Exploring the factors of startup success and growth

James Okrah
Alexander Nepp
Ebenezer Agbozo
Ural Federal University, GSEM, Yekaterinburg, Russia

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Abstract

Most developing economies relies heavily on startups, startups has been identified to be the measure of innovation and development and countries that has more startups have higher economic stability. The aim of this paper is to identify factors that influence the success of startup in this ever changing world. Factors such as turnover, internal Market openness, Market dynamic and Government policies turns to influence capital investors decision and affect the confidence of the entrepreneur.

Introduction

Entrepreneurship, innovation, and creativity have been the epitome of modern industrialization. World economies are experiencing a massive boost because people are fast adapting to the concept of entrepreneurship and innovation. This in turn puts less pressure on the government in the job creation sector of the economy. In 1949 Economist Joseph Schumpeter's theory of entrepreneurship focused on three main characteristics of the entrepreneur. These are Innovation, Foresight and Creativity

A better understanding of the factors that contribute to startup failure represents a critical aspect of entrepreneurship studies. the startup literature has spent disproportionately more attention on success stories and factors rather than on new business failures (Deakins, 1996). From the GEM (2017) report, sixty-two (62) economies around the world were surveyed, more than sixty-seven percent (67%) of the adult population believe that entrepreneurs are well-respected and enjoy high status within their societies. This percentage encourages young and upcomings desire in entrepreneurship, which is positive to the future of their economies.

Moderate average scores for media visibility. Around 60% of adults, in all three economic development groups, believe that entrepreneurs garner substantial media attention. On average, sixty-seven (67%) of the adult population in the efficiency-driven economies consider starting a business a good career choice, compared to around 60% in the factor - and innovation-driven economies. Africa is the region reporting the most positive attitudes towards entrepreneurship, with three quarters of working-age adults considering entrepreneurship a good career choice while 77% believe that entrepreneurs are admired in their societies. In contrast, Latin America and the Caribbean reports the lowest proportion of adults believing that entrepreneurs are highly regarded(63%) while Europe has the lowest belief in entrepreneurship as a good career (58%) and the lowest media publicity for this activity (55%).

Two factors of success of every startup is it consistency with innovation and continuous flow of funds. But there are a number of factors which affect these two factors, mostly financing due to the high level of risk involved in startups, looking at the statistics, it makes it much more difficult for any investor to trust in any startup. So the focus of this research is to find out factors that influences innovation and makes startup attractive for financing. Many great companies have exited the market because of lack of innovation and foresight of it leaders, there are a number of factors that influences the decision of corporate and startup leaders in their choice to be innovative or not. There has been a

lot of research which identified financing of startup as the main hindrance to innovation in startup. There is a strong relationship between financing and innovation.

Financial and innovation

Innovation is a strong pillar to the success of every startup known in the world, Business that are not able to invest in research and development dies in the striving market. the capital cycle has become the main feature of the innovative market, as indicated by (Gompers and Lerner 2004), (Kaplan and Schoar, 2005), (Gompers, Kovner, Lerner and Scharfstein 2008). (Rhodes-Kropf, M. 2015) indicated that the market plays a vital role in the financing and financing also has a strong linkage with innovation. Financing hinders innovation in small scale enterprises in Europe (Ghisetti Et al, 2017). (Nanda, R., Rhodes-Kropf, M. 2017) and (Ou, C. 2011) indicated that strong financial support for startups can trade off high-level risks. Many business failures are mostly attributed to lack of financing, internal market dynamics and lack of innovations. there is a concern over declining innovation in small and medium-sized enterprises, most particularly in the case of family businesses(Schäfer, D., Stephan, A., Mosquera, J.S. 2017). the research indicated the inefficient realization of innovative practice by families businesses due to funding in R&D. which means that if enough financing allocated to such business it will increase their survival and innovativeness. The gap between innovation and financing seems too difficult to close as noted by (Czarnitzki and Hottenrott, 2011; Mohnen et al. 2008; Canepa and Stoneman 2008; Freel 2007). Source of funding of innovative activity becomes the other of the day since there would not be innovation without research.

From the literature, we come up with these set of Hypothesis.

H1: Innovation is influenced to a certain level by Internal market Openness:

A theoretical model describing the dependence of innovation activity of enterprises on the degree of competition in the market can also be found in Aghion, Bloom, Blundell, Griffith and Howitt, 2002. (Berger, 2010) in his work he established an empirically positive relationship between competition in the market and innovation. Significant is also the effect of economies of scale and greater ability to raise funds for innovative research. openness bring competition and ensures the quality of product and services,

H1: Turnover influence the decision of a corporation to be innovative.

Innovation has a major effect on the turnover and general growth of companies (Capasso, M., Treibich, T., Verspagen, B. 2015). We want to find out if turnover also influences the decision of corporation to invest much in R&D.

Financing and startups

Financing of startups is the most changing thing for entrepreneurs. most investors are afraid of the high risk involved in investing in startups and companies that do not have sustainable returns. This is due to the credit crisis of 2008 and 2009 which has made it more difficult for entrepreneurs to secure financing as banks have become risk-averse in lending money to new startups (Nutting, 2009). with the reduced access to financing from banks, it has increased drastically the competition for venture capitalist funding. Recently governments in most developing countries are trying to finance startups in other to create employment for its citizenry, but that also has a high competition in securing funds.As indicated by (Dilger, R.J., Gonzales, O.R. 2011) the USA H.R. 5297, the Small Business Lending Fund Act of 2010, which would authorize the Secretary of the Treasury to create a $30 billion Small Business Lending Fund to encourage community banks to provide small business loans, a $2 billion State Small Business Credit Initiative to provide funding to participating states with small business capital access programs, and a $1 billion Small Business Early-Stage Investment Program to provide venture capital funding for startup companies. This is to ensure job creation and

employment in the country, but this type of financing can not be accessed by all, so the focus of this research is to find out the factors that influence startup financing.
Based on this, we formulated this hypothesis.

H3: Government policies places a high constraint on the financing decision of investors.

some policies of the government either make investing in startups attractive or not attractive. some policies scare investors off certain locations, due to unattractive of government policies.

Data structure

The data is a panel data consisting of developed countries and this selection was done assessing the GDP of the various countries. The 13 countries are include: Belgium, Canada, France, Germany, Italy, Japan, Netherlands, United kingdom, United States, Switzerland, Sweden, Russia, and China. The years selected for the analysis were selected because of the availability of data; data was selected from the year 2006-2015. Missing data are replaced with the mean.The GDP per capita is not presented in percentage but in raw figures to know the actual value in dollars.

The data below describes the factors considered in the data structure and what each factor represent. The GDP per capita is not presented in percentage but in raw figures to know the actual value in dollars.

Factors	Representation
Turnover	Measures the percentage of Return on Investment over the course of the year
Financing	The availability of financial resources as 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	The extent to which public policies support entrepreneurship - taxes or regulations are either size-neutral or encourage new and SMEs
Basic_education	The extent to which training in creating or managing SMEs is incorporated within the education and training system at primary and secondary levels
post_education	The extent to which training in creating or managing SMEs is incorporated within the education and training system in higher education such as vocational, college, business schools, etc.
r&d	The extent to which national research and development will lead to new commercial opportunities and is available to SMEs
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
GDP_per_capital	GDP per person in the economy
Employment	This discuss the percentage of people who are employed out of the total population from various countries.

Correlation Coefficient

	1	2	3	4	5	6	7	8	9	10	11	12
1	1.00											
2	0.12	1.00										
3	0.07	0.60	1.00									
4	0.01	0.50	0.63	1.00								
5	-0.03	0.43	0.25	0.59	1.00							
6	-0.02	0.56	0.50	0.55	0.48	1.00						
7	0.01	0.67	0.59	0.63	0.42	0.61	1.00					
8	0.10	-0.42	-0.21	-0.38	-0.38	-0.52	-0.42	1.00				
9	-0.03	0.60	0.43	0.53	0.71	0.43	0.60	-0.44	1.00			
10	-0.06	0.32	0.12	0.42	0.58	0.31	0.24	-0.12	0.39	1.00		
11	0.11	0.44	0.28	0.51	0.49	0.39	0.52	-0.29	0.43	0.58	1.00	
12	0.10	0.31	0.34	0.64	0.48	0.22	0.39	-0.14	0.40	0.58	0.57	1.00

Data analysis structure

First created a simple linear regression using the lm command of the R-Studio, Setting R&D as the dependent variable for the first model, I then checked for heteroskedasticity using the plot command and two other mathematical models, namely the Breusch Pagan Test and the NCV Test. All the test showed the presence of heteroskedasticity. The Box-Cox Transformation for correcting heteroskedasticity. We primarily focus on the dependent variable , after the transformation, it was tested again for heteroskedasticity.

After eliminating heteroskedastic from the data, the data was then analysed using the Fixed effect model with dummies of Years and country and the second model was with dummies,

Innovation

Log r.d	Oneway (individual) effect Random Effect Model With dummies of Year and Country	Oneway (individual) effect Random Effect Model Without Dummies
Turnover	-4.1264e-03.	-4.9285e-04

	2.4105e-03	1.2053e-03
Government Policies	.0245e-01*** 2.8435e-02	9.6744e-02** 2.8527e-02
xinternal_market_openness	1.5338e-01*** 3.5389e-02	1.5633e-01*** 3.4642e-02
Employment	3.3923e-03 6.3146e-03	2.4362e-03 4.9234e-03
Cultural and social Norms	-1.0568e-02 2.6148e-02	-1.9972e-02 2.5559e-02
xtaxes	4.0454e-02 3.0548e-02	5.6835e-02* 2.7605e-02
xGDP_per_capital	-3.1232e-06 5.9685e-06	-9.4631e-07 1.9265e-06
xinternal_market_dynamics	1.7991e-02 7.3356e-02	1.9939e-02 7.2424e-02
R^2	0.56729	0.48925
F statistics	6.32382 on 17 and 82 DF, p-value: 3.6795e-09	10.8962 on 8 and 91 DF, p-value: 1.184e-10

The first hypothesis Innovation is influenced to a certain level by Internal market Openness, this was seen to be positive with the Fixed effect model in table 2. this confirms another finding by (Berger, 2010), which stated that openness of the market create competition which intends makes leaders focus much on innovations. as the market is open, it attracts a lot of participants, which create the atmosphere for innovation and development. when there is no competition, leaders becomes reluctant with the creativity. Like the case of Nokia, because there was a high competition on the smartphone market, those companies that still lived in the past were left behind. Facebook is still Facebook after a decade because they understand the competition and always tries to kill the competition, Facebook buying WhatsApp because they realized people were switching their attention to WhatsApp at the time of purchase. Openness keeps good leaders on their toes, which wakes their innovative instincts. competition is good for every economy.
It was realized that turnover did not have any influence on the innovation of startups.

The analysis shown a strong impact of Governmental policies on innovation, this takes into account the sound economic policies, good trade practices, knowledge sharing and good environment for business

Financing

Log Financing	Oneway (individual) effect Random Effect Model With dummies of Year and Country	Oneway (individual) effect Random Effect Model Without Dummies
Turnover	5.7657e-03* 2.6098e-03	2.5570e-03. 1.3835e-03
Government Policies	1.0836e-01***	1.1611e-01***

	3.0786e-02	3.2745e-02
xinternal_market_openness	8.8976e-02* 3.8315e-02	1.2841e-01** 3.9764e-02
Employment	9.9723e-03 6.8367e-03	1.4194e-02 * 5.6513e-03
Cultural and social Norms	-1.4463e-03 2.8311e-02	1.0912e-02 2.9337e-02
xtaxes	5.0201e-02 3.3074e-02	1.1988e-02 3.1686e-02
xGDP_per_capital	-8.9482e-06 6.4620e-06	-9.9709e-07 2.2114e-06
xinternal_market_dynamics	-1.7017e-01* 7.9421e-02	-1.7854e-01* 8.3131e-02
R^2	0.57577	0.43717
F statistics	6.54653 on 17 and 82 DF, p-value: 1.8182e-09	8.83536 on 8 and 91 DF, p-value: 7.118e-09

Financing has been identified to have a strong correlation with innovation and success in most startups. it has also been identified to be the best mean to the trade of risk is by high initial investment in startups. But there are other unknown factors that influenced the behaviour of of investors.from the results indicated above, it shows that turnover, internal market openness and Government policies are characteristics that investors looks at before committing their monies to any venture. The internal dynamics of the market scares investors off due to the higher risk associated with the market dynamics.

Discussion

Based on our findings, this section discusses the factors which influence startup success. It is divided into two subsections with discussions on the research question.

Turnover

With respect to the financing factor, our analysis revealed that turnover, internal market openness and government policies highly influence the financing of startups. The results confirm the findings of Diamond (2012), Tanrısever et al. (2012) and Cusumano (2012). According to Tanrısever et al. (2012), profit maximization is key to investment decision which in turn influences the survival of startups. Facebook's success hinges upon pressure to innovate and aggressively compete against other technology companies which led to massive turnover that in turn attracted more investors (Diamond, 2012).

A positive turnover has a positive effect on a firm's performance builds its reputation in the marketplace and influences the desire for investors to invest in the said firm. Conversely, Cusumano (2012) reported that, within a week of the social networking giant Facebook's initial public offering (IPO), their stock market value fell by 25% which affected its first earnings, thereby disappointing investors. Thus, low capital turnover influences investor confidence.

Government Policies

The results confirm the findings of Minniti (2008), Cheah et al. (2016), Colwell & Narayanan (2010), Patanakul & Pinto (2014) and Dolfsma & Seo (2013) that government policies have an effect on financing of startups and innovation in startups which lead to growth and success. With respect to financing, policies implemented by governments are capable of fostering or retarding financing and investment opportunities in the business and entrepreneurship ecosystem of a country. Similar to spheres such as agriculture and education where government policies drastically influence the outcome over a period of time, one can infer that government policies are the fuel of an economy. As argued by Minniti (2008), the place of government as a body in regulating rules both formal and informal places constraints on entrepreneurial activities. The author concluded that government policies are powerful influencers of entrepreneurial activity by structurally setting the tone in the business world thereby encouraging certain activities which will favour one group of startups which fall within laid out criteria and disfavour another (leading to loss of investment opportunities).

A classic example of a society where startups flourish is Singapore and the success is attributed to government policies purposefully aimed at innovation-driven economic growth. Cheah et al. (2016) pointed out that the government of Singapore established venture-friendly legislation in areas such as taxation and bankruptcy laws (where the procedure duration drastically was cut down from 29 months to 10 days) to encourage the formation of innovative startups and investment. Thus, government policies are capable of changing the entrepreneurial culture of the country by fostering a climate in which entrepreneurship is viewed by citizens as a means to create value for the economy (Colwell & Narayanan, 2010) and drawing in investment opportunities.

Next, we discuss the influence of government policies and their impact on innovation in startups. Government policy framework, according to study is a progress or hindrance to innovation and the determines the course of the country's development; within which the startup and innovation landscape is constituent. In America, the government launched an initiative - Startup America - aimed at promoting entrepreneurship and accelerating the transfer of research breakthroughs from universities to businesses, improving the regulatory environment for starting and growing new businesses, and increasing connections between entrepreneurs and prolific business mentors (Patanakul & Pinto, 2014). A policy framework of this nature serves as a launching pad for startups and gives rise to sporadic quality innovation due to the fact that government policy has made provision for building an ecosystem that promotes startup growth. A strategic policy by the government of the Netherlands aims at strengthening its position as one of the world's top five most competitive economies by increasing spending on research and development to 2.5% of the gross domestic product (GDP) by 2020. Thus, creating a ripe environment for more startups to spring up with highly innovative products. Government policies such as lower corporation taxes, provision of funding opportunities, tax credits, intellectual property rights as well as antitrust law are examples of policies which exist to protect small players active in the startup market, hence creating a level playing field to encourage healthy competition (Dolfsma & Seo, 2013).

Internal Market Openness

Our analysis revealed that internal market openness is essential to startup financing and innovation, and back the findings of Li et al. (2004) and Zilgalvis (2014). The level of openness of a country's internal market is to external investors and trade opportunities is a gateway to drawing in investment opportunities which will contribute to the economy of the country as well as drive innovativeness and competitiveness. Foreign investments made possible by market capital openness as a result of trade openness boosts innovation by local startups which motivates startups to outperform rivals (Li et al., 2004).

Zilgalvis (2014) described the U.K. withdrawing from the European Union as a move from openness toward isolation which could damage the talent and investment base of the emerging startup ecosystem. The author made reference to the need for more accelerators and incubators in the

UK due to the huge operational costs associated with running a startup in London. Thus, the market structure here calls for more investment, yet the changing scene from an open to closed system is potentially threatening to startups gaining financial backing.

The open nature of markets in the United States, Netherlands and Switzerland make them powerhouses for startup innovation.

On the other hand, observing countries such India and China which were closed until the last decade and two decades respectively, levels of innovativeness has skyrocketed and the outcome of startups in these countries are evident all over the world.

Internal Market dynamics

Our analysis revealed a negative significance of market dynamics on financing of startups. A country or region's entrepreneurial landscape is dependent on the systems that form the economy and is filled with uncertainties with various risks associated. Giardino et al. (2014) pointed out that despite the uncertain nature of certain or all aspects of the market, a good entrepreneur is proactive, has foresight and is capable of anticipating unforeseen events. This means, new startups are at risk of failing which poses a threat to financial investment opportunities. Also, the unpredictable nature of the market puts investors in a position whereby financing startups is done in a cautious and rigorous manner so as to avoid risks, and it affects the chances of other equally innovative startups being financed. Hence, the market dynamics of a region highly influence the financing of startups and for that matter, startup growth.

Conclusion

Two factors were considered for the dependent variable Innovation (R&D) and Financing, and factors like Government policies, Internal market openness, internal market dynamic, are considered as independent variables with GDP per capita and employment as controlled variables.

The finding will help policymakers strengthen their policies in the area of trade and investment. Increasing government support for startup and making the trade environment more easy. Government has a major rule to play in ensuring growth in the success of startups.

Future work should focus on assessing closed markets at a regional level to establish the impact of financing, innovation (R&D), government policies, internal market openness, and internal market dynamics on the success of startups.

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