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The Influence of Home Country Factors on Immigrant Entrepreneurship in the U.S.

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Claremont McKenna College

The Influence of Home Country Factors on Immigrant
Entrepreneurship in the U.S.

submitted to
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by
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for
Senior Thesis
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Abstract

This paper uses a Poisson regression model to determine the effects of entrepreneurial conditions of home countries on immigrant founded startup activity in the United States. The study determines that the most relevant factors are innovation, internal market dynamics, governmental support and policies, financing, and internal market openness. It then analyzes the change rates of these entrepreneurial conditions between 2007 and 2017 in China, India, and the United States to determine the implications of changing power dynamics in the global economy on flows of immigrant entrepreneurship and innovation in the global entrepreneurial ecosystem. The study finds that after being in the lead in 2007, the United States had fallen behind China and India in all entrepreneurial conditions, with the exception of innovation, by 2017. With the way trends are moving, this paper predicts that innovation in the U.S. will be the next metric to fall behind.

Acknowledgments

I would like to thank Professor Ozbeklik for his patience and support throughout this process. I truly enjoyed writing this thesis and loved exploring a new topic alongside Professor Ozbeklik. I would also like to thank my friends and family for their support and interest in my topic.

Introduction

Professor Erkkö Autio, of Imperial College Business School and a co-author of the Global Entrepreneurship Index, stated in 2014,

"To understand the true impact of entrepreneurship in the economy, you have to go from bean counting to looking at the country's entrepreneurship ecosystem as a whole. The US excels because it is strong in so many areas that matter. Entrepreneurship plays a crucial role in the US economy and as result policy initiatives are created to encourage entrepreneurial behavior. This, coupled with the culture of determination and motivation, makes the US a great place to be an entrepreneur."¹

The Global Entrepreneurship Index (GEDI) names the United States the most entrepreneurial country in the world. It does so by measuring the health of the country's entrepreneurial ecosystem. While that may be true today, this study discusses the probability that it will not be true for too much longer. What many United States enthusiasts may have failed to recognize is how large of a role non-Americans have played in American economic success. Because of the role of immigrants in the success of the U.S. economy and their ability to transfer talent back to their home countries if economic conditions indicate that it is favorable to do so, the fall of the United States from the top may be quicker than some think – if it has not happened already. This paper analyzes the strength of the United States' entrepreneurial ecosystem in the face of changing global economic power dynamics. The primary focuses of the paper is the role that immigrant entrepreneurship plays in that ecosystem, how the entrepreneurial

¹ "United States Top in the World for Entrepreneurship." ScienceDaily, ScienceDaily. 9 Apr, 2014.

conditions of immigrant entrepreneur's home countries impact the decision to start companies in the U.S., and how these factors have changed over time.

Since the years immediately following the American Civil War, marking the beginning of the American industrial revolution, the United States has hailed as the largest economy in the world. The innovation and technological advancement that once drove the industrial revolution continue to be the country's main drivers today. The United States fostered entrepreneurship and cultivated a romantic ideal of the "American Dream" – the U.S. was the land of prosperity and hope for anyone who was willing to work hard. And so, immigrants have flocked to the U.S. for centuries in search of this promise.

These immigrants made lives for themselves and boosted the U.S. economy along the way. Immigrants have played a huge role in the growth of the U.S. economy through their contributions as innovators and entrepreneurs, a disproportionate role in fact. Immigrants represent only 13% of the U.S. population, yet they account for 27.5% of the countries' entrepreneurs. Immigrants are almost twice as likely to become entrepreneurs as native-born U.S. citizens.² Their impact is undeniable, as almost half of the Fortune 500 companies have been founded by immigrants or their children.³ This phenomenon of immigrant entrepreneurial success has been compounded by the new revolution – the digital revolution, also called the Information Era. Not only are immigrants more

² Franke, Peter VandroNikolaus. "Why Are Immigrants More Entrepreneurial?" Harvard Business Review. September 21, 2017.

³ Hathaway, Ian. "Almost Half of Fortune 500 Companies Were Founded by American Immigrants or Their Children." Brookings, Brookings. 4 Dec, 2017.

entrepreneurial, but they are also concentrated in the industries that drive technological advancement and disruptive innovation. One-fourth of all technology and engineering companies started in the U.S. between 2006 and 2012 had at least one immigrant cofounder, and that number is almost 50% in Silicon Valley alone. Innovation driven entrepreneurship has created companies that change the way we as humans live time and time again. Google has transformed the way we learn, communicate, and experience the world around us through harnessing the power of the internet as the most powerful search engine and the developer of some of the world's most groundbreaking technologies. Tesla has revolutionized the electric car market and made huge strides toward a greener future through their focus on R&D in renewable energy and green transportation. What do Google founder Sergey Brin and Tesla mogul Elon Musk have in common? They are both immigrants.

Literature Review

Why are immigrants more entrepreneurial? There has been extensive research into the success of immigrant entrepreneurs in the U.S. The literature discusses the causation of disproportionate rates of immigrant entrepreneurship. Chiswick (2000) examines the mechanisms through which immigrants are selected into the U.S. including visas, education, and familial ties inferring that there is selection bias favoring educated and highly-skilled immigrants. This selection bias leads to higher probability that immigrants selected through these mechanisms will be more successful when they adjust to their destination country, and will therefore have a more favorable effect on the economy and society of the new country. Chiswick goes on to state that the more favorably selected

immigrants are, the more the destination country comes to rely on them and the worse the adverse effect will be if they are to depart or their immigration frequency rates were to decrease.

AnnaLee Saxenian (1999) studies the role of Asian immigrants, primarily Indian and Chinese, in the growth of Silicon Valley's startup ecosystem. Saxenian examines the role of extended ethnic networks and resources on the success of these immigrant entrepreneurs. She states, "Silicon Valley's new immigrant entrepreneurs are building professional and business ties to regions in Asia. They are uniquely positioned because their language skills and technical and cultural know-how allow them to function effectively in the business culture of their home countries as well as in Silicon Valley." Ethnic networks allow access to capital and high-skilled labor from home countries. Immigrants also benefit from the knowledge of home country markets, often times allowing them to expand internationally and take advantage of high economic growth rates overseas, this is especially true for Asia.

Wadhwa, Rissing, Saxenian and Gereffi (2007) studies the educational backgrounds and career trajectories of immigrant entrepreneurs. They found that immigrants who are most likely to start engineering and technology companies - from India, the UK, China, Taiwan, Japan, and Germany - are better educated than their native-born counterparts. Key findings include, "96 percent of immigrant founders of technology and engineering companies held bachelor's degrees and 74 percent held graduate or postgraduate degrees [...] Moreover, 53 percent of the immigrant founders of U.S.-based technology and engineering companies completed their highest degrees in

U.S. universities.” Additionally, it is not only high levels of education which result in immigrants becoming better entrepreneurs, they are also heavily concentrated in fields with high success rates. Seventy-five percent of the highest degrees among immigrant entrepreneurs were in STEM fields (Science, Technology, Engineering and Mathematics).⁴ STEM related fields are the fastest growing industries in the world. STEM occupations are projected to grow 18.7% by 2020, compared to 14.3% for all other occupations. The U.S. Bureau of Labor Statistics states that 59% of the projected increase in STEM jobs is in computer and mathematical scientist occupations. These occupations also have the largest growth rate (23.1%).⁵ The growth rates of these industries give startups in the space a higher chance of success and market driven growth. The disproportionate success of immigrants is no coincidence, it is strategic. Immigrant entrepreneurs were responsible for one fourth of the technology and engineering firms founded between 2006 and 2010.⁶ They are out innovating their native counterparts, per capita, in the fields which are most economically and culturally impactful in the technocentric Information Era.

Akcigit, Grigsby and Nicholas (2017) explore the relationship between immigrants and innovation in the United States. They conducted empirical analysis on patents filed by immigrants from 1880-1940 and found that immigrants innovate at a much higher rate than their native-counterparts, logging more patents in their lifetime.

⁴ “Education, Entrepreneurship and Immigration: America's New Immigrant Entrepreneurs, Part II.”

⁵ National Science Foundation. "What Does the S&E Job Market Look like for U.S. Graduates?" STEM Education Data and Trends.

⁶ Wiens, Jason and Dane Stangler. "The Economic Case for Welcoming Immigrant Entrepreneurs." Kauffman.org.

Additionally, while immigrants exhibited higher rates of innovation, they were paid lower wages than native-counterparts. In this study we start to see some of the disparities which may lead to falling rates of immigrant entrepreneurship over time, in this case, wage inequity. Vandour and Franke (2016) suggest that cross-cultural experience itself may help internationally mobile individuals to develop skills and knowledge that allow them to better identify entrepreneurial opportunities. Their study finds that this phenomenon is not exclusive to immigrants, but even to experiences such as study abroad, emphasizing that it is the awareness and experience which are most valuable. By living in different cultures, one encounters new products, services, customer preferences, and communication strategies that can then be translated into successful strategies in the U.S.

Existing research primarily focuses on immigrant selection into the United States and the factors that contribute to their success after they have founded their companies. We know little about what happens before this point and what role conditions in immigrant home countries play in the decision to found a company in the U.S. as opposed to their native country. This study seeks to make connections between economic and social conditions in the home country of immigrant entrepreneurs and determine which factors are most relevant to them ultimately founding a company in the U.S. This paper then goes on to investigate changes in these conditions over time in countries that contribute high rates of immigrant entrepreneurship to the U.S. and the implications of these changes over time, focusing on China and India. The U.S. economy has flourished due to the innovation and entrepreneurship of the world's best minds for centuries. It is important to understand the drivers of this inflow of innovation and entrepreneurship in

order to foresee changes in them. As times change, it is necessary for the United States to adjust policies and public sentiment in order to retain the benefits that the U.S. has received from immigrant entrepreneurs.

Data

A key purpose of this paper is to explore the impacts of home country factors on immigrant entrepreneurship in the United States with a focus on innovation driven entrepreneurship. One of the largest gaps within the existing literature is the lack of focus on Schumpeterian entrepreneurship. Joseph Schumpeter holds the view that entrepreneurs are innovators, people who come up with new ideas and turn those ideas into disruptive, high-growth companies. The Economist explains the distinguishable aspects of these two definitions, “Schumpeterians distinguish between “replicative” entrepreneurs (who set up small businesses much like other small businesses) and “innovative” entrepreneurs (who upset and disorganize the existing way of doing things).”⁷ Past studies have used metrics such as self-employment or business ownership in order to track immigrant entrepreneurial activity. The issue with this methodology is that it includes small and medium businesses which do not constitute as indicators of innovative, high-growth, job creating entrepreneurship following the Schumpeterian definition. This study seeks to better address this issue.

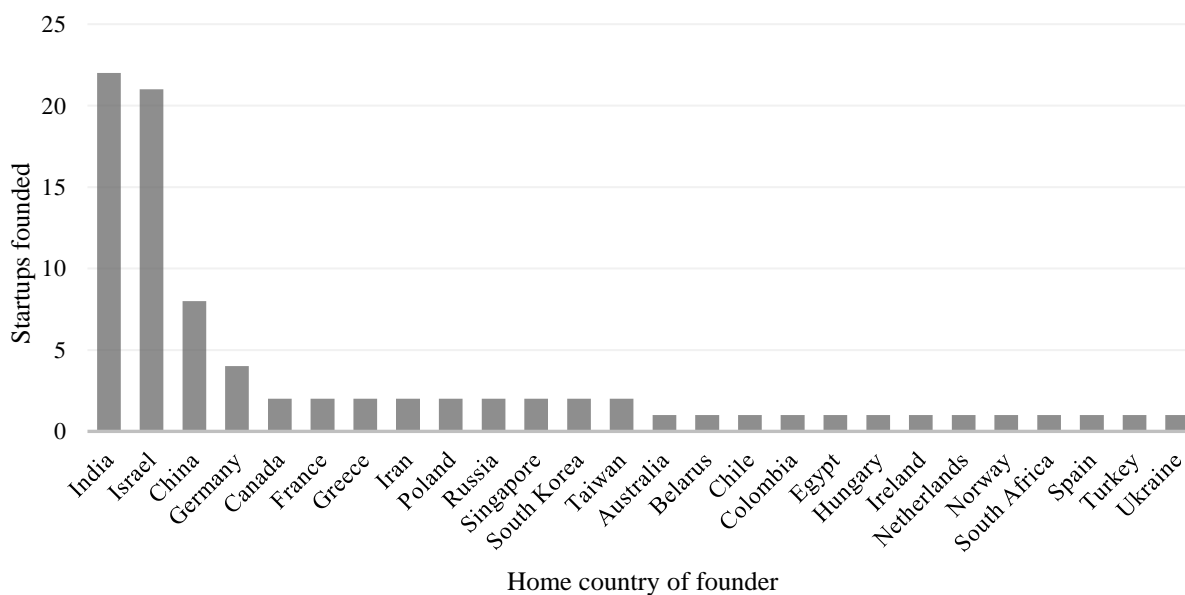
⁷ “What exactly is an entrepreneur?” The Economist, 2014.

Sample Selection: Immigrant Entrepreneurs

To identify innovative, high-growth entrepreneurship in the US, this study uses early-stage startup activity in the U.S. A list of all companies founded in 2015 that have raised 5 to 20 million dollars was compiled using the Pitchbook database. Company founders were identified using Crunchbase. Founders were then cross-referenced using their LinkedIn profiles. Founders were classified as an immigrant based on if they held an undergraduate degree from outside the U.S.; the country which their undergraduate degree was issued from was used as a proxy for home country.⁸ This method leaves out immigrants who entered the U.S. before or after college creating potential selection bias. The top contributors of immigrant entrepreneurship in 2015 were India which had 22 immigrant founded startups, Israel with 21, and China with 8.

Figure 1.

Home-countries of immigrant founder by frequency of startup founding (5M-20M in funding) in 2015



⁸ See information on immigrant education statistics in Introduction for justification.

Entrepreneurial Conditions Data

To identify home-country factors which contribute to entrepreneurship, data from the Global Entrepreneurship Monitor (GEM) is used. GEM compiles annual data regarding entrepreneurship from all available countries around the world. The dataset consists of indicators of Entrepreneurial Behavior and Attitudes taken from the Adult Population Survey which looks at the characteristics, motivations and ambitions of individuals starting businesses, as well as social attitudes towards entrepreneurship; and indicators of Entrepreneurial Framework Conditions taken from the National Expert Survey which looks at the national context in which individuals start businesses and measures how easy or difficult it is to start up a company. This paper uses the aggregated average of all metrics listed in **Figure 2** and **Figure 3** for the years 2013, 2014, and 2015. The empirical analysis utilizes the dataset of entrepreneurship indicators from 40 countries. These 40 countries include the 22 countries which contributed immigrant entrepreneurs to the US in 2015, based on founders of the 2015 startups with 5 to 20 million in funding. The remaining 17 are the countries with the largest number of new immigrants to the U.S. in 2015, according to the Center for Immigration Studies, but that have not necessarily contributed entrepreneurs. The study controls for home-country population taken from census data and GDP per capita taken from the World Bank.

Figure 2.
Complete list of 40 countries included in study

Argentina	El Salvador	Jamaica	Russia
Australia	France	Japan	Singapore
Brazil	Germany	Mexico	South Africa
Cameroon	Ghana	Morocco	South Korea
Canada	Greece	Netherlands	Spain
China	Guatemala	Nigeria	Taiwan
Colombia	Hungary	Norway	Thailand
Ecuador	India	Peru	Turkey
Egypt	Iran	Philippines	United Kingdom
	Ireland	Poland	Vietnam

Figure 3.
Entrepreneurial behavior and attitudes

Perceived opportunities	Percentage of 18-64 population who see good opportunities to start a firm in the area where they live
Total early-stage entrepreneurial activity (TEA)	Percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business
Innovation	Percentage of those involved in TEA who indicate that their product or service is new to at least some customers AND that few/no businesses offer the same product

Figure 4.
Entrepreneurial framework conditions

Financing for entrepreneurs	The availability of financial resources, equity and debt, for small and medium enterprises (SMEs) (including grants and subsidies)
Governmental support and policies	The extent to which public policies support entrepreneurship - entrepreneurship as a relevant economic issue
Taxes and bureaucracy	The extent to which public policies support entrepreneurship - taxes or regulations are either size-neutral or encourage new and SMEs
Governmental programs	The presence and quality of programs directly assisting SMEs at all levels of government (national, regional, municipal)
Internal market dynamics	The level of change in markets from year to year
Internal market openness	The extent to which new firms are free to enter existing markets

Cultural and social norms

The extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income

Notes: NES interviews 38 experts on key economic indicators in their respective countries. Indicators are measured on a scale of 1-5; Completely True (5), Somewhat True (4), Neither True Nor False (3), Somewhat False (2), Completely False (1).

Empirical Analysis

The empirical analysis first identifies the entrepreneurial conditions of a home country which are most material to immigrant startup founding in the U.S. The paper then discusses the change rates of these factors over time in China and India, two of the largest contributors of immigrant entrepreneurship, and the United States.

Home Country Factors Material to Immigrant Entrepreneurship

The study begins by testing the correlation of home country factors and immigrant startup founding in the U.S. The outcome variable is the number of startups founded for a given country in 2015. Because our outcome variable is input using count data, a Poisson regression model is used. There are a total of 40 observations; each individual observation is a country with an entrepreneurial profile made up of the Entrepreneurial Behavior and Attitudes metrics and Entrepreneurial Framework Conditions. To determine which of the data most strongly effect immigrant startup founding, we specify the following regression model:

$$\begin{aligned} startups = & \beta_1 TEA + \beta_2 opportunities + \beta_3 innovation + \beta_4 governmentsupport + \\ & \beta_5 internalmarketdynamics + \beta_6 internalmarketopenness + \\ & \beta_7 culturalandsocietalsnorms + \beta_8 governmentalprograms + \beta_9 taxesandbeaurcracy \\ & + \beta_{10} financing + \beta_{11} taxesandbeaurcracy + \beta_{12} financing + \beta_{13} gdp + \beta_{14} population \end{aligned}$$

The results of the regression are as follows:

Figure 5.
Results from Poisson regression

VARIABLE	Coef.	p> z
Perceived opportunities	-0.006 (0.019)	0.764
Total early-stage entrepreneurial activity (TEA)	-0.067 (0.056)	0.237
Innovation	0.119 (0.024)	0.000*
Financing for entrepreneurs	1.668 (0.760)	0.028*
Governmental support and policies	-2.102 (0.877)	0.017*
Taxes and bureaucracy	1.360 (0.836)	0.104
Governmental programs	1.029 (0.682)	0.131
Internal market dynamics	1.603 (0.494)	0.001*
Internal market openness	-3.033 (1.141)	0.008*
Cultural and social norms	0.643 (0.491)	0.190
GDP	-0.000 (0.000)	0.017
Population	-0.000 (0.000)	0.171
Number of observations	40	
Lr Chi ² (12)	158.41	
Pseudo R ²	0.587	

The Poisson regression yielded statistically significant positive results for the relationship of innovation, internal market dynamics, governmental support and policies, and financing with immigrant founded startup activity in the United States. The model yielded statistically significant negative results for internal market openness.

The results are largely consistent with the intuition that home country conditions which support entrepreneurship would decrease the rate at which founders start their companies in the U.S. Innovation had the most significant results which state that for a one unit change in innovation, measured by the percentage of entrepreneurs who indicate

that their product or service is new to at least some customers and that few/no businesses offer the same product, the difference in the logs of expected counts of startups founded in the U.S. is expected to increase by .11965, given the other predictor variables in the model are held constant. Internal market dynamics, which refers to the level of change in markets from year to year, has a positive correlation as well. The year to year level of change of home markets could indicate growth, but could also indicate volatility. This is a negative trait for entrepreneurship as it infers unpredictability in the markets and therefor increases risk. Immigrants likely favor the relative stability and predictability of the U.S. economy. The implications for this finding are that as a home country market stabilizes, immigrant entrepreneurs will be more likely to start companies in their home country over the U.S. Government openness negatively correlates with startup founding in the U.S. and impacts it with the largest magnitude with a coefficient of -3.033. This means that as a home country market becomes more open and firms are freer to enter, immigrant startup activity in the U.S. decreases. This makes intuitive sense because the more open a home country market is, the less entrepreneurs need to look elsewhere for more favorable conditions.

The results obtained for financing are contrary to intuition. One would assume that increasing financing in the home country would further incentivize entrepreneurs to found companies in their own country, as opposed to the U.S. However, this statistic may be picking up on endogeneity between financing and high-growth entrepreneurial activity. Countries with successful founders and entrepreneurial communities will attract more financing. That being said, the results may be explained by the fact that if countries are producing successful immigrant entrepreneurs in the U.S., they likely have a growing

entrepreneurial ecosystem in their home country as well that is attracting financing. This reasoning is countered by the negative coefficient for total early-stage entrepreneurial activity (TEA) which states that TEA does not indicate higher rates of startup activity in the U.S. for immigrant groups, however the TEA regression result was insignificant in our model.

The implications of this empirical analysis may be hindered by the small sample size of only forty countries and the limited time period from which immigrant founded startups were counted. The Poisson regression obtained a Pseudo R^2 value of 0.587 indicating that a large percentage of variation in our outcome variable can be explained by the model. However, it should be noted that R^2 values for the Poisson model are less direct than that of linear regressions. Future studies should compile data on a larger sample size of immigrant founded companies over time and their entrepreneurial conditions.

Changes in Entrepreneurial Conditions Over Time

In the regression analysis, we identified the entrepreneurial factors which are most material to promoting entrepreneurship and the relationship between home country factors and immigrant startup founding in the U.S. The study will now look at how these factors have changed over time in India, China, and the United States, how these changes impact the flow of entrepreneurial talent from these countries to the U.S., and how these changes impact the global entrepreneurial ecosystem. India and China have been selected as two of the largest contributors to immigrant entrepreneurship in the U.S., as well as the

largest economic competitors of the analyzed countries by GDP growth and size of economy.

It is assumed that for many years entrepreneurs came to the U.S. because it offered better entrepreneurial conditions to founders than their home country could provide. Following our list of entrepreneurship indicators, this would mean that the United States had greater internal market openness, more financing available to entrepreneurs, more governmental support and policies to directly assist entrepreneurs, and less taxes and bureaucracy, less internal market dynamism and therefore greater economic stability. Today, trends in these factors are changing. This is largely due to changes in the global economy. China recently replaced the United States as the largest economy in the world, measured by GDP at PPPs, and emerging markets are projected to grow up to twice as fast as advanced economies in the coming years. As a result, by 2050, six of the seven largest economies in the world are projected to be emerging economies – led by China in 1st and India in 2nd, leaving the United States in 3rd place.⁹ The United States has flourished due to the high growth enterprises and industries that have driven our economy for the last couple hundred years. But without the top spot in the world economy, the country will lose a large share of the innovation and growth derived from high-skilled immigrant talent.

There is little data available for the stay rate of immigrant entrepreneurs or the number of startups founded by immigrants by home country over the last ten years. However, considering that we know that 96 percent of immigrant founders of technology

⁹ PricewaterhouseCoopers. "The World in 2050." PwC.

and engineering companies hold at least a bachelor's degree, we can look at the stay rate of international students over the last 10 years as a proxy for immigrant entrepreneurial retention rates. Upon graduation, international students have the choice to pursue work in the United States or to start their own business here, or to return to their home country.

Economic and political conditions influence both of these decisions similarly. The ICEF

Monitor found that,

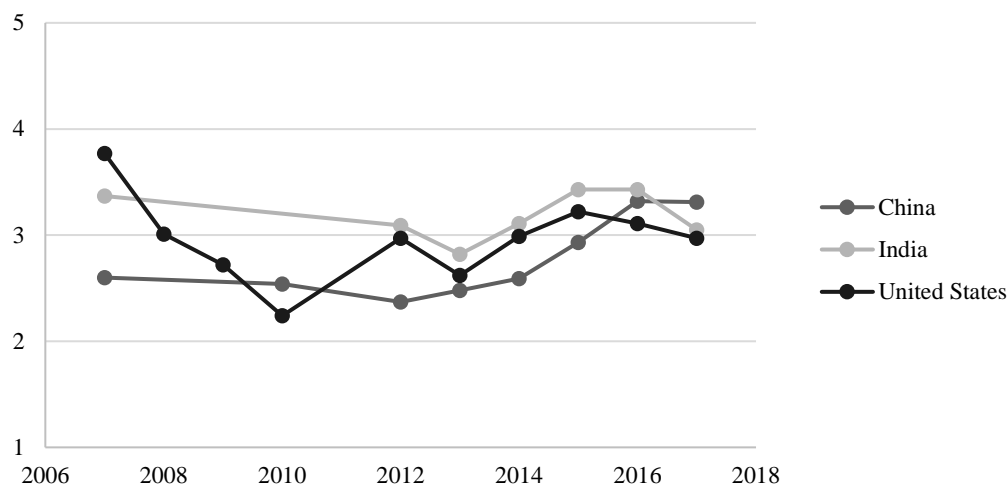
“Chinese students abroad are being drawn home in greater numbers, due in part to the strong Chinese economy. A record 409,100 Chinese students returned from overseas last year, bringing the total number of returnees to 2.2 million as of 2015. Xu Peixiang, the deputy director of the Ministry’s Overseas Students’ Support Center, noted that in recent years between 70 and 80% of outbound students return to China after their studies abroad.”¹⁰

This record number of Chinese returnees is a direct product of the improving economic conditions and job market in China, which are now superior to those overseas. The return of Chinese students is likely paralleled to the return of Chinese immigrant entrepreneurs. In analyzing the changes in their entrepreneurial conditions over the last ten years, we can see why this trend is occurring. Using the Global Entrepreneurship Monitor data from above, we analyze the changes in entrepreneurial conditions in India and China, two of the largest contributors of immigrant founded startups in 2015, over the last ten years and compare them to the United States to identify exactly how the country stacks up to its largest competitors.

¹⁰ "A Record Number of Chinese Students Abroad in 2015 but Growth Is Slowing." ICEF Monitor - Market Intelligence for International Student Recruitment. June 30, 2016.

Figure 6.

Change in financing available to entrepreneurs from 2007 to 2017



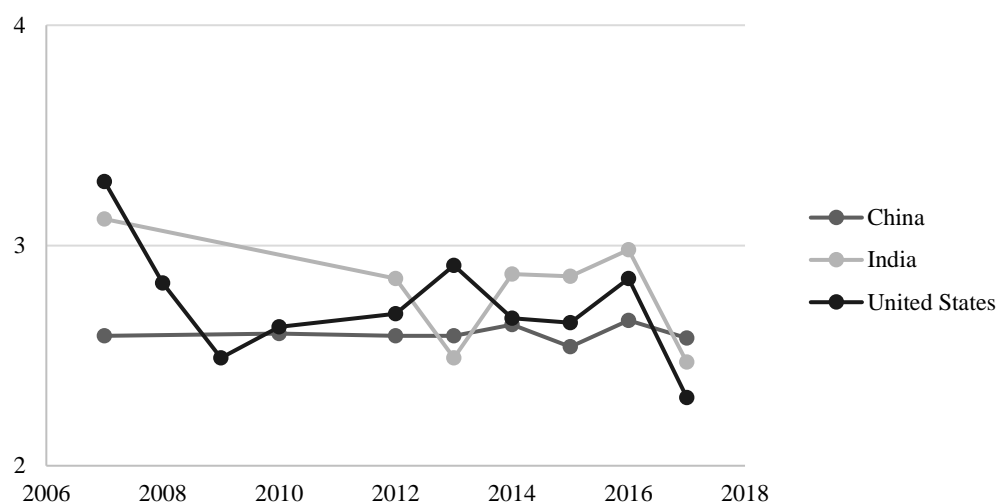
In the last ten years, we see that financing available to entrepreneurs has increased by 27 percent in China and has fallen in India (-14 percent) and the United States (-21 percent). Financing is one of the most important factors for entrepreneurial support. Financing for early stage startups typically comes in the form of debt or equity through bank loans, angel investors, and venture capital. These are largely opportunistic institutions which follow the markets. According to the change rates found, China is where capital is flowing. Over the last few decades, China has prioritized entrepreneurship and innovation as the foundation of their economic strategy and has seen an exponential increase in entrepreneurial activity because of it. In his work report speech at the 2016 National People's Congress, Premier Li of China mentioned the word "innovation" 59 times and "entrepreneurship" 22 times.¹¹ This emphasis on entrepreneurship has seen impressive returns as well. From 2000 to 2013, privately

¹¹ Tse, Edward. "The Rise of Entrepreneurship in China." Forbes. April 05, 2016.

owned business profits increased by 23 times.¹² And where opportunity for returns is found, money follows. Crunchbase News reported that “a few years ago, North American startups reliably received at least two-thirds of global early-stage investment. No more. For the past three quarters, North America’s share has dwindled to less than half.”¹³ China’s progression in the global market and their increasing retention rate of domestic entrepreneurs should be viewed as an example and an indicator for what the future can look like for the United States in regards to immigrant entrepreneurial retention from other competing markets.

Figure 7.

Change in internal market openness from 2007 to 2017



Internal market openness was indicated as another significant factor to immigrant choice to found their companies in the U.S. as opposed to their home country. As internal market openness increases in a home country, immigrant entrepreneurship in the U.S. decreases. The results for change over time in the selected countries shows falling rates

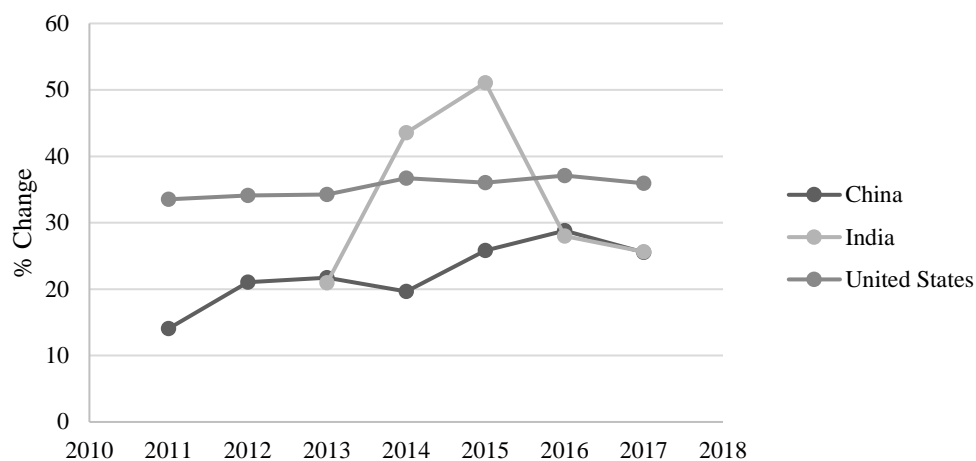
¹² Tse, Edward. "The Rise of Entrepreneurship in China." Forbes. April 05, 2016.

¹³ "US Early-Stage Investment Share Shrinks As China Surges." Crunchbase News.

of internal market openness in India (-21 percent) and the United States (-30 percent), and relative consistency in China (0 percent) from 2007 to 2017. While no country is showing significant growth over time in this indicator, it should be noted that by 2017, the United States is reporting the lowest numbers out of the three countries while it was significantly ahead in 2007.

Figure 8.

Change rate in innovation from 2011 to 2017

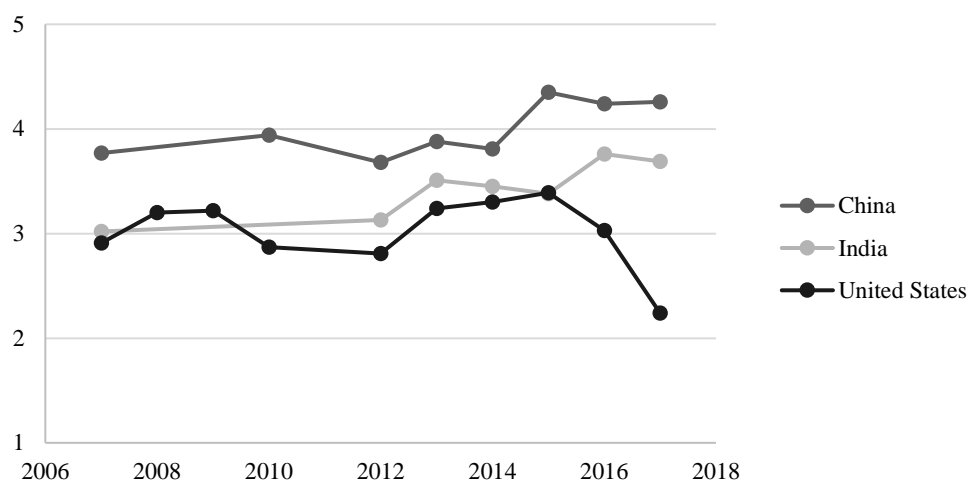


In the digital age that we live in today, innovation is the name of the game.

Disruptive innovation allows for startups to capture huge market shares by disrupting legacy markets and creates new markets all together. Results from the empirical analysis yielded innovation as the most significant contributor to early stage immigrant entrepreneurial activity. In the last four years, we have seen drastic rates of change in China (+81 percent) and India (+22 percent) with leveling out in the United States (+7 percent). Innovation is still highest in the U.S. overall, but as the country loses share of immigrant entrepreneurs, the rate of innovation will decrease. Innovation will drive home country economies if it is deployed domestically as opposed to abroad.

Figure 9.

Change rate in internal market dynamics from 2007 to 2017

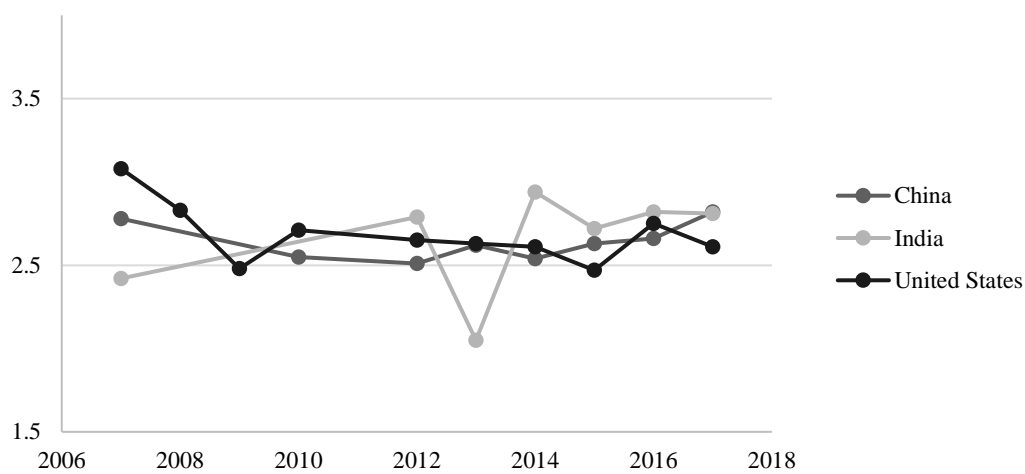


In the empirical analysis, home country internal market dynamics were seen to have an inverse relationship with immigrant entrepreneurial activity in the U.S. Internal market dynamics refer to the level of change in a market from year to year, but there is no distinction between market growth and retraction. This is important to indicate whether market dynamics are a positive for entrepreneurs in the form of growing markets, or a negative in the form of market volatility. To help clarify on this matter, we can look to GDP growth rates. Both China and India are emerging economies with very high growth rates of 6.7 percent and 7.1 percent respectively, and the United States has been plateauing at 1.6 percent.¹⁴ Due to high growth rates in India and China, we can infer that their market dynamics indicator is picking up on this rate of change. The U.S.'s economic stability is also a function of low growth rates. Economic growth is a positive for entrepreneurs, meaning these statistics are a positive sentiment for China and India.

¹⁴ "GDP Growth (annual %)." GDP Growth (annual %) | Data. World Bank.

Figure 10.

Change rate in governmental support and policies for entrepreneurs from 2007 to 2017



In the empirical analysis, we found that governmental support and policies which directly assist businesses in a home country are negatively correlated with immigrant startup founding the United States. The better a home country supports their entrepreneurs, the less likely these individuals are to seek out overseas markets. Over the last ten years, governmental support and policies have increased in China (+1 percent), and decreased in India (-16 percent) and the United States (-15 percent). Governmental support and policies are particularly relevant to the U.S.'s ability to retain growth from immigrant entrepreneurship for two reasons. The first being that the U.S. will likely not have the economic leverage to attract immigrants solely based on market opportunity, and the second being that governmental policies and support are a weak spot for the United States.

The U.S. fought hard during the Obama administration to promote entrepreneurship and innovation through initiatives such as the Regional Innovation Strategies program which provides grants to state and local governments, non-profits,

universities, and other organizations to help build capacity for entrepreneurs seeking to turn ideas into job creating companies. Obama even declared November National Entrepreneurship Month.¹⁵ During this time there were also efforts taken and policies created to attempt to attract and support high-skilled immigrant entrepreneurs. The United States does not have a startup visa for immigrant entrepreneurs like those which exist in Canada, France, Singapore, and the U.K. To mitigate this, Obama enacted the International Entrepreneur Rule. A summary of the rule states,

“The final rule adds new regulatory provisions guiding the use of parole on a case-by-case basis with respect to entrepreneurs of start-up entities who can demonstrate through evidence of substantial and demonstrated potential for rapid business growth and job creation that they would provide a significant public benefit to the United States.”¹⁶

The rule would have allowed immigrants who can prove the credibility and potential of their startup venture through “the receipt of significant capital investment from U.S. investors with established records of successful investments, or obtaining significant awards or grants from certain Federal, State or local government entities”¹⁷ a 30 month visa with the ability to extend it further thereafter to grow their company and benefit the U.S. economy. When the rule was passed in January of 2017, the future was looking bright for governmental support of immigrant entrepreneurs in the United States. But come the election of 2016, hope for the initiative and for U.S. relations with immigrants was halted.

¹⁵ "U.S. EDA: Promoting Entrepreneurship and Innovation Across Every Community in America." Department of Commerce. November 06, 2015.

¹⁶ "International Entrepreneur Rule." Federal Register. January 17, 2017.

¹⁷ "International Entrepreneur Rule." Federal Register. January 17, 2017.

The prospect of attracting more immigrant entrepreneurs was heavily impacted by the rise of Donald Trump. Donald Trump delayed the International Entrepreneur Rule and threatened to rescind it all together.¹⁸ The decline in government support and policies directly relating to immigrant entrepreneurs has been starkly political. One of the main pillars of Donald Trump's 2016 election campaign was anti-immigration. Though his campaign primarily revolved around restricting illegal, low-skilled immigration, the sentiment was felt by all immigrant communities.

Conclusion

The United States is no longer the largest economy in the world. We have seen disruption in global markets which have overturned the economic positions of players who have long been at the top. The rise of China, India, and other emerging economies is shifting concentrations of high-skilled labor, financing, innovation, entrepreneurship, and growth away from advanced economies such as the U.S. In our analysis of changes in entrepreneurial conditions over time, the United States reported higher levels of four of the five significant indicators in 2007, financing for entrepreneurs, government support and policies, market openness, and innovation. The only metric that the U.S. was not top in is market dynamics which, as discussed before, is likely picking up on India and China's higher GDP growth rates – a positive attribute for entrepreneurship. By 2017, the U.S. had fallen below China and India in all metrics except for innovation. However,

¹⁸ Woyke, Elizabeth. "By Backing Immigrant Entrepreneurs, These U.S.-based VCs Are Filling a Void Left by Trump." MIT Technology Review. September 06, 2017.

innovation is strongly connected to entrepreneurship, making it likely that we will see an eclipse of China and India past the U.S. in this metric soon as well.

The U.S. has long relied on its position as an economic superpower to attract immigrant entrepreneurs in search of the “American Dream” but this dream is outdated. Both China and India now offer favorable entrepreneurial conditions to the U.S. in the majority of metrics. The loss of immigrant entrepreneurs will be a double edged sword for the United States. The economy will suffer directly from the loss of economic growth derived from immigrant founded companies which will then be compounded by the transfer of that growth to the country’s largest competitors – China and India. Because the U.S. is no longer the superior economy, it is necessary to attract and support immigrant entrepreneurs through improved policies, governmental support, and a welcoming public sentiment.

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