educated on how to use digital and mobile payment systems, for example, as well as basics of how checking and savings accounts operate.[204] Any initiative aimed at the unbanked, whether at a specific population or at broad swaths of countries, required well-designed, targeted intervention to enhance financial knowledge, business skills, attitudes, and behaviors.[205] These educational interventions must go hand-in-hand with policy initiatives if policy changes are to be successful in bringing the unbanked into the global economy.

Small Business, Global Stage

by Efrem Bycer
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International trade is an increasingly important element of our economic story. Production and innovation fueled our economic resurgence coming out of the Great Recession, and accessing new markets in which to sell American goods and services remains one of the top priorities of the Obama Administration, as well as an important topic along the presidential campaign trail. 2016's political discourse has been anything but friendly to trade, with candidates on all sides deriding trade policy proposals without a substantive conversation as to why we must focus on global markets. Beyond missing the mark on delivering an important message to U.S. businesses on the necessity of going global, these surface-level conversations leave out crucial information: the federal government, as well as many states and cities, have numerous programs and resources to help businesses reach the global markets that will fuel their growth. The truth is that accessing these services is difficult for too many businesses, including those that would benefit the most from using them. What we truly need is a deeper conversation about the benefits of exporting and how we can make the already-existing services more user-friendly and effective.

Businesses are faced with an economic imperative to take on a global orientation. The spending power of the global middle class will grow by $20 trillion by 2025,[206] far outpacing the growth of U.S. consumption. This new and growing class of global consumers will want products and services produced by American firms. In fact, research from the U.S. Department of Commerce indicates 95% of the potential customers for U.S. goods and services live outside the U.S.[207] If businesses want to remain competitive, then they will need to reach this new consumer base around the world.

The proliferation of the Internet and digital services makes the opportunity to reach global customers is more accessible than ever. Once a privilege of a few large companies, businesses of all sizes and across a variety of industries can now efficiently and effectively evolve into businesses with international customers. Put simply, the Internet is democratizing trade. Supporting this point, of all the businesses that do over $10,000 of sales annually on eBay, 97% of them export to at least one other country, and 81% export to five or more countries.[208] Similar platforms can help American firms trade services internationally. These services fall into two buckets: 1) services already delivered digitally, like music streaming, software, and financial services, and 2) services, such as engineering, design, and telemedicine, that until recently could not be delivered online. The growing production of and demand for online services that are bought and sold online presents an even greater opportunity to bring billions of potential new buyers to American businesses. These businesses are regarded globally as the producer of high-quality services, and they routinely run surpluses in this type of trade, a statistic that is consistent across most developed nations. We need to ensure businesses know how to leverage the Internet to sell their goods and services.

Policymakers and government officials need to consider and more readily explain the benefits of exporting abroad both for businesses as well as the national economy. Exports created for one-third of the more than ten million jobs from 2010 to 2015.[209] American businesses that export pay higher wages, hire more workers and have higher sales than their non-exporting peers.[210] Exporting businesses are 20% more productive and create 20% more jobs than non-exporters, yet the percentage of U.S. businesses that export abroad remains small. While Great Britain and Germany export 32% and 50%, respectively, of their GDPs, the U.S. exports only 14%.[211] Not only will our global competitiveness slip if we do not focus on increasing access to global markets, we will also pass up countless opportunities to add more resilient, higher-paying jobs for American workers.

Achieving our export goals requires a supportive policy environment. We need to simultaneously remove or reduce tariffs on U.S. goods and services, lift worker and environmental standards in our trading partners, reduce regulatory barriers and eliminate customs delays. We also should maintain or expand programs, including the often derided Export-Import Bank, that help mitigate against the risks exporters face when working with international buyers.

As progressives, we strive to develop and execute policies and programs that promote inclusive economic growth. Because small businesses,[212] particularly new businesses,[213] created two-thirds of all net

[203] "FINDEX NOTES - World Bank." 2015. 2 Jul. 2016 <http://www.worldbank.org/content/dam/Worldbank/Research/GlobalFindex/PDF/N2Unbanked.pdf>

[204] Ibid.

[205] "Global Financial Development Report - Social Performance Task Force." 2 Jul. 2016 <http://sptf.info/images/wg%20outreach%20regulators_worldbank_financial%20inclusion%20report.pdf>

[207] "Capturing the world's emerging middle class | McKinsey & Company." 2016. 6 Jul. 2016 <http://www.mckinsey.com/industries/retail/our-insights/capturing-the-worlds-emerging-middle-class>

[208] "National Export Initiative Fact Sheet - International Trade Administration." 2013. 6 Jul. 2016 <http://trade.gov/nei/nei-fact-sheet.asp>

[209] "Unleashing Innovation and Growth: A ... - Progressive Policy Institute." 2016. 6 Jul. 2016 <http://www.progressivepolicy.org/wp-content/uploads/2016/03/2016_PPI_Unleashing-Innovation-and-Growth_A-Progressive-Alternative-to-Populism.pdf>

[210] "America's Moment: Creating Opportunity in the Connected Age." 2016. 6 Jul. 2016 <https://www.amazon.com/Americas-Moment-Creating-Opportunity-Connected/dp/0393285138>

[211] "The Trans-Pacific Partnership and Small Business: Boosting Exports ..." 2015. 6 Jul. 2016 <http://www.progressivepolicy.org/wp-content/uploads/2015/11/2015.11-Gerwin_The-Trans-Pacific-Partnership-and-Small-Business_Boosting-Exports-and-Inclusive-Growth.pdf>

new jobs in America, we must create an environment that supports these companies' growth. In making expanding exports a priority, we focus on creating higher-wage American jobs in the industries that will continue to grow as global demand increases.

Small businesses, however, most often struggle to become exporters. High duties hit them much harder than their larger counterparts, and they have much more trouble taking on the risks associated with foreign business transactions. They do not have the skilled marketing teams or working capital to establish foreign offices, and they often lack the expertise to navigate complex regulations in the multiple markets in which they seek to do business. Just as the Internet is democratizing trade to small and medium sized enterprises (SMEs), the already existing programs should be structured for efficiency and allow access to businesses starters, to effectively do the same.

Not only will our global competitiveness slip if we do not focus on increasing access to global markets, we will also pass up countless opportunities to add more resilient, higher-paying jobs for American workers.

While these policy debates fill the airwaves, policy alone is not sufficient in helping us achieve our export goals. Too often, well-intentioned policies and programs fall far short of their intended goals; it's not because of explicit flaws in the policy, but because their implementation and the ways in which they are operationalized make it prohibitively difficult for businesses to use them, assuming they are even aware of these programs in the first place. The U.S. International Trade Commission found that nearly 50% of small business owners do not know where to start when trying to access global markets.[214] Going deeper, the research found three consistent challenges: 1) too much regulation and paperwork; 2) problems managing finances, including shipping costs and transferring payments; and 3) figuring out how to market to unfamiliar places in languages the firms do not understand. Regardless if these challenges are real or perceived, they serve as barriers to companies going global, leaving them to compete for a stagnant or slowly growing U.S. consumer base that pales in comparison to the growth opportunities abroad.[215]

These statistics highlight the clear need for better, more effective processes to match foreign market demand to American supply, bridge language and cultural differences, and reduce shipping costs and payment problems. Much of this can be addressed through the successful implementation of a number of programs, most of which are within the Small Business Administration (SBA) and the Department of Commerce (Commerce), as well as innovative uses of digital tools powering global online commerce.

Export programs may be country or industry specific. Others, such as the Gold Key service, are customizable to the specific needs of a business. Some resources, such as Small Business Development Centers, U.S. Export Assistance Centers (USEACs), Service Corps of Retired Executives (SCORE), Export Legal Assistance Network, and District Export Councils (DECs) are distributed across the United States. Businesses can access in-person meetings with experts and specialists within a reasonable distance of their primary place of business. Beyond the resources available domestically, the U.S. Commercial Service, as well as the Departments of State and Agriculture, have specialists placed internationally who can conduct research and facilitate meetings with potential buyers, distributors, and potential joint venture or licensing partners in international markets. Another group of services, including some offered by SBA and the Export-Import Bank of the United States, provide financing assistance to mitigate the risks of growing global.

These programs represent just a fraction of the federal programs available for businesses to help them access global markets. This list grows in number and complexity as state, local, and regional programs are added. Suffice it to say, businesses struggle to access many of the resources and policymakers resort to rhetoric rather than data when pontificating on how to improve them or if they are even legitimate uses of tax dollars.

Even as the debates around international trade policy continue, the federal government should work to ensure the programs currently on the books are working as well as possible to serve the businesses who will create jobs and power American economic growth. Many improvements to this set of programs can be achieved without potentially divisive policy deliberations. These operational improvements will not only strengthen delivery of export services but also enable the capture of relevant data points to create feedback cycles that drive continuous improvement, and facilitate data-driven conversations on the future of American export programs:

Conduct a digital census of export programs. Americans have come to expect they will be able to access any and all services digitally. Government services should not be the exception, but rather the standard-bearer for a digital user experience. One place to start to better understand the quality and availability of digital services is to conduct a digital census of the export services available to American businesses. The digital census will help officials view which services are online, which online services are working and which ones aren't, and assess and prioritize services. They can use the census to develop a framework for engaging relevant stakeholders, including businesses, about delivering an experience consistent with what should be expected of 21st century government.

Better data. Entrepreneurs, small business owners, and executives leverage data for all types of decision-making. This is especially true for decisions about exporting, which come with a number of associated risks. Unfortunately, export data, global supply chains, and trends by country and industry can be opaque to businesses and prohibitively expensive if they attempt to get data from high-priced consultants. Government data related to trade and exports should be open, understandable and available to the public. All data should be kept in a machine-readable format.

Improved performance evaluation that includes user experience. Too many government services take years, if not decades, before analysts and officials can determine if those programs are working. Better data and digital tools can help departments know if their programs are working in a fraction of the time, enabling them to make improvements in close-to-real time. This will require having explicit metrics on what makes for an effective program, systems to track those metrics and regularly report to officials and the

[212] "Overwhelming majority of American Businesses still not exporting ..." 2015. 6 Jul. 2016 <https://www.uschamberfoundation.org/blog/post/overwhelming-majority-american-businesses-still-not-exporting/34010>

[213] "Frequently Asked Questions about Small Business - SBA.gov." 2014. 8 Jul. 2016 <https://www.sba.gov/sites/default/files/FAQ_Sept_2012.pdf>

[214] "The Importance of Young Firms for Economic Growth | Kauffman.org." 2014. 8 Jul. 2016 <http://www.kauffman.org/what-we-do/resources/entrepreneurship-policy-digest/the-importance-of-young-firms-for-economic-growth>

[215] "Small and Medium-Sized Enterprises - United States International ..." 2015. 6 Jul. 2016 <https://www.usitc.gov/publications/332/pub4189.pdf>

public, and pathways for ongoing feedback from the businesses that successfully and unsuccessfully use these services. The right mix of quantitative and qualitative data will help agencies prioritize which improvements to make to the delivery of their programs.

Develop and implement a dynamic export planning tool. SBA's current export planning resource is a 193-page manual.[216] It includes worksheets, templates and other tools that will come in handy as SMEs decide when, where, and how to go global. It's time, however, for SBA to create a user-friendly digital platform that allows businesses to complete these forms online and save them to a unique user profile. Businesses should be able to upload other relevant documents to their profile and seamlessly receive feedback from international trade specialists, who prepare companies to enter new markets.

Leverage online resource matching. The plethora of information and programs can overwhelm businesses, especially when they are unsure of where to start. Rather than endlessly link firms, too often with broken links, a digital resource matching tool will help connect businesses with the information, resources, and services that are most applicable to their situation, whether they are new or experienced exporters. For example, using PrimerPeso217 (a 2014 Code for America Fellowship project with Puerto Rico) as a model, this type of tool will make it possible for businesses to seamlessly and easily learn about programs and connect with experts who can answer questions and help them enroll. The tool should also have an intuitive interface so that relevant state and local programs can be added to the database so allowing businesses to access the resources available from all levels of government.

Make digital export services a permanent priority. Commerce, SBA and other agencies providing export services should make the provision of user-friendly online digital services a top priority. They should engage with a constant flow of technology and design experts through the U.S. Digital Service and 18F Digital Services Delivery, both of which were created by the Obama Administration, to have regular and robust user feedback, testing, and iterative design. This will also include reviewing technology procurement processes and policies, so that agencies can develop the intuitive and personalized digital experiences Americans have come to expect from great consumer internet companies. In this vein, departments should be providing their own funding and advocating for further appropriations to continue and enhance the role of digital teams across important federal services, including export-related services.

The aforementioned federal agencies will need access to the talent and technologies in order to make dynamic planning tools and online resource matching a reality. To this end, millennial progressives must seek out innovative processes, skills, and products to work with and lift up federal export systems.

The imperative for American businesses to go global grows with each day. Not only will those businesses grow and expand, but also their communities will see increased prosperity. Our government's programs intended to enable and encourage exports must function at a level matching the importance of businesses accessing international markets. Focusing on operational improvements that will make the delivery of export services consistent with Americans' expectations of 21st century government will be a crucial step.

Federal agencies should refer to these concrete recommendations to maximize the benefits of their programs for American businesses and the public at-large. Technology and innovation are not simply concepts to be regulated or incentivized. Rather, when applied deliberately and strategically, they are both useful tools that can make government services simple, effective, and easy to use. Used to improve export services, technology and innovation stand to promote a robust economic growth that will increase wages, distribute gains, and ultimately combat rising income inequality. This must be part of the American approach to maximize our nation's competitiveness in an increasingly globalized world.

Looking Ahead

The NLC set of policy ideas, written through the lens of millennial leaders, is a much-needed, beginning dialogue for and by the largest generation our nation has beared witness to. Here we begin strategizing our role in asserting progressive values in the model of the 21st century workforce, to preserving agricultural land, and everything in between.

The ideas presented in this set, are in the development process. We use them as a starting point from which we will dig deep into policy that affects the innovation economy, tackles income inequality, addresses social justice, and supports innovation that will provide opportunity for everyone.

Our objective is to take action. Reaching this goal requires our generation of progressive leaders to continue digging deep into the innovation economy by expanding our policy memos and refining the ones presented here. We must deliver these strategies directly into the hands of policy influencers so we, progressive thinkers, pave the way towards an equitable and inclusive, pro-growth future.

We will continue to gather progressive millennial leaders across the country to work with our partners and mentors, who provide guidance and insight on results oriented, data based recommendations to craft ideas that are just and allow for increased economic opportunity for all.

The future is bright when the millennial generation is at the helm.

[216] Ibid.

[217] "Export Business Planner.pdf - SBA.gov." 2014. 7 Jul. 2016 <https://www.sba.gov/sites/default/files/SBA%20Export%20Business%20Planner.pdf>

[218] "Helping entrepreneurs grow their small businesses in Puerto Rico ..." 2016. 6 Jul. 2016 <https://www.codeforamerica.org/stories/helping-entrepreneurs-grow-their-small-businesses-in-puerto-rico>

NLC

New Leaders Council

NLC4

ppi progressive policy institute

CALinnovates