

The science of success

# INVESTIGATING AN INNOVATIVE METHODOLOGY CHARTING THE STEPS TO START-UP SUCCESS

Panagiotis H. Ketikidis, Aristeia I. Ladas, Fotis Gonidis,  
Andreas Baresel-Bofinger, Katerina Aichinger,  
Olga Athanasiadou, Maria Giorgalli, Raffaella Paradeisi,  
Arvesa Studenica & Kyriaki M. Tsigarida

## The Altuntas Start-up Compass Theory



SOUTH-EAST  
EUROPEAN  
RESEARCH  
CENTRE



The  
University  
Of  
Sheffield.



**CITY College**  
An International  
Faculty Of  
The University.

## Executive Summary

In an era where the world is experiencing the aftermath of a financial crisis, faced with the potential of further economic deterioration, entrepreneurship and the creation of small businesses seem to be vital in developing stronger, more resilient, and more sustainable economies. For this reason, the success and failure of start-ups is of central interest not only to relevant stakeholders, like entrepreneurs, investors and governments, but also to academics of the field of business, entrepreneurship and innovation. Throughout the years, several theoretical frameworks, either financial or other, have been developed and tested for their efficacy in predicting company success and failure and some indeed seem to be of great value. As a result of these efforts, various factors have been suggested to contribute to the survival or death of a newly developed business. In fact, the variability in these frameworks is so high that it is difficult, if not impossible, to form a uniform and all-inclusive theory. In light of this difficulty, we attempted to offer a different approach to the issue of start-up success/failure. Therefore, in this paper we present the Start-up Compass Theory (SCT), which involves several stages and steps as follows: Stage (1) Before Starting the Business, also referred to as Wannapreneurship; Stage (2) Starting Up the Business, involving the steps of Innovation, Entrepreneurship, Marketing and Sales; (3) Growing the Business, including Branding, Institutionalization and Franchising and finally (4) Maturing the Business, involving Leadership and Angel Investment.

As opposed to existing theoretical frameworks, developed by academics, the SCT has the benefit of being developed by an experienced entrepreneur and businessman. Thus, this theory has already been “tested” in the real world for its effectiveness in leading a start-up to success. However it has not been submitted to scientific scrutiny. Given the predictive value of empirically tested models, we aimed at empirically evaluating the SCT by initially using interviews that were structured according to the SCT’s elements. Our interviewees were successful Venture Capital (VC) managers and Business Angels (BAs), approached at the World Business Angels Investment Forum ‘Access to Finance from Start-up to Scale-up to Exits’, held in Istanbul on 21 - 23 February 2016, as we considered that such a sample would be most suitable for offering a well-founded view of the factors that lead to start-up success, given the participants’ extensive entrepreneurial experience.

According to the results of our interviews, the majority of the factors that are described in the SCT are also embraced by the interviewees for their value in enhancing or even determining a young company’s success. However, there are also other factors such as the level of the product’s innovative nature, the required knowledge of the company’s staff or the location of the business which are identified as important in the SCT but not equally valued by some of the participants. Nevertheless, the SCT seems promising both from a scientific and a more “applied” perspective.

## Introduction

The financial crisis that broke out in 2007 precipitated by US banks is still ongoing in Europe, as evident from relevant reports on international financial newspapers (e.g. Financial Times, 2016; The Guardian, 2016; Wall Street Journal, 2016). Among viable solutions proposed to address the financial crisis and establish a competitive economy, many scholars have identified entrepreneurship as an important one (Huggins & Williams, 2011). According to the World Bank, the backbone of entrepreneurship is start-ups (Nguru, 2016), which in turn contribute to economic growth, as well as to job creation and poverty reduction (Hecht, 2014). In addition, start-ups are largely considered as a major force of innovation (Freeman & Engel, 2007; Weiblen & Chesbrough, 2015), which also leads to economic development (Easley & Miler, 2012; Rosenberg, 2004). Thus, significant policies have been put forward in order to create an entrepreneurial ecosystem, including important stakeholders such as organizations [incubators/accelerators, companies, banks, Business Angels], institutions [universities/research centres, other governmental agencies, financial bodies] (OECD, 2013) as well as the wider university-industry technology which further supports and encourages such entrepreneurial activity (Peters, Rice & Sundararajan, 2004; Siegel et al., 2003). However, relevant studies show that the success rate of start-ups is less than 25% (Steve Blank, 2013; Rose, Kumar & Yen, 2003), partially attributed to the fact that entrepreneurs do not follow an established method during the product development process (Steve Blank, 2013). Therefore, given the vital role of start-ups, it is of major importance to formulate methods and well-established strategies, which can be adopted by young entrepreneurs, to enable them to increase the success rate of their ventures.

Among other implications, the significantly high percentage of failed start-ups has a profound impact on the direct investors and stakeholders of the start-ups, namely the Business Angels (BAs) and the Venture Capitalists (VCs). Both BAs and VCs are indispensable parts of the entrepreneurial ecosystem that ensure the continuous funding of the start-ups and thus guarantee their viability. Those investors undertake a high risk by opting for an extraordinary return in case the start-up becomes successful and thus profitable. However, in the case that the start-up fails the entire invested capital may be lost.

To this end, this paper reports on an ongoing effort to identify and evaluate existing methods, which have the potential to increase the success chances of a start-up. In particular, the scope of this research is three-fold: (a) to review earlier relevant proposed models and frameworks, (b) to present a new method, the Start-up Compass Theory (SCT), which comprises an empirical approach formulated by an experienced entrepreneur, and finally (c) to evaluate the SCT by conducting an interview-based study, involving Venture Capital (VC) managers and Business Angels (BAs) who play an active role in the field of entrepreneurship.

The novel aspect of this research is that, to our knowledge, this is the first time that an empirical method, which aims to increase the success chances of a start-up and has been already successfully applied in practice, is validated through a scrutinizing process involving active experienced and successful practitioners in the field. The BAs and VCs, interviewed during the World Business Angel Forum (WBAF) 2016, have extensive experience in start-up funding worldwide and at least few successful exits. It is worth noting that WBAF is the ideal platform to make such interviews since it is one of the world's leading organisation for start-up and scale-up investments.

# Background

## Impact of entrepreneurship on economic development

Caree and Thurik (2003) have put forward the notion that economic growth, the creation of new jobs and competition benefit from intense entrepreneurial activity. In support of this notion, Acs and Armington (2003) have provided empirical evidence supporting that higher growth rates are indeed achieved in regions with increased entrepreneurial activity. Similarly, Audretsch and Keilbach (2004) have demonstrated that on a regional level, entrepreneurship is positively related to growth in labour productivity. Additionally, Reynolds (1999) has provided evidence of the positive relationship between growth rates and entrepreneurship in the USA. On the other hand, Audretsch and Fritsch (1996) have found evidence supporting the opposite in Germany during the 1980s: Higher start-up rates were negatively related to growth rates and this finding was also repeated by Fritsch (1997). However, due to current processes of convergence between the US and Germany, it seems that nowadays entrepreneurship tends to become a major source of growth for both countries (Audretsch and Fritsch, 2002).

## The role of start-ups in the economic development

Especially when focusing on small businesses, they appear to be a major source of entrepreneurship, compared to larger businesses; this was demonstrated in a study involving a respectable sample of patent businesses (i.e. 1293 technology firms), supporting that “small firms in emerging industries are one of the greatest engines of American economic growth” (Breitzman & Hicks, 2008, page i). According to Blank and Dorf (2012, p.xvii), “A start-up is a temporary organization in search of a scalable, repeatable, profitable business model”.

In other words, a start-up is a temporary organization aiming to become a successful company. Presumably, a successful start-up would be one that actually manages to grow into a company which creates sustainable profit, and this is the definition of start-up success we will embrace for the purposes of the current study. Scholars and businessmen argue that today’s economy should be based on entrepreneurship and innovation (Fritsch & Mueller 2004; Huggins & Williams, 2009; Porter, 2003; Reynolds et al., 2002), and hence there is a great need for the creation of new businesses. However, the success rate of start-ups is quite low. As Steve Blank (2013) notes, about 75% of start-ups fail. This is also supported by Rose, Kumar and Yen (2006), reporting that only about 10% of start-ups survive beyond 10 years. Coming to a similar conclusion although deriving from slightly different numbers, an American Small Business Administration’s report of 2014 states that only about one-third of start-ups survive more than ten years in the market. Also, according to the US Census Bureau, the number of businesses in the US that die annually (i.e. 470.000) is larger than the number of businesses that are founded (i.e. 400.000) (Meszaros, 2016). In addition, Blank (2013) reports on a recent study by Shikhar Ghosh from the Harvard Business School which demonstrates that about 75% of all US start-ups fail.

---

*Therefore, it becomes evident that start-up success is a significant issue to investigate for three reasons: Firstly, because start-ups are fundamental for economic growth in today’s economies; Secondly, because the success rates of start-ups is considerable low and thirdly, because other major stakeholders of the entrepreneurial ecosystem, namely BAs and VCs, and their funding decisions are directly influenced by start-up success rates.*

---

## Success factors for start-ups

Given then the importance of this current state of affairs, several factors influencing the desired success of a new venture have long been recorded in the literature. These could be divided in individual and more generic ones (see Table 1). For example, on an individual level, the entrepreneur's personal characteristics, together with motivation, risk-taking behaviour (Carayannis et al., 2006; Linton, 2006), as well as the level of familiarity with the sector (Vivarelli, 1991) are considered important factors influencing start-up success. The level of skills is an additional factor suggested to play a role in the course of a start-up (Cross, 1981). According to that, people with previous managerial experience (Cross, 1981) and skilled workers have more possibilities of developing their own business compared to semi-skilled or un-skilled ones (Lloyd & Mason, 1983). In addition, higher levels of education in combination with previous managerial experience have also been suggested as factors positively influencing entrepreneurship (Storey, 1982). On a broader level, regional innovation networks (Vliamos, Halkos & Tzeremes, 2009) and the local culture (Carayannis & Campbell, 2009) have been documented as influencing entrepreneurs' activity and thus success. In addition, other factors at a macro-level have been suggested to influence entrepreneurial activity, such as the opportunities provided by the resources available in a given economy, governmental policies regarding entrepreneurship, number of immigrants and women in the labour market (Audretsch et al., 2002). Moreover, Verbovskii, Poletaev and Chayka (2014) report that the idea, funding, team and the ground for development are vital factors for the successful growth of a newly-founded business. Furthermore, Psaltopoulos, Stathopoulou and Skoura (2005) state that the location of the market in which the start-up is developed, as well as entrepreneurial risk-perception affect the investment inflows of a start-up, which further impact its success rate.

In addition, Maxwell, Jeffrey & Lévesque (2011) look at the investors' criteria, and specifically the criteria that Business Angels use to fund a start-up, and subsequently identify eight factors that play a critical role in deciding whether a start-up will be funded or not. These criteria are the following: product adoption (i.e. how attractive the product is to potential customers), product status (i.e. measures the financial and technological risk in releasing the product into the market), ability to protect the product/brand (i.e. can it be legally protected from copies?), customer engagement (i.e. whether potential customers have been engaged in the development of the product, so that the product addresses actual customer needs), route to market (i.e. the route that the product needs to follow to reach the market), market potential (i.e. is a large market available for this product or does the product address a market with a large potential for growth?), relevant experience (i.e. of the entrepreneur) and financial model (i.e. the ability of the venture to produce profit and how realistic that is).

### Table 1. Description of factors that influence start-up success/ entrepreneurship in more general, according to the literature

#### *At a micro level (individual characteristics)*

(Carayannis, Popescu, Sipp & Stewart, 2006; Linton, 2006):

One's personal characteristics, also involving motivation and risk-taking behaviour

(Vivarelli, 1991):

The level of familiarity with the sector

(Rauch & Frese, 2000):	Risk-taking behaviour, the need for achievement and locus of control
(Cross, 1981):	Level of skills (people with previous managerial experience)
(Lloyd & Mason, 1983):	Level of skills (skilled workers)
(Storey, 1982):	Higher level of education in combination to previous managerial experience
(Rose, Kumar & Yen, 2006):	Entrepreneur's education level, as well as his/her working experience and familial experience with managing a business
(Rose, Kumar & Yen, 2006):	Entrepreneur's education level, as well as his/her working experience and familial experience with managing a business

---

***At a micro level (individual characteristics)***

***Direct influence***

(Vlamos, Halkos & Tzeremes, 2009):	Regional innovation networks
(Carayannis & Campbell, 2009):	Local culture
(Audretsch, Thurik, Verheul & Wennekers, 2002):	Other regional characteristics
(Verbovskii, Poletaev and Chayka, 2014):	The idea, the funding, the team and the ground for development

***Indirect influence***

(Psaltopoulos, Stathopoulou and Skoura, 2005):	Location of the market where the start-up is developed and entrepreneurial risk-perception affect the investment inflows of a start-up, which in turn will affect its success rate given that if such inflows are small, the business cannot develop further.
--	---

---

***Criteria used by business angels to take funding decisions, either direct or indirect***

(Maxwell, Jeffrey & Lévesque, 2011):	Product adoption (i.e. how attractive the product is to potential customers), product status (i.e. measures the financial and technological risk in releasing the product in the market), ability to protect the product/brand (i.e. can it be legally protected)
--------------------------------------	---

from copies?), customer engagement (i.e. whether potential customers have been engaged in the development of the product, so that the product addresses actual customer needs), route to market (i.e. the route that the product needs to follow to reach the market), market potential (i.e. is a large market available for this product or does the product address a rather small market but with a large potential for growth?), relevant experience (i.e. of the entrepreneur) and financial model (i.e. the ability of the venture to produce profit and how realistic that is).

As evident, numerous factors on both a macro and a micro level have been suggested to influence start-up success. These factors have been incorporated to wider methods and strategies that attempt to increase the success chances of start-ups. In the next section we bring together and evaluate such methods which contribute to the success of start-ups.

## Scientific models to measure and increase start-up success

As described above, there are numerous factors/variables that have the potential to improve the chances of success of a newly-developed business. This abundance in variables (see Table 1) and their often complex (e.g. variables that may indirectly influence start-up success, thus function only as mediators in the factors-success relationship) or even changing role in the failure or success of a newly developed business may give rise to confusion for anyone wishing to study this field or acquire useful knowledge to apply in making a start-up succeed. Thus, in the present paper we focus on existing coherent strategies rather than individual factors or a combination of these.

Several theories aiming to predict a company's failure have been developed throughout the years (Carter & Van Auken, 2006; Cooper, Gascon, & Woo, 1991; Pompe & Bilderbeek, 2005; Reynolds, 1987; Reynolds & Miller, 1989; van Gelder et al., 2007; Westhead, Wright, & Ucbasaran, 2001). These theories involve factors that the authors of each study considered significant in influencing a company's success or failure. In particular, the study by Carter and van Auken (2006) developed a primarily financial model, tested in the form of a questionnaire and disseminated in a sample of both bankrupt and non-bankrupt companies. Importantly, they included age of the company as one of the main factors influencing failure. Similarly, Reynolds (1987) as well as Reynolds and Miller (1989), have used the age of the company as one of the two bases for the development of their model, finding that company age is a very important predictor of survival. However, with respect to our study, the company's age is not a factor that could provide any guidance for a firm at a starting phase, with an age of close to zero. In a similar vein, Pompe and Bilderbeek (2005) developed a financial model (i.e. including several ratios) in addition to the age of the firm as predictive factors of company failure. However, ratio prediction models of company failure impose certain limitations. According to Dechow et al. (2013), such financial models often misclassify many firms in the "bankrupt" category. As an example, Dechow et al. (2013) report that in a study by Beaver, McNichols and Rhie (2005) the vast majority (i.e. 95%) of the companies that were ranked at the top 30% of the ranked probability (including 86% of the bankrupt sample) as -future- bankrupt, actually did not go bankrupt. An additional limitation of ratio models aiming to predict company failure is that

for these models to be accurate, the financial data they are based upon must be reliable (Louangrath, 2015). De Clarens (2015) claims that since such financial ratio models have predictive value only if the external conditions of the company remain unchanged, one should not trust them if they involve data of more than 15 months. Finally, several authors (e.g. Cooper, Gascon & Woo, 1991; Reynolds & Miller, 1989; Reynolds, 1987) suggest that financial models are not appropriate at all for studies involving small businesses.

In a different vein, Cooper, Gimeno-Gascon and Woo (1991) used a resources framework to predict start-up survival and growth. Specifically, it includes variables such as the initial capital invested in the company, the educational level and previous employment of the entrepreneur, demographic characteristics of the entrepreneur and relevant experience with managing a company. However, it mostly focuses on the characteristics of the entrepreneur and hence neglects other aspects that could play an important role in the success of a start-up, such as the target market, strategic issues like competitive companies and poor economy, federal regulations and capital availability (Carter & van Auken, 2006). In addition, this model perceives growth as a 50% increase in employment within the company. However we believe that this is an indirect measure of venture success, since growth in employment could also imply that the entrepreneurs invested in more employees merely because they believed this would benefit the company and not because of the increased demand for personnel caused by business growth. Similarly, the factors that van Gelder et al. (2007) believe to influence failure or success of a company are related to the individual characteristics of the business owner (i.e. the strategies and the planning the owner used, goal specificity and goal difficulty, the education and the experience of the business owner). Although they did find that most of these factors were statistically relevant to failure or success of the business, there is a serious limitation inherent in this model, mainly that it leaves out factors, which are related to the macro-functioning level of a company and which may play a significant role in its success. Moreover, a study by Westhead, Wright and Ucbasaran (2001) investigated whether the companies of interest are more likely to survive compared to other kind of companies. However, this study focused on exporting companies, and hence measured characteristics applicable specifically to these companies. Similarly, we believe that the framework developed by Gartner, Starr and Bhat (1998) is not suitable for our goal, as it is considerably outdated. We believe that since the business world is a dynamically changing environment, we need to be informed by recent data in order to have a level of certainty regarding their ecological validity. In addition, older studies may not include factors that have emerged at a later point in time.

---

*Lussier developed a model, initially published in 1996, which involves specific factors which are tested, such as planning, advisors, economic timing, record keeping and financial control, as well as product/service timing (Table 2). In this study, the sample consisted of 48 successful and failed firms. According to the results, the model had an accuracy of 80% in predicting which firms succeeded and which did not. Also, it predicted 67% of the variance in the success or failure of a retail company.*

---

**Table 2.**  
**Explanation of success versus failure variables (adopted from Lussier & Halabi, 2010 by permission of Prof. Lussier)**

---

Capital (capt).	Businesses that start undercapitalized have a greater chance of failure than firms that start with adequate capital.
Record Keeping and Financial Control (rkfc).	Businesses that do not keep updated and accurate records and do not use adequate financial controls have a greater chance of failure than firms that do.
Industry Experience (inex).	Businesses managed by people without prior industry experience have a greater chance of failure than firms managed by people with prior industry experience.
Management Experience (maex).	Businesses managed by people without prior management experience have a greater chance of failure than firms that are managed by people with prior management experience.
Planning (plan).	Businesses that do not develop specific business plans have a greater chance of failure than firms that do.
Professional Advisors (prad).	Businesses that do not use professional advisors have a greater chance of failure than firms using professional advisors. A more recent source of professional advisors are venture capitalist.
Education (educ).	People without any college education who start a business have a greater chance of failing than people with one or more years of college education.
Staffing (staff).	Businesses that cannot attract and retain quality employees have a greater chance of failure than firms that can.
Product/Service Timing (psti).	Businesses that select products/services that are too new or too old have a greater chance of failure than firms that select products/services that are in the growth stage.
Economic Timing (ecti).	Businesses that start during a recession have a greater chance to fail than firms that start during expansion periods.
Partners (part).	A business started by one person has a greater chance of failure than a firm started by more than one person.
Parents (pent).	Business owners whose parents did not own a business have a greater chance of failure than owners whose parents did own a business.
Minority (mior).	Minorities have a greater chance of failure than nonminorities.
Marketing (mrkt).	Minorities have a greater chance of failure than nonminorities.

Throughout the years, and in contrast to the aforementioned frameworks, the Lussier 15-variable business success versus failure prediction model has been tested with different businesses, in different countries, so that evidence on its generalizability can be provided. As shown, the predictive power of the full model, which seems to be substantial in areas such as South and North America, diminishes when tested in completely different cultural contexts such as Croatia where a reduced model seems more suitable (Lussier & Halabi, 2010). Thus, its applicability is rather confined to America. Secondly, as commented by the authors themselves, given the rather low amount of explained variability in company success and failure from both the overall framework and its variables individually, other factors not included in this formula seem to play an important role in venture success; for example, Lussier and Halabi (2010) suggest that use of IT and the Internet on behalf of the company could inform such a model in future studies.

This section evaluated several methods and models, which attempted to either increase the success rate or predict the success or failure of newly developed businesses. The common goal of all these models/theories is to help entrepreneurs understand the mechanisms that drive venture success and failure as well as to reduce risks and thus increase the success chances of their companies.

In the next section we focus on the Start-up Compass Theory, a theory which puts forward a systematic approach that a young entrepreneur may follow in order to transform a start-up to a mature company. Unlike the existing methods and prediction models reviewed in this section, the Start-up Compass Theory constitutes an empirical approach, which has been successfully put in practice by an entrepreneur but has not yet been scientifically tested for its validity.

## The Start-up Compass or Altuntas Theory

The Start-up Compass Theory, SCT (Altuntas, 2014), or the Altuntas Theory as it is called by academics in the field, was formulated by Baybars Altuntas. This theory has been developed on the basis of Altuntas' extensive experience in creating a start-up and maturing it up to the point of making it a successful, profitable business. At its core, it proposes four stages and nine steps (see Table 3), which in essence describe the entrepreneurship experience of Baybars Altuntas (Altuntas, 2014).

The stages and steps of the SCT are as follows: (1) Before Starting the Business, also referred to as Wannapreneurship; (2) Starting Up the Business, involving Innovation, Entrepreneurship, Marketing and Sales; (3) Growing the Business, including Branding, Institutionalization and Franchising and finally (4) Maturing the Business, involving Leadership and Angel Investment.

### Stage 1: Before starting the business:

The first stage includes the step of the so-called Wannapreneurship. During this process the individual generates the relevant business model for his/her idea and explores potential financing sources. As described in the SCT, the ideal model is the one where you "first earn and then spend" (Altuntas, 2014, page 2), thus generating the idea's financing source based on the merits of its own business model.

**Table 3.**  
**Description of the Start-up Compass Theory by Baybars Altuntas**

Stage	Step
A. Before Starting Up the Business	1. Wannapreneurship
B. Starting Up the Business	2. Innovation 3. Entrepreneurship 4. Marketing and Sales
C. Growing the Business	5. Branding 6. Institutionalization 7. Franchising
D. Maturing the Business	8. Leadership 9. Angel Investment

### Stage 2: Starting up the business:

The second stage involves three steps, namely Innovation, Entrepreneurship and Marketing and Sales. The first step examines the innovative aspect of the product/service that the new business delivers. Entrepreneurship regards the characteristics that according to Altuntas are essential for boosting a newly developed business, such as the office location, the name of the company, and the pricing. Marketing and Sales capitalize on the level of personal involvement of the entrepreneur in the marketing of the product/service as well as other aspects of the marketing process.

### Stage 3: Growing the business:

This stage includes Branding, Institutionalization and Franchising. Branding considers advice regarding the branding process and its importance, while Institutionalization touches upon the management of a business that has grown considerably. Franchising reflects on how to successfully plan the franchising process.

### Stage 4: Maturing the business:

The final stage involves the step of Leadership, namely how to effectively lead a company, and Angel Investment, which examines the reasons for becoming an angel investor and the qualities required. The SCT entails the relevant phases of developing a new business and growing it from a start-up to a large company with many franchisees. At the same time it describes steps to be taken by a new entrepreneur to grow into an Angel Investor. In the next section we attempt to evaluate the SCT and provide hard data on its possible effectiveness.

## Methodology

In evaluating the SCT, we used two approaches: a quantitative and a qualitative one, one complementing the other, as emphasized by the work of Onwuegbuzie & Leech (2005). More specifically, we designed a questionnaire based on the SCT and distributed it to the relevant sample (quantitative method). However, the latter is beyond the scope of the present paper as it is still ongoing research. Currently, we focus on presenting the data that emerged from the qualitative method, namely the semi-structured interviews with questions formed based on the SCT. We interviewed world-class successful Business Angels and Venture Capitalists, aiming to investigate the extent to which they have followed the SCT or they believe it may increase the success chances of a start-up. To our knowledge, this is the first time in this field that a method which has been already proven successful in the business world is put under scientific scrutiny. In the literature, relevant models that accurately predict the success rates of new businesses, presented in previous paragraphs herein have been either created –and tested- by academics of the field of business, and hence lack the component of hands-on experience, or by individuals with experience in creating start-ups, and thus have not been evaluated scientifically.

---

*We interviewed nine (9) participants, who attended the World Business Angels Investment Forum, 'Access to Finance from Start-up to Scale-up to Exits', in Istanbul on 21 - 23 February 2016, where the interviews also took place. All the participants were experienced Business Angels and VCs, with more than 10 years of experience in the field of entrepreneurship and at least 3 successful exits. Their entrepreneurial activity spans across the globe (USA, Europe, Middle East, Asia, Africa) and their investment areas focus particularly on the High Tech industry and Information Technology. We particularly chose participants with these characteristics, as we believed that their long experience in successful entrepreneurship renders them most suitable for the purpose of our study, namely the evaluation of the SCT.*

---

We approached the participants by email explaining the background and purpose of the study to them and setting the date and time for the interview. The participants were interviewed individually face to face, one-to-one, in a quiet room at the World Business Angels Investment Forum. Each interview lasted approximately 30 minutes and was conducted in the English language. The interviewers were two members of our research team, who were highly knowledgeable in the SCT and were carefully trained in the interview process, to avoid any potential bias towards the interviewees. After informing the participants as to their rights to anonymity and withdrawal, they signed an informed consent form and the interview process started. All interviews were recorded, with the permission of the participants, to allow further transcription of the data. The recordings were available to the research team only and will be destroyed after completion of our research.

The stages and steps identified from the SCT served as the basis for the layout of the nine semi-structured interviews. We chose this in-depth qualitative method of interviews to allow us not only to record the benefits and drawbacks of the SCT, but also to understand the deeper mechanisms of the SCT if possible and essentially gain rich information on the process of start-up success. Such a method allowed us to reveal and further investigate additional issues not raised by the interview questions but by the interviewees themselves. We believed that a qualitative method such as the current one would be most suitable for these purposes especially in the initial stage of our research. That is, although we designed the interview questions according to the SCT's stages (see Table 3), the interviewees were free to express any additional information that seemed relevant to them. Thus we were able to gain a deeper insight into the factors that may predict start-up success.

Following Williams, Vorley and Ketikidis (2013), in our analysis of the collected data for the current paper we investigated not only the predefined topics of the interview schedule but also the topics that emerged during the interview. To this end, we used the constant comparative method to analyse the interviews, which allowed us to reformulate an existing theory (in this case, the SCT) based on the constant comparisons of the emerging themes. This also allowed us to avoid researcher bias (Hamel, 1993). Additionally, this approach was considered appropriate for our purposes since it acknowledges that there is no simple answer and that individual differences are important to consider (Shields, 2007) as appears to be the case with start-up success that we are investigating. In order to deepen the understanding of the concepts that emerged, we provide quotes from the data.

## Findings and Analysis

The vast majority of the interviewees (i.e. 8 out of 9) believed that the factors that are important for the success of a start-up are (a) the people working in the business, (b) the product/service (i.e. its quality, its pricing, its marketing, its innovative features), (c) marketing of the product/service, (d) the depth of knowledge that the entrepreneur has of the business field, and (e) the company (i.e. the location of the office, finances, funding, franchising, branding and management of a business). The SCT's elements of Leadership and Angel Investment were also discussed by the participants.

### The importance of the team

The staff of a company plays an important role in its success. Specifically, these people need to be fully engaged and dedicated to their work. The value of the team (i.e. the staff of the company) is underlined by the following statements:

*"Without staff you don't have a business. So that is just to me that simple. The first most important thing is the customer because they bring the money. Then the proposition. That's what the proposition is for. The next important thing is the staff which is the organization. Those two are more important than the money which is the economics."*

The value of the company's staff, and particularly the team's selling skills, is also stressed by another participant:

*"If the entrepreneur is capable of delivering the product, during this execution so you can have a scientist that is very good at creating a patent or a device... But then, you need another skill for selling the product, is the team ready to sell the product, is the team good to sell this product"*

Another interviewee also believes in the value of the team (the people as he calls it) as a main factor contributing to a new business's success.

*"Again it depends on the company, but in more.... and it's all about people... So, even in a capital.... of manufacturing plans you still need the right management the right people. We are in a lot of artificial intelligence business but again, you know, it's knowledge and people. So, 100%. The entire business depends on the people and their knowledge..."*

An additional participant also supports the importance of the people that constitute the team of a company:

*"If, at the early stages of an enterprise when you are starting with 2,3,4,5 individuals, you cannot afford to lose any opportunity to delay your work ...because of quality of people. So, that is to be in your concern. If it doesn't become your concern, it's something that you really need to remedy immediately, release three individuals, make sure that your core team are the best and most capable of delivering on your expectations"*

In the SCT, the importance of the team, and specifically the sales team, is clearly stressed (stage 2, step 4 Marketing and Sales), foregrounding the fact that the marketing tools are worth nothing if you do not have the correct sales staff. The importance of individual staff members' skills is also stressed, in the 1st stage, step 3 Entrepreneurship. In general, according to the SCT, steps 3 and 4, the staff of the company are important and hence need to be fully trained and closely monitored by the owner.

Regarding the founder of the company, the participants believed that it is important for the success of the new business that the owner of the company is highly engaged, motivated and dedicated to his/her work. This passion for the job is stressed in the following statement:

*"So, in our case, in our companies, we need those 24/7 time people who can work in this... . . . I see colleagues saying, «ok, let me go to my desk and I will call you back», you know, what desk? I do not have a desk like... you know. Which desk? I do not have a desk. I work everywhere..."*

Another participant also supports that the founder of the company must be passionate:

*"A founder has the passion, the idea and also, if something starts failing, the founder depending on ... the founder is up and passionate about their business, you cannot find that man in a CEO."*

With reference to the SCT, throughout the model the reader can clearly see that passion and commitment on behalf of the entrepreneur are prerequisites for the start-up to succeed.

## The product

According to another interviewee, besides the people, there are other variables that also play a role: the staff in combination with the quality of the services or the product offered are what may make the difference between success and failure.

*"...many people say that the success of the company is about people, product and processes. You can have fantastic people but if they do have a very bad product with bad process then it is not good. Of course people are very, very important, and if you do not have the right people then you'll not have a good product and you'll not have good processes in place."*

Another interviewee also mentions the importance of the quality of the product delivered and that when comparing it to the importance of the price, the entrepreneur should not sacrifice quality for price in order to succeed:

*"We don't attach price to quality. We dissociate that simply because we believe that if you compete on price for quality then you lose. So you have to compete you know, fix the price, and compete on other things... You make sure that the price is sufficient for profitability. And that you know you always make a profit, you are not there for charity. But your focus should always be on value. If people value it then they can pay anything but if they don't value it no matter how cheap they don't care. "*

Regarding the Branding, the 5th step of the 3rd stage of the SCT, Altuntas explicitly states that the quality of the product/service offered is of crucial importance, and especially when one is at the phase of growing one's business; in other words, in order to create a successful brand, it is imperative to value the quality of the product/service delivered.

Regarding the quality of the services and/or product one offers, the interviewees believed that it is an important factor to consider. Altuntas also paid close attention to the quality of the product/service, so that his brand was paired with a high quality product/service, as evident in the SCT (e.g. Stage 3, step 6 Institutionalization). However, one interviewee mentioned that it depends on the market demands. That is, because the quality of the product elevates pricing, if the market "asks" for a cheaper product with lower quality, instead of a more expensive one but with better quality, then that is what the company should offer:

*"...if the market wants cheaper price with less quality, we sell cheaper price with less quality. Of course, we must tell the market what is the quality we are talking about. We cannot say the market this is really good but in reality is really bad."*

This balance between pricing and quality is also evident in the following:

*"...So, pricing...I think, you know, you have to maintain a balance, you don't want to come up with some extremely high quality but no one wants to buy it. It has to be balanced."*

According to the SCT, the pricing of the product should match its exact nature and quality. However, if one is to maintain high product/service quality, as the SCT suggests, then the price would be equally high and this could become a barrier if the target market cannot afford such a price.

The product has another important feature that one must take into consideration when creating a start-up: Its innovative aspects. According to the SCT, described in step 2 (Innovation), a product cannot succeed in a market if it is not innovative or if it does not at least has an innovative feature. Innovation is considered by most interviewees as an important aspect of a newly launched product. As one interviewee puts it:

*"Innovative product or service is very important, because of the competition. There are so many products in the market, so your product has to be something innovative."*

Additionally, according to another interviewee:

*"So, you are small and not innovating. How do you survive? I mean you are in an ocean full of sharks, but if you are innovating, all you are finding is swimming in a blue ocean all alone with your new idea. Of course you still have to be very fast because it doesn't last too long, any new idea is old at some people. But if you have innovation and speed if you look at the most fantastic companies of the world they had the combination of innovation and speed."*

In a similar though slightly different vein, another interviewee states that while it is important for the product of a start-up to be innovative, it is not a prerequisite for its success. On the other hand, innovation of a product can also have its drawbacks: According to the following quote, offering a completely innovative product/service does not automatically mean that it will succeed. It entails the danger of not being accepted by the market due to its highly innovative nature: The entrepreneur in such a case cannot make any assumptions a priori regarding the product's rate of acceptance, since it is introduced in the market for the first time, thus rendering the market's reactions to the product unknown.

*"It was an aspect that was different because what we did had not been tried before by anybody so we made a new market. Remembering now I've had different... I have not one product. I'm on my 7th company... To what I'm thinking about, we were making the market, nobody had ever done it before, nobody even understood what we were trying to do so we had to find a guinea pig and because it was an area that required government regulation. We had to convince the people in government to let us try and so on".*

In line with the above argument, another interviewee prefers to offer a less innovative product, but with a target market "ready" to buy it:

*"It is the market. I can find a very innovative product but the clients do not want to buy the product so what does it matter. So for me it is the clients, it's the market that gets to say if it is good or not. I prefer to invest in a non-innovative product but with market, with clients, with sales, with profits; than to invest on the most innovative product in the planet that no one buys it"*

## Marketing

According to one of the interviewees, marketing should not be considered simply as a tool to attract customers' attention but also as a communication channel through which messages will be exchanged between the marketing team and the customers. That kind of constructive conversation allows both the start-up's management team and the customer to receive valuable feedback and information. Such marketing efforts can be carried out through the use of social networks such as Twitter and Facebook. Additionally, the attendance to networking events and the personal hosting of such events have been proven to be vital assets to a start-up's success. Finally, the feedback acquired by all of the methods that are mentioned above should be used in a constructive and positive manner by the business. As an interviewee quotes:

*"Right from the beginning because I don't see marketing just as convincing people to buy. I see marketing as a conversation between you and your customers. Okay, and the most important part of marketing is the feedback you get from customers... I have over 4,000 followers on Twitter, I'm on Facebook, I'm on Instagram, I'm on also some media, I attend network events. You know physically I host some myself. "*

Another interviewee believes that the product should be introduced to the market even before the establishment of the company, so as to ensure the interest of potential clients early on.

*"...They should market the product before they start producing; getting the potential clients, getting pre-orders, getting orders from the market and understanding what the market wants. Is not to produce and then let's see what the market wants".*

The SCT also values the marketing process (step 4). However, it perceives it from a different viewpoint: The entrepreneur should personally be involved in the marketing process, both the planning and the marketing activities, and he/she should invest in the suitability and quality of the marketing products rather than their quantity.

## The knowledge

An interviewee expresses his belief that people who are interested in founding a business need to have at least some technical knowledge and experience around the field they wish to enter.

*"So, in terms of valuing/evaluating the presentation of a company, I have a big team.... I, personally, ask two things, and look for two things. .... which is a domain expertise. I go and ask by detail is not in a macro-level, have you really done it? If not necessarily the same thing but either your ability expertise or some kind of technology experience, some kind of experience ..... that is number one."*

However, the SCT does not put forward explicitly the importance of the team having particular knowledge in the business field they start up.

## The company

As mentioned above, the notion of the company involves the location, the finances, the funding, the franchising, the branding and the management of a business, all of which are considered crucial to start-up success.

Regarding the location, most interviewees agree that it depends on the product:

*"if it is food, you want to put in a street where there are tons of people passing by. If it's a business to business project you don't need to be in a very good location. Location is really important for business to consumer project but not so much for business to business"*

Also:

*"Office, no. It used to be... Increasingly it's less relevant. It's more having the right space. Location can be important for some things ... office is important if it's important to your customers.... If the customers want proximity and all of that then yes. But that's no longer an office. That's the store front. "*

Yet for another interviewee, location by itself does not matter in regard to the success of a start-up. Instead, it is the availability of the company that matters, as also described by the SCT:

*"I mean office location; we have never seen that to be measured as contribution in success. So I guess a simple answer is that I haven't seen that. I guess just being available to customers is the most important. Where you are situated hasn't mean relatively important."*

According to the SCT, the location of the company, whether that is the office of the company or the retail shop, plays an important role and the entrepreneur needs to consider it before starting the business (stage 2, step 3 Entrepreneurship).

Regarding the funding, some interviewees believe that using idle capacity is a very good strategy for a start-up to evolve.

*"..for instance when I have an entrepreneur wants to do a prototype and asks twenty thousand Euros or twenty thousand dollars I tell the entrepreneur: -Hey, let's see which factories have the machines that you need and you work on the weekends. So instead of...okay, it takes two months or three months but you go there during weekends because the factory is not working and you can use the machines. So I call the owner, the business man and say: -Hey can you allow this entrepreneur to use your machines for this .....!"*

An additional interviewee further supports the value of using idle capacity when starting a business:

*"One of our assessments of how successful the idea is, is how capable you are of utilizing idle resources." Using idle capacity is clearly evident and highly recommended in the SCT (stage 1, step 1). Specifically,*

Altuntas highlights the importance of this skill of the entrepreneur:

*"Converting idle capacity to business is a very unique skill of successful entrepreneurs. Success is not dependent on the finance but rather depends on the skill to convert idle capacity to business. So, finance is not the first important module of the entrepreneurial success." (Altuntas 2014)*

The branding of the start-up is crucial as reported by the participants, who claim that the name of the brand should be easily recognised and to be memorised:

*"Branding is really important. If the name of the company is difficult for the people to memorize, if it is difficult for people to tell others, because the name of the company is so difficult so the referrals do not work so well. Even on Google search it will not show up because the person is putting a different name. And then when you scale up you have to make sure that the name is suitable for different countries"*

According to another interviewee:

*"Creating the brand is the most difficult part. Maintaining is difficult but not, once you are there ..... if you create the brand then you got to have clear plan, which way am I going to go, international or not? And then, selecting the right name and the branding plan should be there from day 1. But you do not have to spend money on that. But it should be there from day one. Every person you hire or everything that you do, it should be in the back of your mind, that you create a trust whether, as I said, it is people, employees or a new client their trust. The branding, basically, straps the trust you gained from day 1."*

The SCT espouses the participants' opinion about branding. Specifically, stage 3, step 5 is devoted to branding and its contribution to the success of the start-up. Franchising is another important factor that plays a role in a start-up's success, according to our participants. This is also stressed in the SCT (step 7, stage 3). However, there is a slight difference between the franchising that Altuntas puts forward and the one suggested by some of the interviewees. Altuntas strongly advises to disclose all the company's secrets to franchisees if you want franchising to succeed. By contrast, according to an interviewee, it is enough to give specific and detailed guidelines to the franchisee, without revealing the company's secrets.

*"I think franchising, obviously, you do not have to share everything. Basically franchising means, you give them a manual, and how to do business and an operation style. With franchising you maintain the branding, you maintain control. Basically, franchisees are execution partners. So, no."*

Another factor of importance regarding effective franchising, according to the SCT, is a detailed, well-written company manual. A participant was clearly in agreement with this:

*"So, as more and more and more business you do, without the manual you would be nowhere. Because, in many cases, you are not meeting face to face. So, you have to have a manual... and it has to be extremely transferable. So, to avoid stupid meetings, if you do not have that then it is chaotic, right?"*

However, according to another participant, a detailed company manual is not essential. Instead, what is needed is a manual with the necessary information:

*"Are we process-driven is what you are asking. Because there is a difference between being process-driven and being bureaucratic. Two different things. That's not. Being bureaucratic means everything is documented and you have to write. No, I'm not that kind of person. But am I process-driven? Which means you do things the same way each time, so that it can be repeated to the same standards and qualities, yes. But they are two different things. So not all processes are documented... We have the key ones that are needed and then ..."*

With respect to the management of a company, a participant suggests that every global company should be decentralized. However, one could keep a backup operation centralized, like creating a centre of excellence.

*"Every global company has to be decentralized... All you can do is to have a decentralized management but some backup operation can be centralized, to create a centre of excellence right? ... location... on place is finance, one place.. But, most of the management is decentralized and you have to plan like that otherwise ,... a legacy. If... a legacy then it is very difficult to fix... right at the beginning and so you are not fixing it later. It should... because that is how you work..."*

The issue of decentralization is also raised by another participant, who states the following:

*"Distributed I prefer. And this is personal preference now. I prefer empowering individuals so that the business can grow. So what you try and find is people who have a vision and an appetite for a particular aspect of the business and then you give them, empower them, let them grow the business and they will do more than you."*

A decentralized, or horizontal management, is further supported by the following interviewee:

*"What we do advise in the founders is a very early on from the first time we give them the first 20-50 thousand dollars is what they need to have a mental psychological detachment for management. What I mean by that is, it is a key that they do not get stuck up the need to be on individual man in this business always. Now, if you are also maturing and developing, then great, you will be the CEO of this company in 5 years. If you are not, it's not bad to step back a bit and bring in veterans individuals who can manage the corporate because again, the money cycle the more that you are rising funds the more the diligence demands is coming to you as a corporate... That management might be better managing horizontally and then is a cultural fit between what you want to do, what is the identity of the corporation. My back on at least, I always nominating push for horizontal management, as a faster more efficient way of delivering results, but at the end you going to a subject of theoretical thinking of what is the best and what it's not."*

Decentralization of the company is also very important for the SCT, as it is clearly evident in stage 3, step 6 Institutionalization.

Following is the step of Leadership, where the SCT describes what it means to lead one's own business and how this can be achieved. In particular, the author of the SCT believes that the entrepreneur should leave the position of the company's CEO as soon as it has grown substantially and act as a leader of the company on a different level than the CEO (e.g. acting as Business Development Manager trying to further develop the company and making social contacts that can reinforce that). According to an interviewee who commented on this, it is not necessary for the entrepreneur to actually lead the company but it depends on that person's knowledge and abilities related to the field, always having the company's best interest in mind.

*"It depends. Some businesses you want to keep the guy who has the vision because it depends on the type of vision it is. Some people have a vision all the way to the end, some people just have a vision on how, you know, this thing should work and they don't have an idea about business. Some people can learn business on the way, some people cannot. So there's no one size fits everybody. It would depend on the individual. Once there are human beings involved, it has to be case by case."*

The 9th and final step (Angel Investment) of the SCT states the reasons and the qualities required to become an angel investor. In addition, the SCT reports that studying the Angel Investment system is essential to become a successful BA. Similarly, though not identically, according to one interviewee's opinion regarding Angel Investment, becoming a successful BA requires relevant training.

*"It should first get some training on how to be a good "Business Angels", so there are lots of term-sheets and lot of things that the "Business Angels" must know to protect his or her investment. I advice them to take some training and start investing together with other more experienced Angels. That way he can learn and once he learns how to do it then he can do it by himself"*

## Discussion

This section sums up the results presented in the previous section. Regarding, Wannapreneurship (step 1 of the SCT), the use of idle capacity is described as an important strategy in creating a successful start-up. The analysis of the interviews shows that idle capacity is equally endorsed by the participants.

Continuing to Innovation (step 2), the SCT supports that if a product/service is to be successful, it must be either innovative or at least have an innovative aspect. The vast majority of our interviewees agree with this point. However, the interviews also express the concern that complete innovation may be fallible, as the market may not be ready to accept it, and it might be even preferable to invest in non-innovative products if there is a clear market demand for them. Thus it appears that the prerequisite of innovation of a product/service for the success of a start-up is not undisputed, in line with Maxwell, Jeffrey and Lévesque (2011) who emphasize the importance of a good market fit in a newly introduced product.

---

*Regarding Entrepreneurship (step 3 of the SCT), some basic features that the entrepreneur must pay attention to are the office's location (in a main street, easily accessible), the name of the company (one that sounds reliable and has the potential to become international) and the staff (with the ability to "attract" customers; although the value of the staff is further described in the next step). According to our analysis, the interviewees believe that it is the availability of the company to the customers that mostly plays a role and not necessarily the location. Regarding the name of the company, the participants equally endorsed its value. Finally, the suitability of the staff is also stressed as a factor greatly contributing to the company's success.*

---

In Marketing and Sales (step 4 of the SCT), the SCT stresses how important the marketing process is, thus rendering the involvement of the entrepreneur necessary. Furthermore, according to the SCT, an entrepreneur should particularly invest in suitable and quality marketing products. While interviewees agreed on marketing being an important process in the success of a start-up, some particular aspects were pointed out such as the feedback received from the customers through the marketing tools as well as the importance of marketing the product/service even before the launch of the company itself. In addition, the competitive sale skills of the relevant staff were underlined. The participants did not

mention anything about the involvement of the entrepreneur in the marketing process, and hence we cannot draw any conclusions about it. In addition, the participants appreciated the importance of competitive sales skills on behalf of the staff as well as the value of the team. Knowledge of the individuals composing the team is another characteristic the participants value, although not explicitly mentioned in the SCT. Finally, certain characteristics of the founder, who is also a part of the team, such as passion and dedication to the goals of the start-up, are valued equally by the SCT and the participants.

Moving to Branding, (5th step) the SCT endorses its high importance as well as the crucial role of the product's/service's quality that contributes to creating and maintaining a successful brand. On the whole the participants appear to agree on the importance of the product's quality and they also report a trade-off between quality and pricing, something which is also highlighted by the SCT.

Regarding Institutionalization (step 6), the decentralization of the management of a grown business is described as an important step towards its success, something that the participants clearly endorsed.

The 7th step of the SCT includes Franchising, which according to the SCT involves - among others - a detailed company manual and revealing all of the company's secrets to the franchisees. The value of such a manual was also stressed by the interviewees, but there was also concern expressed that not all details need to be revealed in a company's manual.

Leadership (8th step of the SCT) describes how the founder of the start-up can lead his/her business. One participant commented that, contrary to the SCT, it depends on whether that person does or does not have the characteristics necessary to become a company leader.

Angel Investment (9th step of the SCT) describes the reasons for becoming an Angel Investor and the qualities which are required. In addition, studying the angel investment system before becoming a BA is a prerequisite according to the SCT. Similarly, one participant who commented on Angel Investment believed that relevant training is required to become a successful BA.

There were also two factors that were not included in the SCT but emerged as important in the success of a starting company: The market to which the product/service is introduced and meeting the deadlines. Regarding the market, a participant suggests:

*"The first and the most important is the proposition to the market. The second is the market itself. So the customer's ability to purchase and to buy within that market. So the market dynamics. So the idea which is the proposition and then the people which is the market itself that you're trying to sell into are the first two."*

Regarding the ability to meet strict milestones, according to a participant the pace that business is conducted nowadays is lightning fast and it can be fairly challenging for a start-up to keep up with. Therefore, the speed and the efficiency with which a start-up achieves its milestones are essential to its success:

*"And one more...The pace... How quickly or how slowly you do things ... Because there's some things that if they are not done just in the right time, you miss..."*

The importance of meeting the milestones timely is also underlined by the fact that, according to the same interviewee, entrepreneurs, as opposed to businessmen, heavily rely on a highly strict and specific timetable which is usually composed of short and medium-term milestones.

In a broader sense, timing seems to be an important factor. As another participant highlights timing of introducing a new business is crucial for its success: *“Timing is one of the most crucial things. You have to select the right time. If you are too early, is not good. If you are too late, it is terrible that. Today, timing is counting only in a matter of a year or two.”*

Yet another interviewee underlines the role of timing as crucial in the success of a start-up, by referring to the long time it may take to complete the legal framework of a start-up, which may prove devastating for the start-up.

*“Companies need license to operate in a certain market. These licenses may take more time than expected and instead of staying there, of going to the market in one and half year, the company can be ready to go to the market in three years or four years; and this will mean the company will need more cash, and if there is no more cash from the investors then the company will be bankrupt. So, there is this legal risk that the companies should take care of. One for instance is freedom to operate, if the company is free to operate in a specific market or not. So they should mitigate this risk”.*

From the aforementioned statements, it becomes evident that timing is an important factor to consider when starting an entrepreneurial activity.

## Conclusion and future work

The initial analysis of the interview data that was presented herein, shows that the majority of the steps described by the SCT are also valued by the interviewees. However, there are also divergent opinions about some aspects of the steps included in the SCT. These are related to the quality of the product, the disclosing of all of the company's secrets, the staff's knowledge of the business field, the level of innovation of the product/service, the location of the business' office and the level of detail in the company's manual. Finally, the nature of the market in which a product/service is launched, which appears to contribute to the success of a start-up, is not mentioned at all in the SCT. Nevertheless, the SCT is the first one, to our knowledge, that is experience-based and has been formulated based on a successful real-case example, compared to related models which are traditionally first formulated in theory and then validated on their efficiency in predicting start-up success. To this end, our work focused on empirically investigating whether other experienced and successful entrepreneurs share the same ideas as the SCT regarding the factors that contribute to the success of a start-up.

One limitation that should be mentioned is the rather limited number of interviewees. This stems from the high quality of the sample on which we chose to carry out this research, namely BAs and VCs with extensive experience in entrepreneurship and at least 3 exits. In addition, the limited scope of the questions might have excluded some potentially interesting opinions of the interviewees, although the chosen format of semi-structured interviews allowed for other topics to emerge. However, the set of questions was chosen to reflect the SCT, which is the main scope of this research, and to fit in the tight schedule of the interviewees.

As it has been previously mentioned, this paper reports on ongoing research of validating the SCT. The analysis of the initial results demonstrates a convergence of the interviewees views with the SCT. In order to further strengthen the validation of the SCT, future work will be carried out. It involves additional quantitative analysis using questionnaires distributed to a larger number of participants bearing the same qualities as the interviewees, namely, experienced VCs managers and BAs with successful “exits”.

## References

Acs, Z. J., & Armington, C. (2003). *Endogenous growth and entrepreneurial activity in cities*. Washington, DC: Center for Economic Studies, Bureau of the Census.

Altuntas, B. (2014). *Off the bus- into a supercar*. New York: Balboa Press.

Audretsch, D.B. & Fritsch, M. (1996). *Creative destruction: turbulence and economic growth*, in E. Helmstädter & Perlman, M. (eds.), *Behavioral Norms, Technological Progress, and Economic Dynamics: Studies in Schumpeterian Economics* (University of Michigan Press, Ann Arbor), 137-150.

Audretsch, D. B. & Fritsch, M. (2002). Growth regimes over time and space, *Regional Studies*, 36 (2), 113-124.

Audretsch, D. B. & Keilbach, M. (2004). "Entrepreneurship capital and economic performance," *Regional Studies*, 38 (8), 949-959.

Audretsch, D. P., Thurik, A. R., Verheul, I. & Wennekers, A. R. M. (eds.), (2002). *Entrepreneurship determinants and policy in a European – US comparison*. Boston, Dordrecht: Kluwer Academic Publishers.

Beaver, W. H., McNichols, M., & Rhie, J. W. (2005). Have financial statements become less informative? Evidence from the ability of financial ratios to predict bankruptcy. *Review of Accounting Studies*, 10 (1), 93-122.

Blank, S. (2013). Why the Lean Start-Up changes everything. *Harvard Business Review*, 63-72. Retrieved July 5th, 2016 from <https://hbr.org/2013/05/why-the-lean-start-up-changes-everything/ar/1>

Blank, S. G., & Dorf, B. (2012). *The start-up owner's manual: The step-by-step guide for building a great company*. Pescadero, Calif: K & S Ranch, Inc.

Breitzman, A. & Hicks, D. (2008). An analysis of small business patents by industry and firm size. *Small Business Research Summary No.335*, SBA,Office of Advocacy, United States

Carayannis, E.G. & Campbell, D.F.J. (2009) "Mode 3" and "Quadruple Helix": toward a 21st century fractal innovation ecosystem. *International Journal of Technology Management*, 46 (3/4), 201-234.

Carayannis, E. G., Popescu, D., Sipp, C., & Stewart, M. D. (2006). Technological learning for entrepreneurial development (TL4ED) in the knowledge economy (KE): case studies and lessons learned. *Technovation*, 26 (4), 419-443.

Caree, M. A. & Thurik, A. R. (2003). The impact of entrepreneurship on economic growth. In Acs, Z. & Audretsch, D. (Eds.). *The International Handbook of Entrepreneurship Research* (pp. 437 – 471). U.S.: Springer.

Carter, R. & Van Auken, H. (2006). Small firm bankruptcy. *Journal of Small Business Management*, 44 (4), 493-512.

Cooper, A. C., Gimeno Gascón F. J., & Woo, C. Y. (1991). *A resource-based prediction of new venture survival*

and growth, in Wall, J. & Jauch, L. (Eds.) *Academy of Management Best Papers Proceedings 1991*, pp. 68-72. Miami Beach, FL: Academy of Management.

Cross, M. (1981). *New Firm Formation and Regional Development*, Farnborough: Gower.

Dechow, P. M., Ak, B. K., Sun, E. Y. & Wang, A. Y. (2013). *Do financial ratio models help investors better predict and interpret significant corporate events?* *Australian Journal of Management*, 38 (3), 553-598.

De Clarens, P. (2015). *Do financial ratios show true reflection of company performance?* Retrieved on 4 November, 2016 from [https://www.researchgate.net/post/Do\\_financial\\_ratios\\_show\\_true\\_reflection\\_of\\_company\\_performance](https://www.researchgate.net/post/Do_financial_ratios_show_true_reflection_of_company_performance)

Eesley, C. E. & Miller, W. F. (2012). *Impact: Stanford University's Economic Impact via Innovation and Entrepreneurship*. SSRN. <http://dx.doi.org/10.2139/ssrn.2227460>

Financial Times (2016). *Greece Debt Crisis*. Retrieved September 15th 2016, from [https://www.ft.com/topics/themes/Greece\\_Debt\\_Crisis](https://www.ft.com/topics/themes/Greece_Debt_Crisis)

Freeman, J. & Engel, J. S. (2007). *Models of innovation: Start-ups and mature corporations*. *California Management Review*, 50 (1), 94-119.

Fritsch, M. (1997). *New firms and regional employment change*, *Small Business Economics*, 9 (5), 437-448.

Gartner, W. B., Starr, J. A., & Bhat, S. (1998). *Predicting new venture survival: An analysis of "Anatomy of a Start-up"*. Cases from INC magazine. *Journal of Business Venturing*, 14 (2), 215-232.

Hamel J (1993). *Case Study Methods. Qualitative Research Methods*. Thousand Oaks, CA: SAGE.

Hecht, J. (2014). *Are Small Businesses Really the Backbone of the Economy?* Retrieved on September 15th, 2016 from <http://www.inc.com/jared-hecht/are-small-businesses-really-the-backbone-of-the-economy.html>

Huggins R., & Williams, N. (2011). *Entrepreneurship and regional competitiveness: The role and progression of policy*. *Entrepreneurship and Regional Development*, 23 (9-10), 907-932. Linton, K.O. (2006). *Access to capital in China: Competitive conditions for foreign and domestic firms*, *Journal of International Commerce and Economics*. [dx.doi.org/10.2139/ssrn.1031223](http://dx.doi.org/10.2139/ssrn.1031223)

Lloyd, P. E., & Mason, C. M. (1983). *New firm formation in the UK*. *SSRC Newsletter*, 49, pp. 23-24.

Loungath, P. (2015). *Do financial ratios show true reflection of company performance?* Retrieved on 4 November, 2016 from [https://www.researchgate.net/post/Do\\_financial\\_ratios\\_show\\_true\\_reflection\\_of\\_company\\_performance](https://www.researchgate.net/post/Do_financial_ratios_show_true_reflection_of_company_performance)

Lussier, R. N. (1996). *A start-up business success versus failure prediction model fro the retail industry*. *The Mid-Atlantic Journal of Business*, 32 (2),79-92.

Lussier, R. N. & Halabi, C. E. (2010). *A three-country comparison of the business success versus failure prediction model*. *Journal of Small Business Management*, 48 (3), 360-377.

Maxwell, A. L., Jeffrey, S.A. and Lévesque, M. (2011). Business angel early stage decision making. *Journal of Business Venturing*, 26 (2), 212-225.

Meszaros, G. (2016). What percentage of businesses fail? Retrieved September 16th, 2016 from <http://www.successharbor.com/percentage-businesses-fail-09092015/>

Nguru, A. (2016). Entrepreneurs and Small Businesses Spur Economic Growth and Create Jobs. The World Bank, retrieved on September 15th 2016, from <http://www.worldbank.org/en/news/feature/2016/06/20/entrepreneurs-and-small-businesses-spur-economic-growth-and-create-jobs>

OECD (2013). Summary report of an international workshop organized by the OECD and the Netherlands Ministry of Economic Affairs. Hague: Netherlands, Ministry of Economic Affairs. Retrieved on November 22nd 2016, from [https://www.oecd.org/employment/leed/INTERNATIONAL%20ECOSYSTEM%20WORKSHOP\\_SUMMARY%20REPORT.pdf](https://www.oecd.org/employment/leed/INTERNATIONAL%20ECOSYSTEM%20WORKSHOP_SUMMARY%20REPORT.pdf)

Onwuegbuzie, A. J. & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology*, 8 (5), 375-387.

Peters, L., Rice, M. & Sundararajan, M. (2004). The Role of Incubators in the Entrepreneurial Process, *The Journal of Technology Transfer*, 29 (1), 83 - 91.

Pompe, P.M., & Bilderbeek, J. (2005). The Prediction of Bankruptcy of Small-and Medium-Sized Industrial Firms, *Journal of Business Venturing*, 20 (6), 847-868.

Psaltopoulos, D., Stathopoulou, S. & Skuras, D. (2005). The location of markets, perceived entrepreneurial risk, and start-up capital of micro rural firms. *Small Business Economics*, 25 (2), 147-158.

Reynolds, P. (1987). New Firms: Societal Contribution versus Potential. *Journal of Business Venturing*, 2 (3), 231-246.

Reynolds, P.D. (1999). Creative destruction: source or symptom of economic growth? in Acs, Z. J., Carlsson, B. & Karlsson, C. (eds.), *Entrepreneurship, Small and Medium-Sized Enterprises and the Macroeconomy* (pp. 97-136). UK, Cambridge : Cambridge University Press.

Reynolds, P.D. & Miller, B. (1989). New Firm Survival: Analysis of a Panel's Fourth Year. *Frontiers of Entrepreneurship Research*, in Brockhaus, R. H. Churchill, N. A., Katz, J. A., Kerchhoff, B. A., Vesper, K. H. & Wetzel, W. E. ( eds.), pp. 159-172. Wellesley, MA: Babson College.

Rose, R. C., Kumar, N., & Yen, L. L. (2003). The dynamics of entrepreneurs' success factors in influencing venture growth. *Journal of Asia Entrepreneurship and Sustainability*, 2 (2), 1 – 22.

Rose, R. C., Kumar, N., & Yen, L. L. (2006). Entrepreneurs success factors and escalation of small and medium-sized enterprises in Malaysia. *Journal of Social Sciences*, 2 (3), 74- 80.

Rosenberg, N. (2006). Innovation and Economic Growth. *Innovation and Growth in Tourism*, 43-52, doi: 10.1787/9789264025028-4-en.

Shields, C. M. (2007). *Can case studies achieve the 'Gold Standard?' Or when methodology meets politics*. Paper presented at the Annual meeting of the American Educational Research Association, Chicago, USA, April 2007.

Siegel, D., Wessner, C., Binks, M., & Lockett, A. (2003). Policies Promoting Innovation in Small Firms: Evidence from the U.S. and U.K. *Small Business Economics*, 20 (2), 121-127. Retrieved from <http://www.jstor.org/stable/40229253>

Storey, D.J. (1982). *Entrepreneurship and the New Firm*. London: Croom Helm.

Small Business Administration (2014). *Advocacy: The Voice of Small Business in Government*. Washington, DC: U.S.

The Guardian (2016). Greece's economic crisis goes on, like an odyssey without end. Retrieved September 15th 2016 from <https://www.theguardian.com/business/2016/jan/04/greeces-economic-crisis-goes-on-odyssey-without-end>

Van Gelder, J. L., De Vries, R. E., Frese, M. & Goutbeek, J. P. (2007). Differences in psychological strategies of failed and operational business owners in the Fiji Islands. *Journal of Small Business Management*, 45 (3), 388-400.

Verbovskiy V.A., Poletaev D.A., & Chayka Y.A. (2014). Basics of successful start-up development in the field of innovation. *Journal of Economics and Social Sciences*, 5. [Available at URL: [jess.esrae.ru/8-101](http://jess.esrae.ru/8-101)]

Vivarelli, M. (1991). The birth of new enterprises. *Small Business Economics*, 3, 215-23.

Vliamos, S., Halkos, G. E. & Tzeremes, N. (2009). Small business performance: Seeking efficiency through knowledge based networks. *Int. J. Entrepreneurship and Innovation Management*, 9 (1/2), 47-67.

Wall Street Journal (2016). What's Derailing Greece's Plan to Sell State Assets? Its Own Government. Retrieved September 15th, 2016 from <http://www.greekcrisis.net/2016/10/whats-derailing-greeces-plan-to-sell.html>

Weiblen, T. & Chesbrough, H. W. (2015). Engaging with start-ups to enhance corporate innovation. *California Management Review*, 57 (2), 66-90.

Van Stel, A., M. Carree and R. Thurik, 2005, The Effect of Entrepreneurial Activity on National Economic Growth, *Small Business Economics*, 24(3), 311-321.

Wennekers, A. R. M., vanStel, A. J., Thurik, A. R. & Reynolds, P. D. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24 (3), 293-309.

Westhead, P. Wright, M. & Ucbasaran, D. (2001). The internationalization of new and small firms: A resource based view. *Journal of Business Venturing*, 16 (4), 333-358.

Williams, N., Vorley, T., & Ketikidis, P. H. (2013). Economic resilience and entrepreneurship: A case study of the Thessaloniki City Region, *Local Economy Journal*, 1-17.

The science of success

# INVESTIGATING AN INNOVATIVE METHODOLOGY CHARTING THE STEPS TO START-UP SUCCESS

Panagiotis H. Ketikidis, Aristeia I. Ladas, Fotis Gonidis,  
Andreas Baresel-Bofinger, Katerina Aichinger,  
Olga Athanasiadou, Maria Giorgalli, Rafaella Paradeisi,  
Arvesa Studenica & Kyriaki M. Tsigarida

<sup>1</sup>South East European Research Centre (SEERC)

<sup>2</sup>International Faculty of the University of Sheffield, CITY College

**Correspondence:**

E-mail: [pketikidis@seerc.org](mailto:pketikidis@seerc.org) Tel.: +30 2310 224186

South East European Research Centre (SEERC) - working paper 2016-17

[www.seerc.org](http://www.seerc.org)



The  
University  
Of  
Sheffield.



**CITY College**  
An International  
Faculty Of  
The University.