The worldwide role of Innovation in Startup Financing and Implications for Financial Problems

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SUBMITTED IN THE PARTIAL FULFILLMENT OF THE REQUIREMENT FOR

THE DEGREE OF MASTERS IN BUSINESS ADMINISTRATION

INTERNATIONAL PROGRAM, GRADUATE SCHOOL OF BUSINESS,

SIAM UNIVERSITY, BANGKOK, THAILAND

February 2019

Title of Research:	The worldwide role of Innovation in Startup Financing and Implications for Financial Problems
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Major:	Marketing Management
Degree:	Master in Business Administration (International Program)
Academic:	2019

This Thesis has been approved to be partial fulfillment of the requirement for the Degree of Master in Business Administration International Program, Graduate School Of Business, Siam University, Bangkok, Thailand

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Abstract

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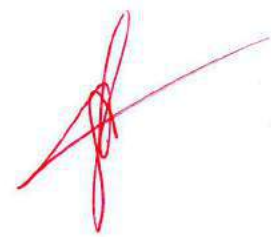
This paper investigates the relation of start up financing in 60 countries to innovation and business failings by using the Global Entrepreneurship Monitor (GEM) surveys conducted in 2015 and 2016. Said data was analyzed using the Spearman Rank-Order Correlation Coefficient.

It finds that in the current, globalized world a higher regional innovation level has a positive correlation to the overall median amount of money needed to start a business. This in turn has a strong influence on the sources of capital used by founders and to some degree determines the likelihood of failing because of financial problems. Key finding was the relation between the usage of formal capital for funding and the accompanying decrease of failing because of financial problems. The paper identified especially the needed business plans and therefore better planned ventures and the easier access to follow-up financing as the main factors which lead to the success of said businesses.

Keywords: Financing, Startup, Innovation
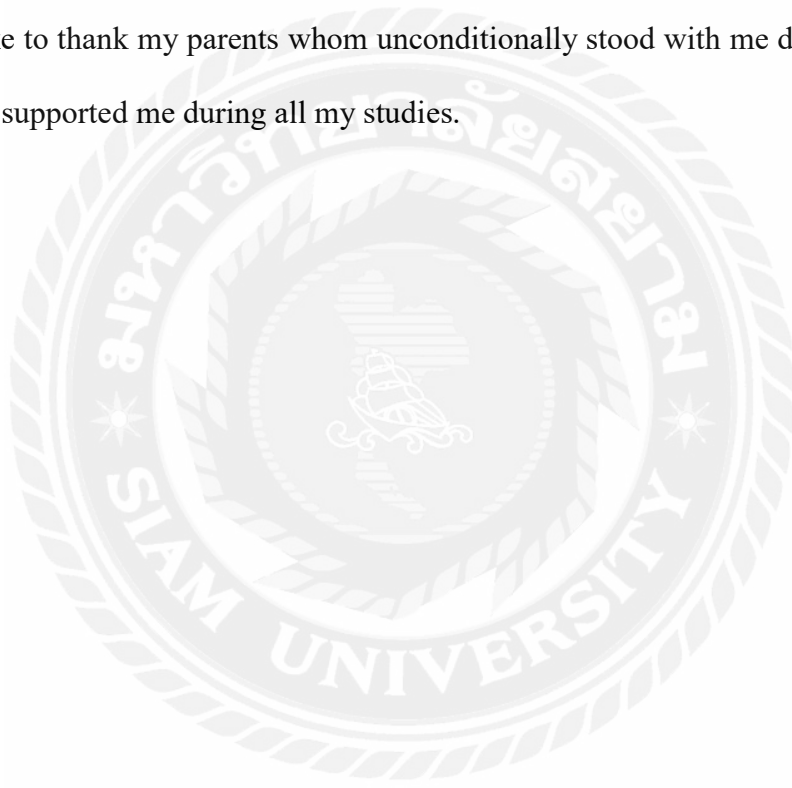
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Acknowledgement

I would like to express my gratitude to everyone who supported me throughout the course of this Independent Study. I am especially thankful for the gracious guidance, constructive criticism and advice during this work. I am grateful to them for sharing with me their wisdom and views on a number of issues related and unrelated to the project.

I express my warm thanks to Asst. Prof Dr. Om Huvanand and Prof. Dr. Vijit Supinit for their support and guidance.

I would also like to thank my parents whom unconditionally stood with me during all my life and generously supported me during all my studies.

Thank you,

Florian Hipp

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Chapter 1

1. Introduction

This chapter presents the background of the topic as well as the delimitation and explains the importance of the study. Furthermore it defines important terms, needed for comprehension.

1.1 Background relating to the topic and problem

The acquiring of sufficient funding for a startup has always been a widely recognized problem for new founders. It can even be seen as the single biggest hindrance for startup activity (Korosteleva and Mickiewicz, 2011). Compared to established companies, startups are faced with numerus disadvantages. Missing reputation, no credit history and the often small scale of the venture make it relatively difficult for nascent entrepreneurs to collect the needed funding (Huyghebaert and Van de Gucht, 2007).

While, in general, this situation is found worldwide, there may be differences, depending on the product the startup is offering. Especially the overall innovative level of products seems to be a defining factor for entrepreneurs when it comes to financial matters. When looking at different regions of the world we will find different levels of innovation in nascent entrepreneurs. This overall level seems to define three major factors in the world of startup financing. First, how much capital entrepreneurs need to start a business, second the kind of capital (formal or informal) available to them, and third how likely it is for young businesses to fail in those regions because of financial problems. With those factors being major points of consideration prior to start any business, it is imperative to closer examine them and their influence on startup activity.

This paper seeks to examine what influence the level of innovation may have towards the amount of capital needed, the kind of capital available, and the likelihood of failing. Additionally, it seeks to find the interconnection between those factors and give reasons, explanations, and solutions to said problem.

1.2 Delimitation

To get an in-depth view of the problem, it is vital to include regions from all around the world. To not overextend the scope of this work, this paper will rely on data collected by the Global Entrepreneurship Monitor (GEM) (http://www.gemconsortium.org/), which periodically collects pertinent data in over 60 countries worldwide. In each country, at least 2000 representative adults are being selected and questioned. In addition to that, the GEM also selects at least 36 experts in each of the said regions and includes them in their findings.

With the GEM being one of the most recognized and extensive research organizations, this paper will rely on their data which is openly accessible to anyone on their internet platform (http://www.gemconsortium.org/).

1.3 Importance of the Study

Living in a globalized world where business is conducted worldwide, especially when it comes to the internet, at first seems like people having similar opportunities to get successful, no matter where they are based. But especially when it comes to the innovation levels of different regions there seem to be significant for entrepreneurs for acquiring capital and their chances of being successful.

1.4 Definition of terms
1.4.1 Total Early-stage Entrepreneurial Activity (TEA)

The Total Early-stage Entrepreneurial Activity (TEA) is an indicator, invented and defined by the Global Entrepreneurial Monitor as an "index, representing the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business" (http://www.gemconsortium.org/wiki/1154).

1.4.2 Innovation Level

Innovation is the newness to a market or within an industry. So the innovation level describes to what extend entrepreneurs invent and later introduce products or services to customers which

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are new to some or all of them while at the same time are offered by few or even no competitors (https://gemconsortium.org/report/gem-2015-2016-global-report).

1.4.3 Informal Finance

The term "informal finance" mainly describes sources of capital which aren't bound to legal infrastructures and therefore are not protected by them. While there are numerous different sources imaginable, this paper focuses on the three major and most used ones: Own Capital, Family Capital, and Friends Capital (Ledgerwood, 1999).

1.4.4 Formal Finance

Following this logic, "formal finance" or often called "formal institutions" are bound to general laws and regulations as well as field specific laws, regulations, and supervision (e.g. banking laws). For this paper it includes banks, venture capital, and government capital (Ledgerwood, 1999). Additionally included is the so called crowdfunding. While this new form of finance might more likely be considered semiformal, for the sake of ease it will be considered formal in this paper since it is an organization (the crowdfunding platform itself) interacting with nascent entrepreneurs and, while on a different level than banks, rules and regulations apply.

Chapter 2

2. Literature Review

This Chapter presents the literature review, especially the sources of the explained variables.

2.1 TEA Innovation Level

The TEA Innovation Level is the accumulation of self-perceived innovation of the nascent entrepreneurs in the different regions. Generally speaking, innovation increases with the development of regions, meaning, that the higher regions are developed, the more likely it is that young businesses are offering products or services that are new to the customers. Reasons are especially the higher participation in information and communication technology in combination with higher levels of education and the access to advanced technologies (https://gemconsortium.org/report/gem-2015-2016-global-report).

2.2 Amount of Money needed to start a Business

For this paper, the amount of money needed to start a business is not defined as the amount which is legally required in each country, say for authorized capital, neither does it only mean the minimum legal costs (i.e. for a notary). It is rather the self-perceived amount which nascent entrepreneurs consider to need as a whole to start a business. This can include kick-off expenses like cost for goods, rent or supplies.

2.3 Likelihood of failing because of Financial Problems

For this paper, as financial problems are considered all problems concerning payment of bills, loans, wages or a harmful increase in debt, while excluding bankruptcy. Again, all from the eye of the young entrepreneurs and what they themselves perceive as financial problems or burdens serious enough to exit their businesses.

2.4 Likelihood of using informal Financing

2.4.1 Own Capital

As the name already depicts, "own capital" describes the financing through capital the founder or founders have acquired ahead of the founding (Hofstrand, 2013). While this may just sound like capital in the personal savings accounts of the involved individuals, it actually describes a variety of options. Although this paper cannot go into detail for each option at this point, it would like to give an overview of possible sources, which are described by the broader terms of "own capital" or "self-funding" (Hofstrand, 2013; https://www.entrepreneur.com/article/217376).

The first, obvious, option of course has to the personal savings of the founders. Quickly accessible money, saved up in bank accounts. This is, without a doubt, the quickest and easiest way to obtain required funds, but most often does not enable the founders to acquire the full amount of required capital. Regularly, the funds will have to come from more than just this one source (https://www.entrepreneur.com/article/217376). Other assets can include real estate equity, retirement funds, life insurance policies, home equity loans, investments like stocks or even vehicles and collections. The last and most expensive possibility of obtaining capital for the venture is the personal credit line, hence money coming from credit cards (Hofstrand, 2013).

2.4.2 Family Capital

Capital obtained from family members is a widely used form of financing for young ventures. Considered private equity, it usually only accounts for rather small sums and is often given with only little control or the validation of business plans (Tariq, 2013). A study by Campbell and De Nardi (2007) found, that in the United States, family financing is, combined with financing from friends the second-largest source. Next to the comparably easy availability, it often is used as a substituted for formal financing, which may not always be accessible (Allen, Qian and Qian, 2005). Next to being used as a substitute, for some it may also be the first choice, since it generally is cheaper than formal sources (Guirkinger, 2008). Batra and Straub found, that especially entrepreneurs in developing economies rely on this kind of informal finance, which also implies the smaller size of the ventures (Batra, 2003). Along with that,

empirical data by Ayyagari, Demirguc-Kunt and Maksimovic (2008) as well as by Du and Girma (2009), and Estrin, Korosteleva and Mickiewicz (2009) depicts, that while being used as a substitute, it does not entirely live up to it. Family capital as a form of financing often fails to scale up which leads to the unlikeliness of such businesses reaching a larger scale (Ayyagari, Demirguc-Kunt and Maksimovic, 2008; Du and Girma, 2009; Estrin, Korosteleva and Mickiewicz, 2009).

2.4.3   Friends Capital

While being examined separately in this paper, there is virtually no difference between family capital and friend's capital, thus meaning, that all for family described points apply as well for friends.

2.5 Likelihood of using formal financing
2.5.1   Banks

Credit, as the major source of debt financing describes the borrowing of funds with an arrangement of repaying the borrowed amount at a mutually agreed upon point of time. Additionally to the said amount comes interest, which functions as the reward for the creditors for providing the finance.

Most popular sources for credit generally banks and other commercial lenders. Before releasing any funds, most of them require reliable business plans, positive track records and of course sufficient collateral. And this is what often troubles the relationship of startups and those lenders. For newly founded ventures it can be considered near to impossible to provide those requirements (especially the collateral) (Hofstrand, 2013).

2.5.2   Private/Venture

Venture capital describes the financing provided by either companies or individuals in exchange for ownership share of the business. Generally speaking, venture capitalist seek for companies that have already surpassed the point of initial financing and with a competitive advantage, strong value proposition (in form of a patent, for instance) or with an extraordinary

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and protectable idea. But still, exceptions are often made for experienced managements with a proven track record (Hofstrand, 2013).

2.5.3 Government

Government support is usually understood as "seed" capital which is granted in form of a grant or loan in order to either spur entrepreneurship as a whole or in particular, promising sector. Most government have an interest in promoting new, and therefore rather risky sectors like medicine, information technology or energy production. Businesses in those fields are desired by economies, but at the same time need high funding and are relatively risky which often leads to constraints from private investors (Bussgang, 2014). To ensure and secure the growth of new businesses in those fields, governments are therefore often forced to step in and take over the otherwise privately organized funding. This now increasingly happens with the help of private venture capitalists to share the risks (Brander, Du and Hellmann, 2015).

2.5.4 Crowdfunding

There still is no official definition of the term "crowdfunding", but generally speaking it can be described has as a web-based form of funding for a venture, with many single contributors providing small amounts of the overall funding. While it may not involve equity or debt in its classical definition, but rather relies on donations or rewards, it is still seen by many as a form of investment.

Chapter 3

3. Research Framework

This Chapter presents the conceptual model, including the hypothesis statements and the Concepts and variables operationalization.

3.1 Conceptual model
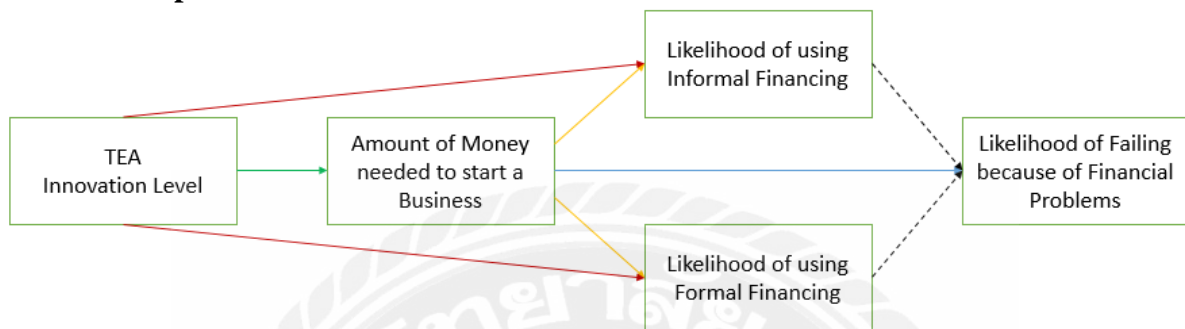
Figure 1 Conceptual Model

3.2 Hypothesis statements

Hypothesis 1:

The TEA Innovation Level is positively correlated to the amount of money needed to start a business.

X: TEA Innovation Level

Y: Amount of money needed to start a business

Spearman Rank-Order Correlation Coefficient

Hypothesis 2a:

The TEA Innovation Level is positively correlated to the likelihood of using informal financing (Own, Family, Friends).

X: TEA Innovation Level

Y: Likelihood of using informal financing

Spearman Rank-Order Correlation Coefficient

Hypothesis 2b:

The TEA Innovation Level is positively correlated to the likelihood of using formal financing (Banks, Venture/Private, Government, Crowdfunding).

X: TEA Innovation Level

Y: Likelihood of using formal financing

Spearman Rank-Order Correlation Coefficient

Hypothesis 3a:

The amount of money needed is positively correlated to the likelihood of using informal financing (Own, Family, Friends).

X: Amount of money needed

Y: Likelihood of using informal financing

Spearman Rank-Order Correlation Coefficient

Hypothesis 3b:

The amount of money needed is positively correlated to the likelihood of using formal financing (Banks, Venture/Private, Government, Crowdfunding).

X: Amount of money needed

Y: Likelihood of using formal financing

Spearman Rank-Order Correlation Coefficient

Hypothesis 4:

The amount of money needed is positively correlated to the likelihood of failing because of financial problems.

X: Amount of money needed

Y: Likelihood of failing because of financial problems

Spearman Rank-Order Correlation Coefficient

All four Hypothesis are being examined by using the Spearman Rank-Order Correlation Coefficient.

$$r_s = 1 - \frac{6 \sum d^2}{n(n^2 - 1)}$$

3.3 Concepts and variables operationalization

Labeling	Definition	Operational Components	Measurements
TEA Innovation Level	Overall economy level of products new to a market	- Average Innovation Level	Ordinal
Amount of Money needed	Self-perceived total amount	- Average Amount	Scale
Likelihood of using informal financing	Usage of capital for startup financing considered "informal"	- Own - Family - Friends	Scale Scale Scale
Likelihood of using formal financing	Usage of capital for startup financing considered "formal"	- Banks - Private/Venture - Government - Crowdfunding	Scale Scale Scale Scale
Likelihood of failing because of financial problems	Problems concerning payment of bills, loans, wages or a harmful increase in debt; excluding bankruptcy	- Financial Problems	Ordinal

Table 1 Concepts and variables operationalization

Chapter 4

4. Research Methodology

This Chapter presents the used technique and types. Additionally it explains the used sampling procedure.

4.1 Technique

The data used for this research paper comes from the Global Entrepreneurship Monitor (GEM) and consists of findings from over 60 countries worldwide. GEM collected its data using two different methods. First, an Adult Population Survey (APS) which was conducted separately in each participating country by selected academic teams. For the survey, they selected at least 2000 representative adults between the ages of 18 and 64, which then were provided with a standardized questionnaire developed by the so called GEM Global Data Team. Those questionnaires were translated into local languages and back-translated for a validity check. The raw data was then analyzed by experts for quality assurance (Daniel, Herington and Kew, 2016).

Second method was a National Expert Survey (NES), for which national and regional key informants were selected on the basis of their reputation and experience. At least 36 experts of each GEM economy were then either personally interviewed or asked to fill out a self-administered questionnaire. The collected data was then centrally harmonized (including an internal quality control process and the calculation of site variables which summarized each block of questions). Each expert in each country was given an individual value to ensure international comparisons were possible. All this happened on the basis of a five-point Likert scale in which 1 meant the statement is completely false and 5 meant the statement is completely true according to the expert (http://www.gemconsortium.org/wiki/1142).

4.2 Type

TEA Innovation Level: Causal

Amount of money needed: Causal

Informal Financing: Causal

Formal Financing: Causal

Financial Problems: Causal

Purpose: Describe

Interference: none

Study Setting: non-contrived

Unit of analysis: Individual

Timing: Cross-sectional

4.3 Sampling Procedure

Target Population: 60 economies; at least 2000 representative adults each + at least 36 experts each

Sampling Unit: Economies as a whole

Sampling Frame: Economies

Sampling Design: non-probability sampling

Size of Sample: 60

Chapter 5

5. Data Analysis

This Chapter presents all the used data in a descriptive as well as graphical form.

5.1 Descriptive Statistics

5.1.1 TEA Innovation Level

Economy	Innovation Rank	Innovation Value
Botswana	39	20,3
Burkina Faso	57	11,6
Cameroon	52	14,8
Egypt	36	22,3
Marocco	55	12,6
Senegal	60	8,2
South Africa	21	30,1
Tunisia	15	32,2
Australia	17	31,7
China	31	25,8
India	2	51,1
Indonesia	46	17,3
Iran	56	12,1
Israel	19	30,8
Kazakhstan	44	18,4
Korea	18	31,3
Lebanon	8	38,4
Malaysia	58	10,4
Philippines	16	31,8
Taiwan	49	16,7
Thailand	42	19,0
Vietnam	50	16,5
Argentina	37	22,2
Barbados	54	13,7
Brazil	40	19,7
Chile	1	54,4
Colombia	23	29,7
Ecuador	26	27,8
Guatemala	9	37,1
Mexico	45	18,3
Panama	24	28,1
Peru	51	15,9
Puerto Rico	32	24,3
Uruguay	28	27,0
Belgium	5	39,7
Bulgaria	59	8,6
Croatia	48	16,9
Estonia	6	39,5
Finland	40	19,7

Germany	13	34,2
Greece	33	24,0
Hungary	43	18,6
Ireland	4	44,8
Italy	25	28,0
Latvia	30	26,3
Luxembourg	3	48,5
Macedonia	47	17,0
Netherlands	29	26,4
Norway	53	14,0
Poland	35	22,4
Portugal	27	27,2
Romania	22	30,0
Slovakia	38	20,7
Slovenia	20	30,7
Spain	34	23,9
Sweden	14	32,7
Switzerland	7	38,5
United Kingdom	11	36,0
Canada	10	36,1
USA	11	36,0

Table 2 Statistics - TEA Innovation Level

5.1.2 Amount of Money Needed

Statistics

N	Valid	60
	Missing	0
Mean		12816,37
Median		10874,00
Mode		11102
Std. Deviation		15535,886
Skewness		2,695
Std. Error of Skewness		,309
Minimum		221
Maximum		88500

Table 3 Statistics - Amount of Money Needed

5.1.3 Informal Finance

Statistics

		Own	Family	Friends
N	Valid	60	60	60
	Missing	0	0	0
Mean		94,733	36,072	11,803
Median		96,000	31,900	8,750
Mode		94,0*	21,1*	3,6*
Std. Deviation		4,6791	17,1565	9,4513
Skewness		-1,521	,906	2,099
Std. Error of Skewness		,309	,309	,309
Minimum		79,0	4,6	1,5
Maximum		100,0	81,5	51,6

 * Multiple modes. Smallest value is shown.

Table 4 Statistics - Informal Finance

5.1.4 Formal Finance

Statistics

		Banks	PrivateVenture	Government	Crowdfunding
N	Valid	60	60	60	60
	Missing	0	0	0	0
Mean		27,170	11,195	17,493	4,315
Median		26,450	11,700	15,900	2,600
Mode		30,3	4,9*	,8*	,0
Std. Deviation		11,1077	6,3507	11,6289	4,9819
Skewness		-,019	,203	,540	1,179
Std. Error of Skewness		,309	,309	,309	,311
Minimum		,0	,0	,0	,0
Maximum		49,4	25,1	44,1	18,7

* Multiple modes. Smallest value is shown.

Table 5 Statistics – Formal Finance

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5.1.5 Financial Problems

Economy	Finance Problems Rank	Finance Problems Value
Botswana	12	20,2
Burkina Faso	43	6,8
Cameroon	24	14,6
Egypt	8	24,0
Marocco	6	26,5
Senegal	19	15,5
South Africa	4	27,6
Tunisia	7	25,6
Australia	54	4,0
China	9	23,0
India	27	13,1
Indonesia	14	19,1
Iran	19	15,5
Israel	54	4,0
Kazakhstan	30	12,5
Korea	37	10,3
Lebanon	52	4,3
Malaysia	1	40,7
Philippines	2	35,6
Taiwan	44	6,3
Thailand	32	11,5
Vietnam	3	29,2
Argentina	48	4,5
Barbados	10	22,4
Brazil	16	16,7
Chile	40	9,9
Colombia	25	14,4
Ecuador	13	19,5
Guatemala	18	16,3
Mexico	21	15,0
Panama	48	4,5
Peru	38	10,1
Puerto Rico	28	12,9
Uruguay	40	9,9
Belgium	59	1,9
Bulgaria	23	14,9
Croatia	11	21,1
Estonia	46	5,1
Finland	60	0,0
Germany	26	14,0
Greece	51	4,4
Hungary	16	16,7
Ireland	33	11,4
Italy	15	18,5
Latvia	42	7,5

Luxembourg	34	10,8
Macedonia	4	27,6
Netherlands	45	5,3
Norway	28	12,9
Poland	58	2,1
Portugal	30	12,5
Romania	34	10,8
Slovakia	39	10,0
Slovenia	21	15,0
Spain	36	10,4
Sweden	57	2,4
Switzerland	56	3,9
United Kingdom	47	4,6
Canada	53	4,2
USA	48	4,5

Table 6 Statistics - Financial Problems
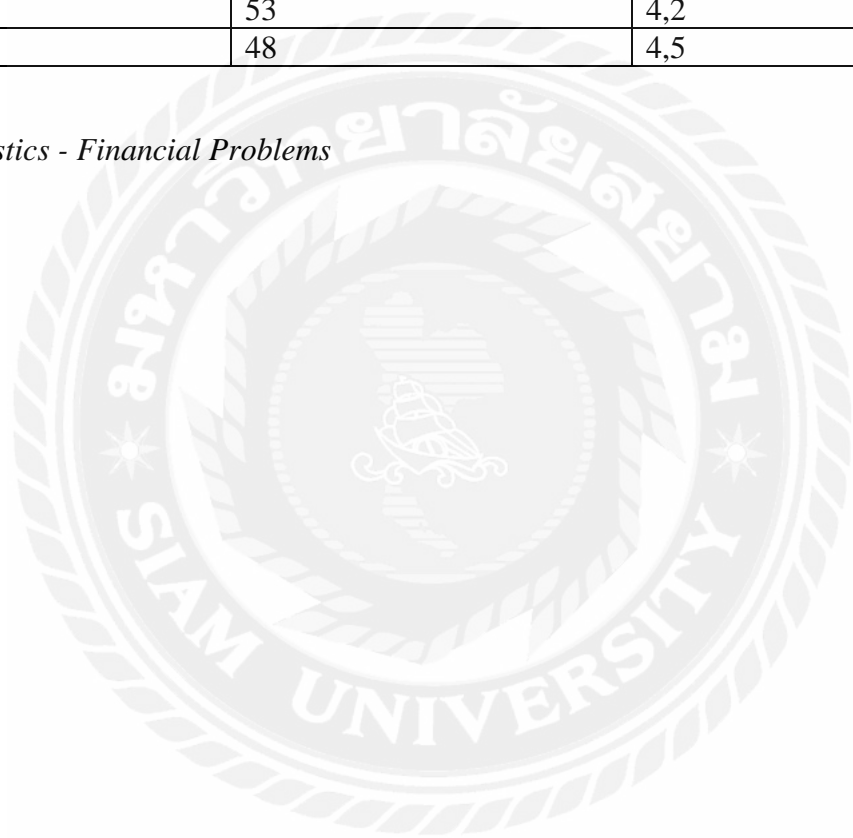
5.2 Charts

5.2.1   Innovation Value

Figure 2 Charts - Innovation Level

■ Innovation Value
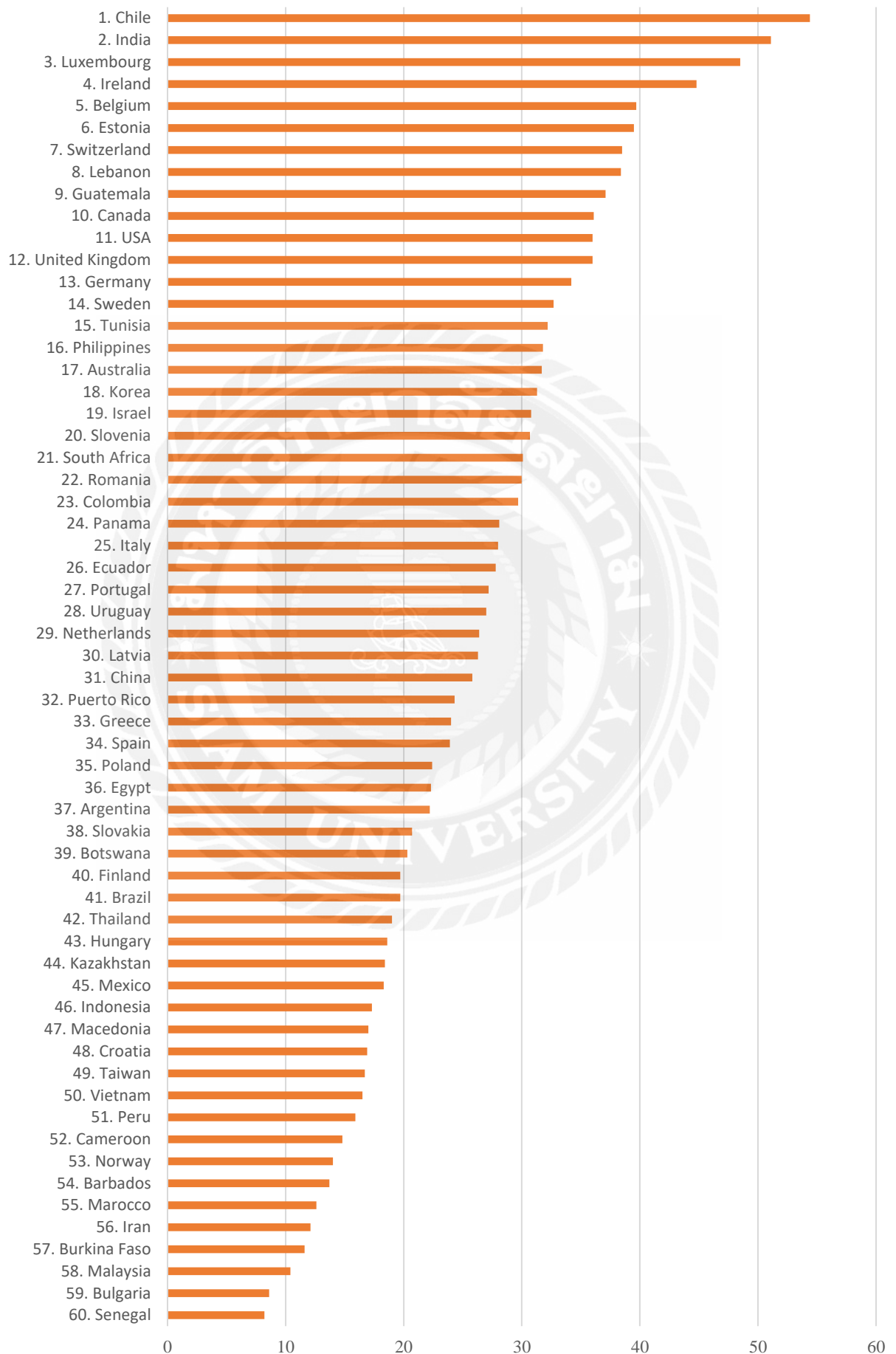
5.2.2 Amount of Money Needed

Figure 3 Charts – Amount of Money Needed 1/2

Figure 4 Amount of Money Needed 2/2

5.2.3 Informal Finance

Figure 5 Charts – Informal Finance 1/2
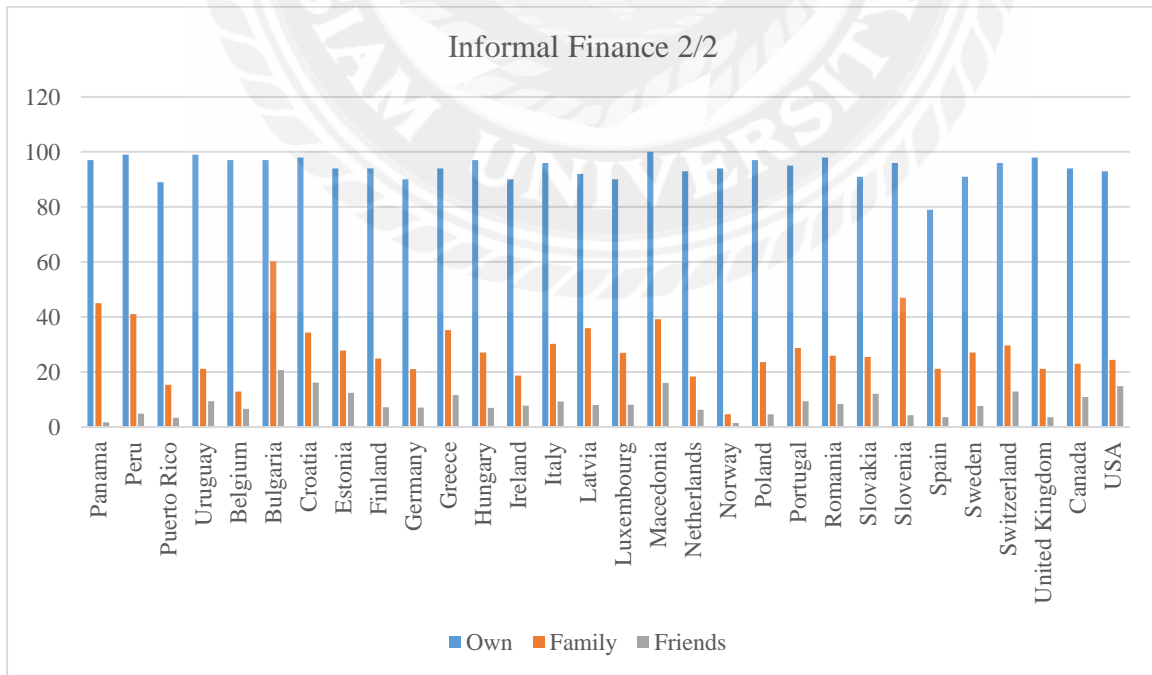
Figure 6 Charts – Informal Finance 2/2

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5.2.4 Formal Finance
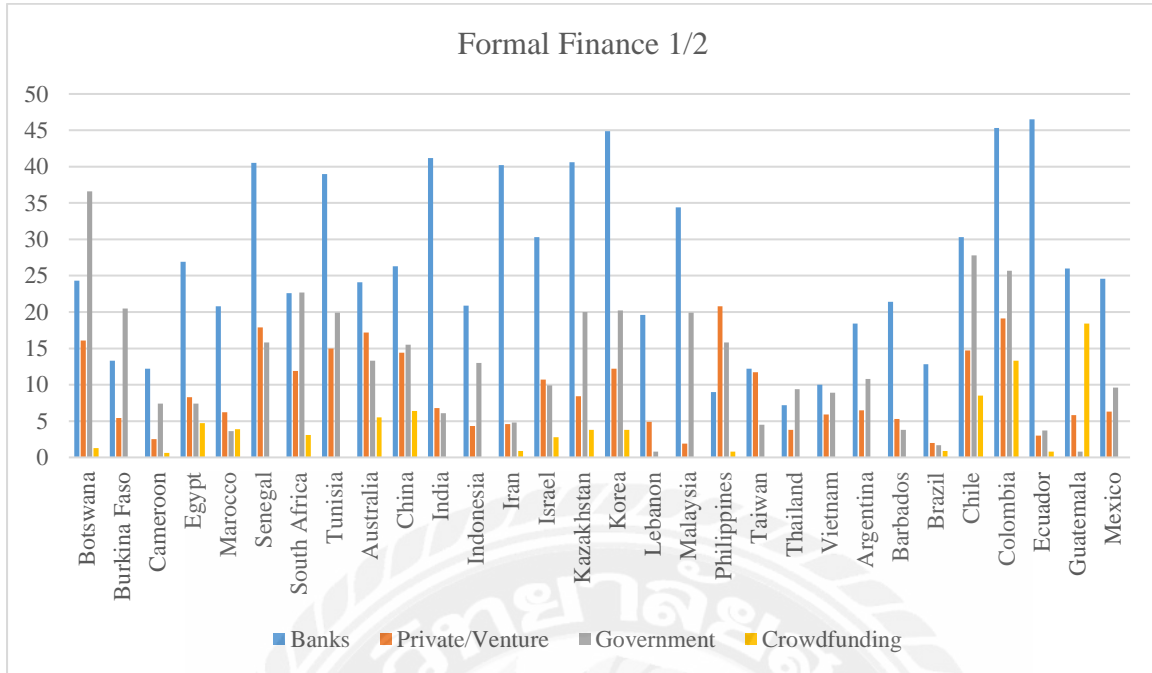
Figure 7 Charts – Formal Finance 1/2

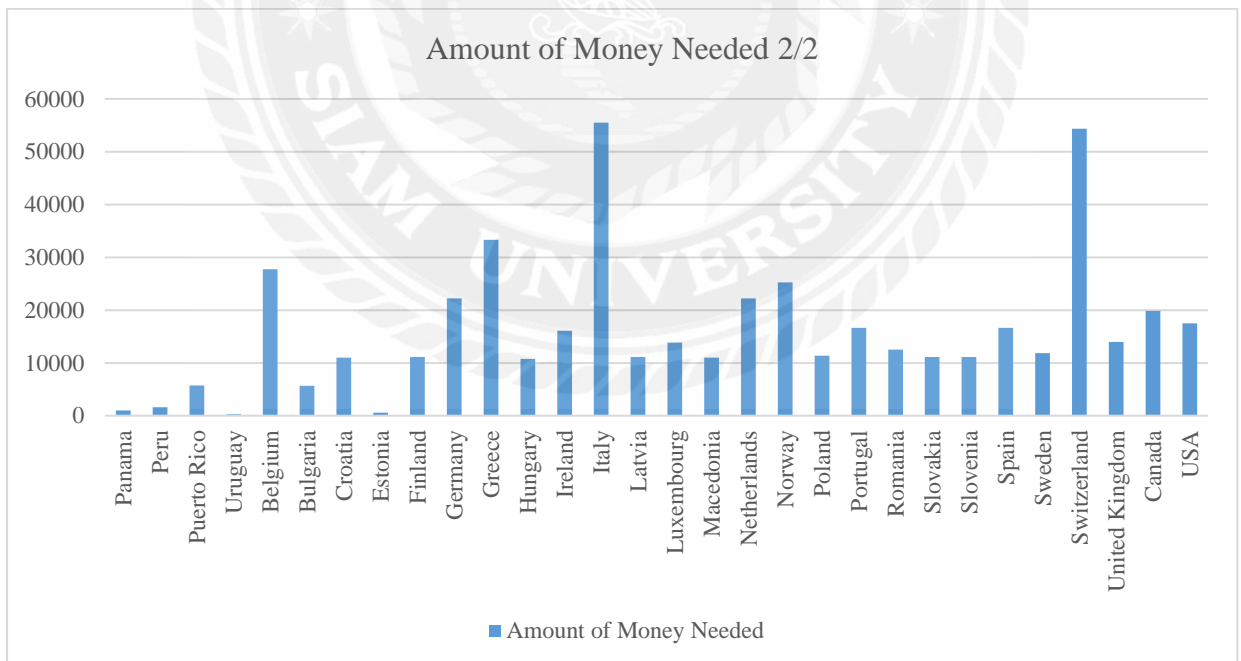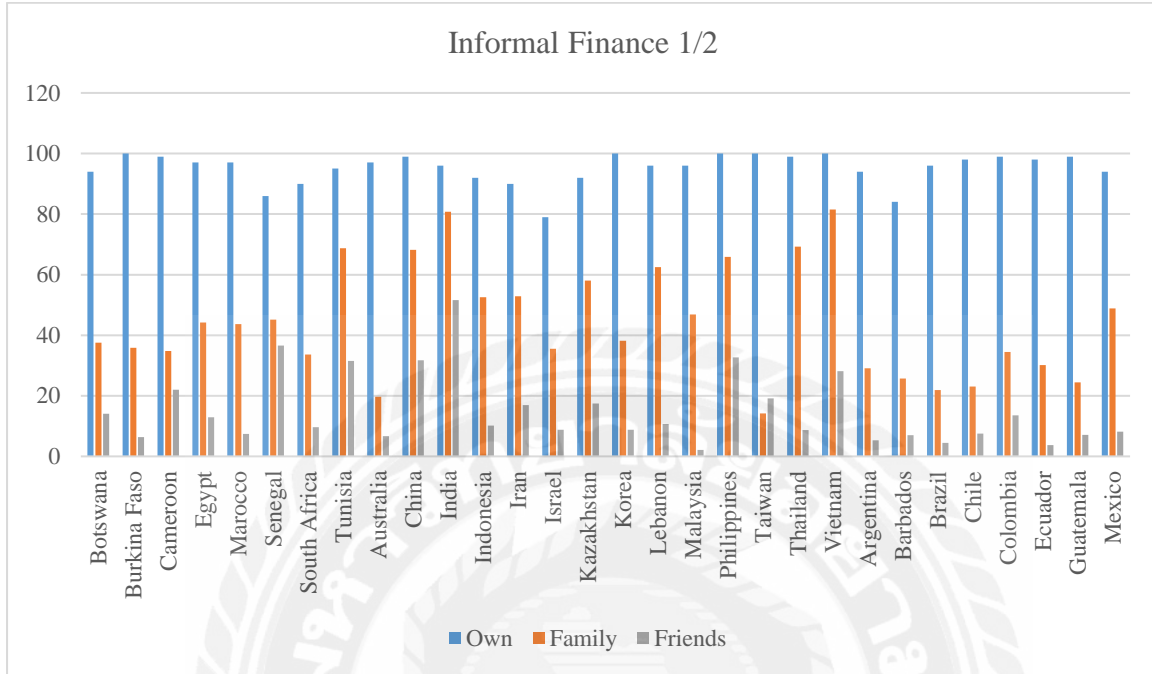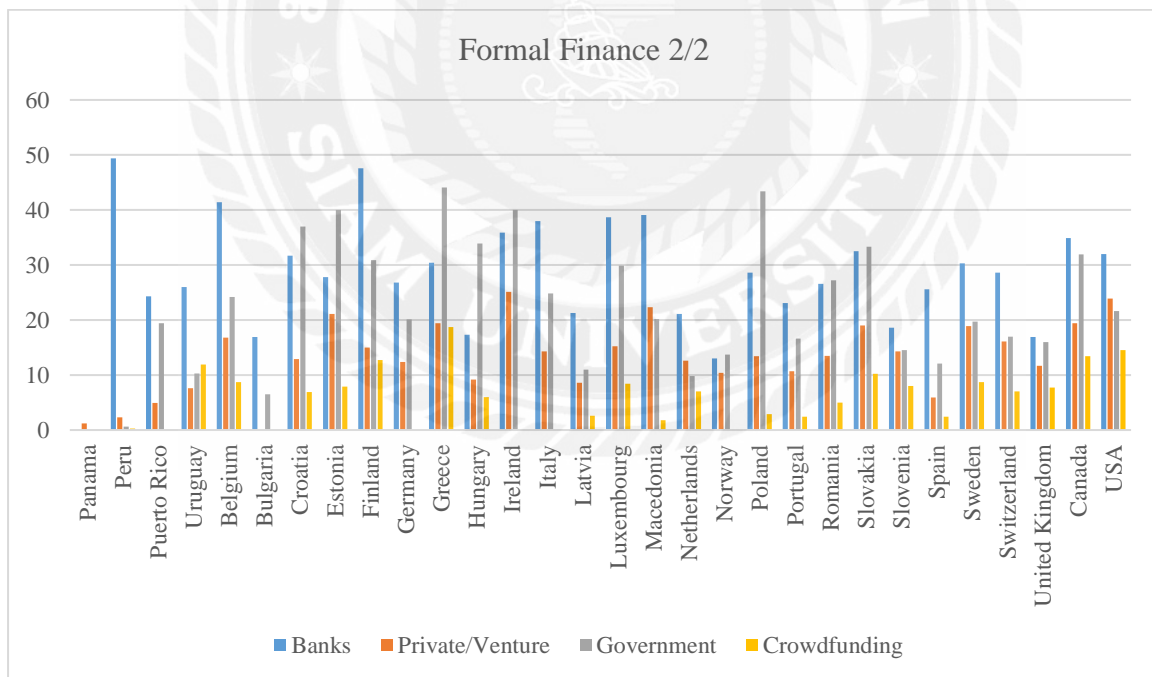*Figure 8 Charts – Formal Finance 2/2*

5.2.5 Financial Problems
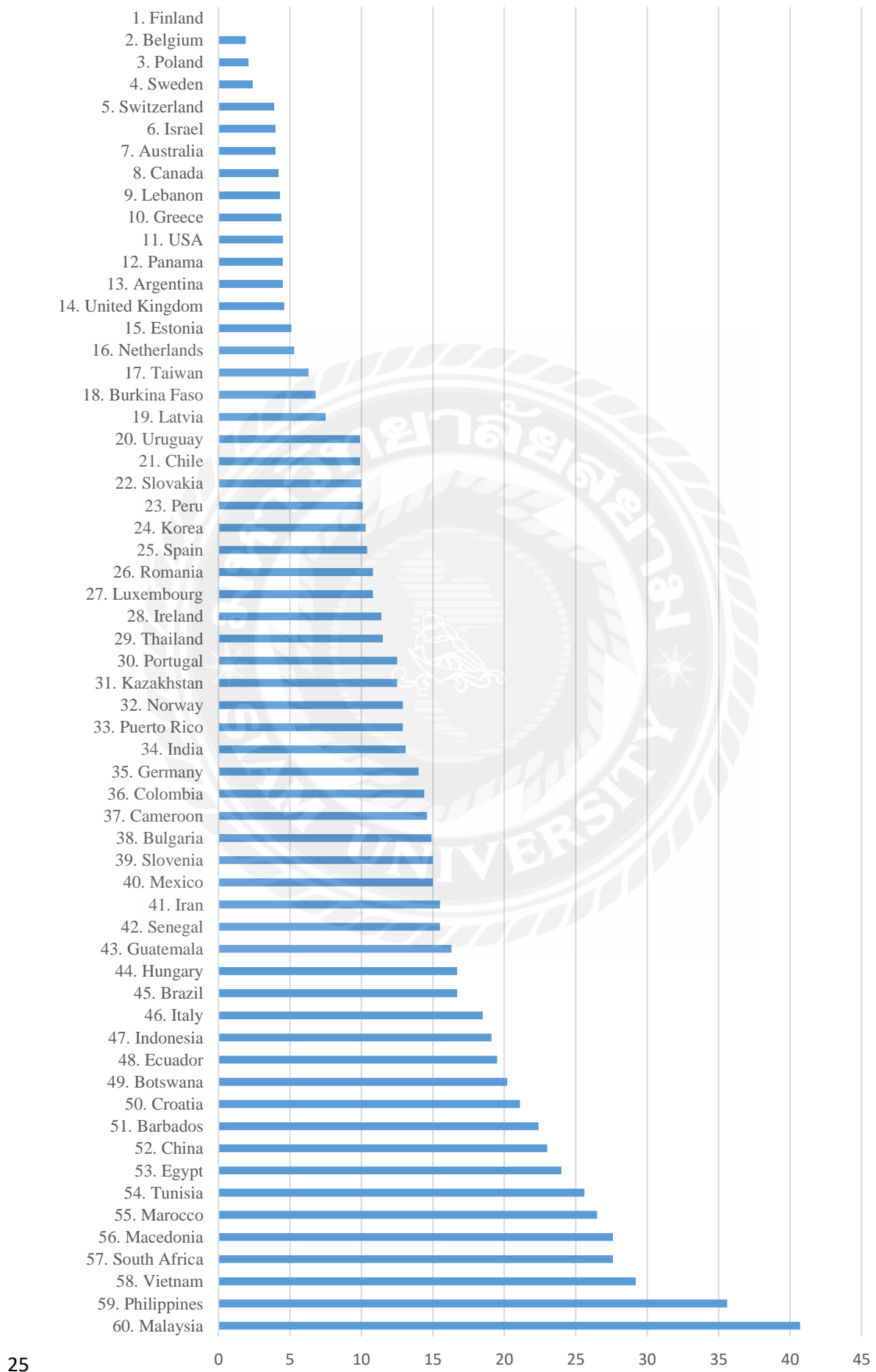
Figure 9 Charts – Financial Problems   ■ Finance Problems Value

5.3 Test the Hypothesis

Hypothesis 1:

The TEA Innovation Level is positively correlated to the amount of money needed to start a business.

Correlations

			InnovationValue	MoneyNeeded
Spearman's rho	**InnovationValue**	Correlation Coefficient	1,000	,315*
		Sig. (2-tailed)	.	,014
		N	60	60
	MoneyNeeded	Correlation Coefficient	,315*	1,000
		Sig. (2-tailed)	,014	.
		N	60	60

* Correlation significant at 0.05 level (2-tailed).

Table 7 Correlation Hypothesis 1

With a Sig. (2-tailed) of 0.014 our correlation is significant at the 0.05 level. The correlation coefficient being 0.315 shows a positive correlation. Hypothesis 1 can therefore be accepted. That means that the higher the Innovation Level of a country, the more money on average is needed to start a business.

Hypothesis 2a:

The TEA Innovation Level is positively correlated to the likelihood of using informal financing (Own, Family, Friends).

Correlations

			InnovationValue	Own	Family	Friends
Spearman's rho	InnovationVal ue	Correlation Coefficient	1,000	-,078	-,274[*]	-,032
		Sig. (2-tailed)	.	,553	,034	,808
		N	60	60	60	60
	Own	Correlation Coefficient	-,078	1,000	,201	,121
		Sig. (2-tailed)	,553	.	,124	,359
		N	60	60	60	60
	Family	Correlation Coefficient	-,274[*]	,201	1,000	,503[**]
		Sig. (2-tailed)	,034	,124	.	,000
		N	60	60	60	60
	Friends	Correlation Coefficient	-,032	,121	,503[**]	1,000
		Sig. (2-tailed)	,808	,359	,000	.
		N	60	60	60	60

* Correlation significant at 0.05 level (2-tailed).

** Correlation significant at 0.01 level (2-tailed).

Table 8 Correlation Hypothesis 2a

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When it comes to the usage of informal finance, only the relation between innovation and family capital is significant (Sig. (2-tailed) of 0.034), while there is no significance between innovation and own or friends capital. Furthermore, the correlation between innovation and family is negative, which means, it is more likely for entrepreneurs in economies with low levels of innovation to use family money to fund their businesses. The Hypothesis has to be partially rejected.

Hypothesis 2b:

The TEA Innovation Level is positively correlated to the likelihood of using formal financing (Banks, Venture/Private, Government, Crowdfunding).

Correlations

			InnovationValue	Banks	Private Venture	Government	Crowdfunding
Spearman's rho	**InnovationValue**	Correlation Coefficient	1,000	,236	,482**	,264*	,427**
		Sig. (2-tailed)	.	,070	,000	,041	,001
		N	60	60	60	60	60
	Banks	Correlation Coefficient	,236	1,000	,396**	,386**	,293*
		Sig. (2-tailed)	,070	.	,002	,002	,024
		N	60	60	60	60	60
	Private Venture	Correlation Coefficient	,482**	,396**	1,000	,723**	,516**
		Sig. (2-tailed)	,000	,002	.	,000	,000
		N	60	60	60	60	60
	Government	Correlation coefficient	,264*	,386**	,723**	1,000	,516**
		Sig. (2-tailed)	,041	,002	,000	.	,002
		N	60	60	60	60	60
	Crowdfunding	Correlation Coefficient	,427**	,293*	,516**	,397**	1,000
		Sig. (2-tailed)	0,001	,024	,000	,002	.
		N	60	60	60	60	60

** Correlation significant at 0.01 level (2-tailed).

* Correlation significant at 0.05 level (2-tailed).

Table 9 Correlation Hypothesis 2b

Looking at the relation between innovation and the usage of formal finance, there are significances for Private/Venture (Sig. (2-tailed) of 0.000), Government (Sig. (2-tailed) of 0.041), and Crowdfunding (Sig. (2-tailed of 0,001), while there is no significance for Banks (Sig. (2-tailed) of 0,070). The Hypothesis can therefore only be partially accepted.

Hypothesis 3a:

The amount of money needed is positively correlated to the likelihood of using informal financing (Own, Family, Friends).

Correlations

			MoneyNeeded	Own	Family	Friends
Spearman's rho	**MoneyNeeded**	Correlation Coefficient	1,000	-,172	-,370[**]	-,063
		Sig. (2-tailed)	.	,188	,004	,634
		N	60	60	60	60
	Own	Correlation Coefficient	-,172	1,000	,201	,121
		Sig. (2-tailed)	,188	.	,124	,359
		N	60	60	60	60
	Family	Correlation Coefficient	-,370[**]	,201	1,000	,503[**]
		Sig. (2-tailed)	,004	,124	.	,000
		N	60	60	60	60
	Friends	Correlation Coefficient	-,063	,121	,503[**]	1,000
		Sig. (2-tailed)	,634	,359	,000	.
		N	60	60	60	60

** Correlation significant at 0.01 level (2-tailed).

Table 10 Correlation Hypothesis 3a

Only the relation between the amount of money needed and the usage of family capital is significant (Sig. (2-tailed) 0.004) while there is no significance for own and friends capital. Furthermore, the correlation is negative, which means that the more money is needed to start a business, the less likely the entrepreneurs are to rely on family capital. The Hypothesis has to be partially rejected.

Hypothesis 3b:

The amount of money needed is positively correlated to the likelihood of using formal financing (Banks, Venture/Private, Government, Crowdfunding).

Correlations

			MoneyNeeded	Banks	PrivateVenture	Government	Crowdfunding
Spearman's rho	**MoneyNeeded**	Correlation Coefficient	1,000	,254*	,438*	,303*	,238
		Sig. (2-tailed)	.	,050	,000	,019	,070
		N	60	60	60	60	60
	Banks	Correlation Coefficient	,254*	1,000	,396*	,386*	,293*
		Sig. (2-tailed)	,050	.	,002	,002	,024
		N	60	60	60	60	60
	PrivateVenture	Correlation Coefficient	,438**	,396**	1,000	,723**	,516**
		Sig. (2-tailed)	,000	,002	.	,000	,000
		N	60	60	60	60	60
	Government	Correlation Coefficient	,303*	,386**	,723**	1,000	,397**
		Sig. (2-tailed)	,019	,002	,000	.	,002
		N	60	60	60	60	60
	Crowdfunding	Correlation Coefficient	,238	,293*	,516**	,397**	1,000
		Sig. (2-tailed)	,070	,024	,000	,002	.
		N	60	60	60	60	60

* Correlation significant at 0.05 level (2-tailed).

** Correlation significant at 0.01 level (2-tailed).

Table 11 Correlation Hypothesis 3b

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The amount of money needed to start a business and the usage of formal financing is significant for the usage of banks (Sig. (2-tailed) 0.050), private/ventures (Sig. (2-tailed) 0.000), and government (Sig. (2-tailed) 0.019), but not for crowdfunding (Sig. (2-tailed) 0.070). The hypothesis can therefore be partially accepted.

Hypothesis 4:

The amount of money needed is positively correlated to the likelihood of failing because of financial problems.

Correlations

			MoneyNeeded	Problems
Spearman's rho	**MoneyNeeded**	Correlation Coefficient	1,000	,405**
		Sig. (2-tailed)	.	,001
		N	60	60
	Problems	Correlation Coefficient	,405**	1,000
		Sig. (2-tailed)	,001	.
		N	60	60

** Correlation significant at 0.01 level (2-tailed).

Table 12 Correlation Hypothesis 4

The correlation between the amount of money needed to start a business and exiting a business because of problems with finance is significant at the 0.01 level with a Sig. (2-tailed) of 0.004. The hypothesis can therefore be accepted.

5.4 Interpretation of the Results

The results deliver a rather clear picture of nascent entrepreneurship. It was shown, that, when looked at economies as a whole, the higher the Innovation Level is of an economy, the more money is needed on average to even start a business. At the same time, we see a tendency towards the sources of said capital. The higher the Innovation Level, the less likely are young entrepreneurs to rely on family money as a source of finance, but lean more towards formal finance such as Private/Venture, Government or Crowdfunding Capital. It was also shown, that the higher the amount of money needed, the less likely are businesses to fail because of financial problems.

To understand those findings, they have to get interconnected. Businesses in economies with higher level of innovation produce higher costs, since the innovation itself is usually more cost-intensive than already established forms of business (https://hbr.org/2012/10/is-the-cost-of-innovation-falling) Those businesses usually cannot rely on informal capital such das family money, since it is commonly very limited. This leads to nascent entrepreneurs turning to formal sources of finance such das venture/private, government or crowdfunding where the total amount receivable is not limited, but harder to obtain. Underlined by the findings of the correlation between the amount of money needed and the source of capital (Hypothesis 3), which show a similar picture, it can be assumed that since more innovative and/or more capital intensive businesses rely on formal capital they are more thoroughly checked (business plans, track records, etc.) by the capital providers. This assumption is rounded up by the last finding, where a positive correlation between the amount of money needed and the likeliness of failing because of financial problems.

In other words, the more innovative an economy, the higher the amount of money needed, the more likely it is for businesses to rely on formal capital which at the same time leads to better control and checks which then again leads to lower rates of business exits because of financial problems.

Chapter 6

6. Summary

This chapter presents the concluding arguments as well as the recommendations for the future.

6.1 Conclusion

The purpose of this paper was to show how several financial factors of nascent entrepreneurship are interconnected. Especially the role of innovation in relation to the need and the accessibility of startup finance and their relation to the likeliness of failure because of financial problems was to be researched.

The data and the hypothesis testing showed, that innovation is in fact a defining factor for the amount of money needed in different economies to start a business, as well as for which form of capital is available or used preferably. Furthermore the research showed, that the more money is needed to even start a business the less likely those businesses are to encounter problems with finance in the future that lead to business exits.

Nearly all research objectives were achieved in this paper. Each Hypothesis was either fully or at least partly accepted. This allowed for a rather clear picture of a strong interconnection between all the variables in the expected way.

6.2 Recommendation

The recommendation for innovation have to be divided into two essential points of view: macro economical and micro economical.

On a macro level, say for governments, focus and support of innovative entrepreneurs and enterprises will, in general, lead economies to often needed development. Regarding the finding of this paper, support of innovative nascent entrepreneurs would enable them to decrease reliance on informal capital and increase the possibilities to secure formal capital which would overall lead to less entrepreneurs failing with their businesses because of problems with finance since the rate of more thoroughly checked and monitored business plans and businesses in general would go up. Since it is often not possible to increase innovation in

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an economy in a short term, second to that this paper recommends to, not control, but support young businesses with the development of business plans from a government side. For instance on a basis of programs for young entrepreneurship which are available for anyone thinking about starting a business. Along with that can go programs that not support the development of businesses themselves, but rather focuses on bringing formal capitalists together with nascent entrepreneurs, since it would have the same effect.

Along with that comes the recommendation for entrepreneurs themselves. It includes focusing on innovative fields. This, again, would enable them to have a higher stance of securing formal capital which would lead to external assessments their business plans and their businesses in general. Since this recommendation cannot always hold up of every young business, since it is often just not possible to "be innovative", the recommendation would be to focus on developing the idea of the business thoroughly, including business plans, to increase the chance of formal capital and along with that decrease the likeliness of failure because of future problems with capital.

All in all this paper sees the core of the problem in hastily founded businesses, which rely too much on informal capital. To conquer this problem, governments and businesses need to focus on increasing the involvement of formal capitalist and along with that properly checked and reviewed business plans.

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