

EXPLORING THE DRIVERS OF INVESTMENT DECISION-MAKING IN ENTREPRENEURIAL PITCHES

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Abstract

Using 63 pitches held by entrepreneurs in front of potential investors, this study explores what drives the final investment decision in consequence of an entrepreneurial pitch. The results show that investors do not pay the same attention to all the characteristics of the ventures that are presented to them, but they have a special consideration for the entrepreneur and tend to disregard the financials. Furthermore, rejection is driven by the presence of combinations of flaws into the venture, while positive investment decision is the outcome of different mixes of flawless characteristics of the venture.

Foreword

I would like to thank my supervisors, especially Raja Singaram and Dr. Kraaijenbrink, for their guidance and continuous help, which went beyond their ordinary role and helped me bridging the physical distance from Enschede. I would have not reached this achievement without their experience and precious suggestions.

My family played a key role in supporting me during my studies, providing me with everything I needed to complete them successfully. This is the reason why today my thoughts are with my father and all the Women of my life.

Finally, my gratitude and a special dedication go to Serena, who sustained me during the whole process of writing this thesis, helping me with her patience and giving me strength whenever I seemed to lose faith.

*“Every little piece of your life
Will mean something to someone”*

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1. Introduction

New ventures foster innovation, creation of new jobs, and economic growth, so that they have a beneficial impact on the region they are embedded in (Pollack et al., 2012; Gilbert et al., 2006). While new ventures contribute to the economy and the wealth of their region, they have to survive a delicate start-up phase, in which they are vulnerable and they need to achieve growth as soon as possible. Growth has a different meaning to new ventures, compared to established ones: for a new venture, absence of growth means endangered survival, while established competitors have already reached viability and endurance (Brüderl et al., 1992). Access to financial resources is one of the vital requirements for a new venture, in order to sustain its activities and allow its growth beyond survival (Pollack et al., 2012). Thus, entrepreneurs have to seek for financial backing of their ventures in order to guarantee their survival and growth. In fact, most of the ventures incur a significant amount of expenditures before they manage to generate income. The cumulated losses cannot always be recovered by revenues only and ventures have to seek for external sources of finance.

23.7% of new ventures disappear within the first 2 years after foundation and 52.7% of them cease their activities within 4 years. The main reasons for this are bankruptcy and unsuccessful access to financing (Berger & Udell, 1998). Venture capital industry has financed ventures for 48.5 USD billions in 2013, representing one of the major sources of finance available to new ventures. Venture capital industry has already recovered its 2008 pre-crisis investment levels. United States account for 68% of the global activity, with Europe runner-up at 15% and China and India as emerging –but not steadily rising– markets (Ernst & Young - Global venture capital insights and trends 2014).

Pitching to potential investors is one of the most important activities performed by entrepreneurs seeking for financial resources for their ventures (Mason & Harrison, 2003). In their communication with potential investors, entrepreneurs have to both gain legitimacy and prove their uniqueness that leads to competitive advantage (Lounsbury & Glynn, 2001). Venture capital market is characterised by adverse selection, since investors cannot unanimously assess the quality of investments (Akerlof, 1970) and entrepreneurs may be tempted to misrepresent facts about their ventures in order to secure an investment (Rutherford et al., 2009). Entrepreneurs often have to present their ventures to investors through a short speech, in order to demonstrate credibility of the venture and its entrepreneurial team, and profitability of investing in the venture itself. Since the majority of the entrepreneurs are “inflating” the real characteristics of their ventures and investors cannot fully assess the true value of a venture, the investment market may not be favourable for the best ventures and attracts a low-quality offer. Given these considerations, entrepreneurs should deploy sensible efforts in developing their pitching skills, in order to overcome information asymmetry, opacity and uncertainty of the market they are dealing with. At the same moment, investors need to be careful in their decisions and gain a deeper understanding of their own evaluation methods.

Even if the practice of entrepreneurial pitching is established, it has received academic attention only after the beginning of the new century (Clark, 2008), with a still relatively small amount of

research. Studies dealing with entrepreneurial pitches are often embedded into the wider field of investment-decision making and are not yet forming an autonomous stream of research. The approach on the topic has always been descriptive, identifying criteria that lead to success of entrepreneurial pitches, but little is known about combinations of different criteria, the way they interact and the hierarchy between them. The same criticism can be addressed to literature on investment decision-making. Furthermore, even if the latter consists of a nourished stream of research, there is still a lack of live observation of decision-making.

Keeping in mind both theoretical and practical interests, it is worth to conduct further research on the topic, understanding what drives the outcome of an entrepreneurial pitch, aimed at raising funds from potential investors. It could be useful for entrepreneurs preparing a pitch, for investors receiving them, but also to contribute to a relatively new avenue of research. Entrepreneurs and investors can know more about the dynamics underlying the decision-making as a consequence of an entrepreneurial pitch, thus being more prepared to play their role. The literature on entrepreneurial pitching will benefit from a study that has a novel approach. Both the literatures on pitching and investment decision-making will get a contribution from a study that explores interactions between identified criteria and establishes a hierarchy amongst them.

The aim of this study is identify what drives the investment decision-making during an entrepreneurial pitch. In order to conduct this study, entrepreneurs and investors taking part to the UK TV show “Dragons’ Den” will be observed in a number of successful and unsuccessful pitches.

The main research question is:

What drives investment decisions during an entrepreneurial pitch?

This study will have a twofold approach. It will consider both successful (awarded with investment) pitches and unsuccessful ones. The main aim of the study can be split into two different but complementary streams: the first aim is to identify the criteria upon which investors reject an investment proposal, while the second one is identifying the criteria that drive the successful outcome of a pitch. The sample consists of 63 entrepreneurial pitches aired in the TV show Dragons’ Den UK.

The next section contains a literature review. It will investigate the theory on newly-established firms, presenting the liabilities of newness and smallness. Then, it will focus on resources available to firms and the resource-based view, with a particular regard to financial resources, which are the main, but not only, resources provided by investors to a new venture. The last part of the literature review will describe the ways to access financial resources and the current knowledge about investment-decision making and entrepreneurial pitching.

2. Literature review

This literature review will have a funnel approach, starting from the wide concept of liabilities of newness and smallness, and gradually narrowing the topic from section to section, reaching the core topics of this study: investors and the entrepreneurial pitch. The chapter will end with a recap of the conclusions obtained in each section.

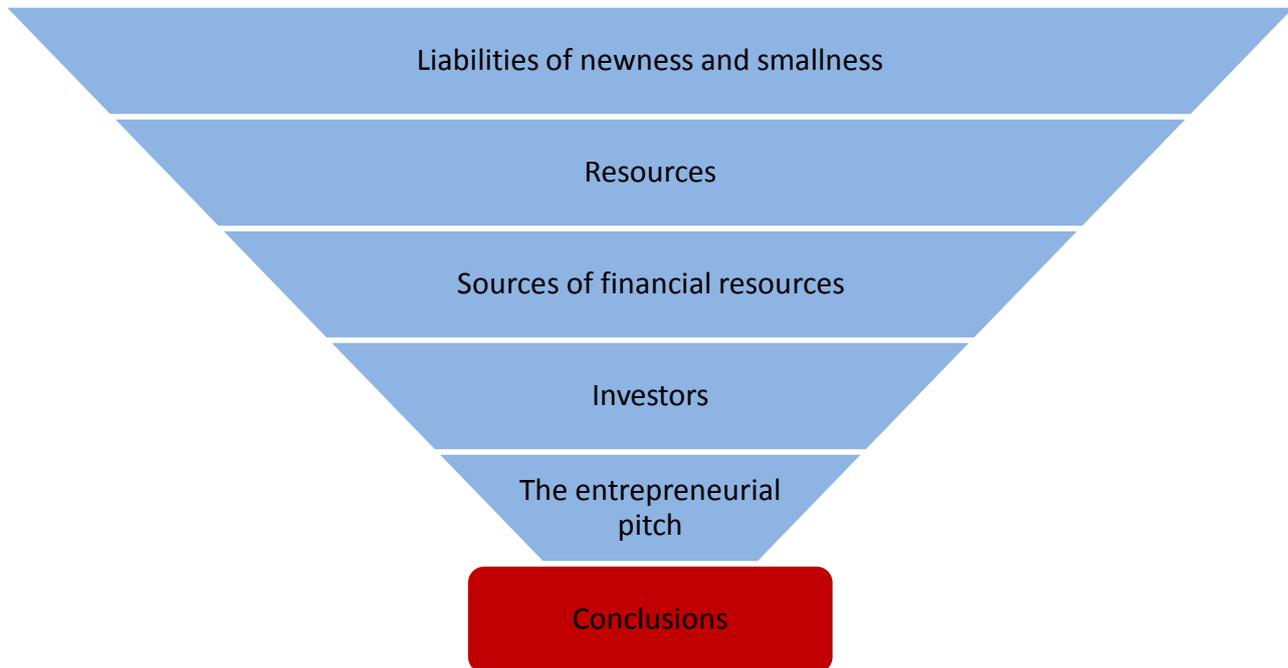


Figure 1: The literature review approach

2.1 Liabilities of newness and smallness

New ventures have to deal with several problems. Literature on this topic is wide. For this study, the starting point will be liabilities of newness and smallness that new ventures face. These two aspects lead them to struggle to attract resources, and thus to find it difficult to survive.

In his 1965 essay, *Social Structure and Organisations*, Stinchcombe analyses the way and the reasons why new ventures are born, evolve and, eventually die. Stinchcombe describes the construct of “liability of newness”, that predicts a high mortality rate in the first years of a new-funded firm that decreases monotonically with age. Several reasons for this phenomenon are identified. The first one is experience:

“New organizations, especially new types of organizations generally involve new roles, which have to be learned; [...] The process of inventing new roles, the determination of their mutual relations and of structuring the field of rewards and sanctions so as to get the maximum performance, have high costs in time, worry, conflict, and temporary inefficiency”

New ventures also have to build trust, both with future suppliers and customers, but also with the important stakeholders in their environment, like local governments. Trust is built with time, and, once achieved, it allows the venture to acquire new customers, gain a preferential treatment from suppliers or gain resources from regulators. Stinchcombe also argues that trust is crucial within the organisation itself, where it favours collective actions and decreases the incidence of conflicts.

Experience and trust are gained as time passes, decreasing monotonically the mortality rate of new ventures.

Freeman et al. (1983) confirm this theory through data coming from three very different industries: national labour unions, semiconductor electronics manufacturers, and newspaper publishing companies show a clear liability of newness in their start-up years. The rate of death is clearly higher for younger ventures in the three industries

Internal and external processes, i.e. the processes within the venture and outside it aimed at gaining trust and legitimacy, identified by Stinchcombe are not fully independent. As Suchman (1995) describes, companies may mimic internal structures and processes of well-established competitors in order to gain legitimacy towards the external world. Singh et al. (1986) explore the interactions between internal and external processes and their impact on liability of newness. Their findings suggest that external legitimacy significantly reduces the risk of death; that absence of external legitimacy voids the declining liability of newness predicted by Stinchcombe, and that losing external legitimacy can even revert this effect, increasing probabilities of death over time. On the other hand, internal organisational changes do not always correspond to an increase in death rate. Thus, the main focus for a new firm should be aimed at gaining external legitimacy.

Hannan and Freeman (1984) extend the liability of newness argument introducing a framework that contemplates also size's effect on survival. They state that, since selection favours organisations that have a higher inertia, bigger-sized organisations face a lower death rate compared to smaller ones.

A potential explanation to Hannan and Freeman's findings comes from Aldrich and Auster (1986), which list several obstacles faced by new ventures. Their lower brand recognition, compared to established competitors, forces them to have a higher spend in advertising. Existing organisations may be able to produce more cheaply; they can hamper the access to suppliers for newcomers or create other barriers for new entrants, like cartels. All of these obstacles have to be overtaken through a consistent deployment of resources. Aldrich and Auster (1986) also refer to internal processes, highlighting how new ventures have to invest resources to train their personnel, since they often fail to attract experienced workforce. They also have to pass a trial-and-error stage to identify "the most cost-effective and efficient ways of operating, for everything from plant layout to incentive systems for their employees". When these additional needs for resources are clear, the authors also add the so-called "liabilities of smallness". Even if some new ventures may not be small, because they can be born out of a well-established mother company, most of them actually are. According to Aldrich and Auster (1986), small firms need venture capital for several reasons, being them solving temporary cash flow problems or trying to catch opportunities they are unable to reach with their own seed capital. Their short-track records enhance uncertainty when externals have to evaluate their potential, as argued by Baum and Silverman (2004) and the venture capital they will eventually raise will be expensive, both in terms of interest and compromises with investors. On the other hand, well established competitors can borrow capitals at a lower rate. Thus, while new and small firms need more resources to overcome the hurdles

placed by their newness, they also struggle to attract them due to their small size; therefore, their death rate is higher compared to older and bigger companies.

It is now clear that new and small firms face an impelling need for resources and in the meantime struggle to obtain them. But what is meant by the term “resources” and why do they matter? The next section will present the resources available to firms and their effect on a firm’s performance.

2.2 The importance of resources

Barney (1991) addresses competitive advantage, introducing the VRIN framework, i.e. firms, in order to obtain a competitive advantage, must possess resources that are:

- Valuable: they must provide efficiency and effectiveness, neutralising external threats
- Rare: they cannot be simultaneously exploited by a large number of competing firms
- Imperfectly imitable: competing firms cannot obtain and identical resource
- Non-substitutable: there are no strategically equivalent resource that are not rare or imitable

Teece et al. (1997) widen Barney’s view introducing the concept of dynamic capability, “*the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.*” This concept shift the focus from the stable, long-lasting sustained competitive advantage hold by a firm (Barney, 1991), to a more continuous and evolving competitive survival.

According to the literature review depicted in table 1, resources available to firms can be divided into three main categories: social, human and financial capital.

	Social Capital	Human Capital	Financial Capital
Nahapiet & Ghoshal (1998)	X		
Adler & Kwon (2002)	X		
Davidsson & Honig (2003)	X	X	
Lado et al. (1992)		X	
Cooper et al. (1994)		X	X
Samila & Sorenson (2010)			X
Samila & Sorenson (2011)			X

Table 1: Literature review on resources available to firms

Nahapiet and Ghoshal (1998) define social capital as a threefold concept that has a structural, a relational, and a cognitive dimension. The first dimension deals with the personal connections between people and the structure of the resulting network. Relational dimension concerns the characteristics of each network tie, i.e. if it is a mutual respect or a friendship tie. Cognitive resources provide “*shared representations, interpretations, and systems of meaning among parties*”. Social capital allows for combination and exchange of intellectual capital, thus producing new intellectual capital (the knowledge available to a firm) and, eventually, competitive advantage for the firm. Firms foster intellectual capital creation by creating opportunities to make combinations and exchange, making them valuable and motivating employees to participate and making them capable of “absorb” the new knowledge.

Adler and Kwon (2002) provide another interesting definition of social capital: *“the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor.”* Similarly to Nahapiet and Ghoshal (1998), they identify opportunity, motivation and ability as sources of social capital. Social capital creates value through information access, power benefits, and solidarity. Adler and Kwon (2002) also underline how information, power and solidarity can negatively influence each other if not accurately balanced. For example, excessive solidarity can lead to group thinking and hinder the creation of new ideas.

Davidsson and Honig (2003) find support for three different hypotheses on social capital. First, individual social capital is positively associated with entrepreneurial discovery and with the probability of starting an entrepreneurial activity. Individual social capital is also positively associated with successful exploitation. There is also a weak association between individual social capital and the capability of generating profit. Davidsson and Honig (2003) also deal with human capital theory, which states that individual knowledge increases cognitive abilities, thus fostering productivity and efficiency (Schultz, 1961). They find out that human capital increases the probability of entrepreneurial discovery and that some of its aspects are positively correlated with successful exploitation.

Firms that possess, acquire or develop unique skills may survive and grow, and can perform better in acquiring external resources. Transformation-based competencies, i.e. those competencies related to the efficient conversion of an input into an output, lead to optimisation, development of scale/scope economies and optimal capital/labour ratio. The advantage coming from these three sources can be sustained only if the firm fosters creativity and idea flow. Output competencies allow the firm to better meet the expectations of its customers, deliver a higher quality product, and build an external reputation (Lado et al., 1992).

The relationships between three kinds of individual human capital of the entrepreneur (general, management know-how, and specific industry know-how) and the performance of a new venture are verified. Education, ethnicity and gender of the entrepreneur affect performance. A male, well-educated entrepreneur not belonging to a minority is the best combination. Management know-how has no significant effect on performance. Specific industry know-how is a significant determinant of performance. Experience and established contacts allow the entrepreneur to have a shorter “trial and error” phase. Cooper et al. (1994) also study the effect of financial capital on performance, finding that it has a positive effect both on survival and growth (Cooper et al., 1994).

There are different insights on the effects of venture capital on entrepreneurial activity. The supply of venture capital in a metropolitan area increases the creation of new firms locally. This is mainly due to two mechanisms. First, potential entrepreneurs are incentivised to start up because they include venture capital funding in their preliminary calculation. Second, a fallout effect: existing ventures inspire potential entrepreneurs to start their own businesses. Presence of venture capital in a region enhances also the correlation between public research funding and patenting. While research funding fosters academic research and the creation of new ideas, it is

venture capital to allow the ideas to develop. The availability of venture capital can also encourage researchers in embracing more radical innovations (Samila & Sorenson, 2010 and 2011)

Up to now, it is known that new and small firms are in need of resources in order to survive, but at the same time they struggle to obtain them. The resources a firm possesses are essential to build and maintain its performance and can be divided into social, human and financial. Each of these categories gives a different contribution, as just discussed. This study will have a special focus on financial resources, which are the most visible contribution given by investors to new firms. Hence, the next section will illustrate what are the sources of finance available to entrepreneurs. However, it has to be noted that investors are often contributing also with their social and human capital, i.e. making their know-how available to the firm and providing personal business connection to the firm itself.

2.3 Sources of financial resources

In order to survive, ventures have to pass the so-called “valley of death”, the period between the initial capital contribution (usually owner’s funds) and the moment in which they begin generating revenues. After the initial round of funding, ventures incur several costs while they do not generate significant income. Their cumulative profit/loss graph looks like a valley in which ventures die if they do not manage to secure financial resources in order to survive.

This section will quickly mention the sources of financial resources, with a deeper presentation of business angels and venture capitalists, the two main kinds of external investors for new firms and also the target of this study. There are several forms of financing for new ventures, like:

- Owners’ finance (Robb & Robinson, 2012; Berger & Udell, 1998; Davidsson, 2005)
- Crowdfunding (Mollick, 2014; Lehner, 2013; Burtch et al., 2013)
- Incubators (Clarysse et al., 2005; Markman et al, 2005)
- Grants (Schwartz & Clements, 1999; Lerner, 1999; Hall & Van Reenen, 2000)
- Bank loans (de Bettignies & Brander, 2007; Petersen & Rajan, 1994; Berger & Udell, 2006; Ueda, 2004)

It has to be taken into account that each firm faces a different mix of available sources of funding, according to the geographical position, the context and the economic environment it is embedded in (Lerner, 1999; Berger & Udell, 2006; Mollick, 2014).

Business angels and venture capitalists

Business angels “*tend to be private individuals, who often have started their own successful firms in the past and are now looking to invest some of their money and experience gained into a small entrepreneurial firm*”, while venture capitalists are “*professional investors of institutional money*” (Van Osnabrugge, 2000). Business angels usually invest in firms needing less than venture capitalists and in an earlier stage of development (ibid.). Venture capitalists aim at safer and more mature firms (Sapienza et al., 1996) and they usually have a more analytical approach in evaluating potential investments, based on due diligence (Wiltbank, 2005). However, given these differences, business angels and venture capitalists often co-invest in the same firms (Bonnet &

Wirtz, 2012), they invest sequentially or they exchange referrals and their interactions are often beneficial for the firms (Harrison & Mason, 2000). The presence of an angel investor increases chances to receive funding from venture capitalists, because the former provide assistance and networking to the firm and makes it ready for subsequent investments (Madill et al., 2005). When compared to bankers, business angels and venture capitalists have a closer approach in evaluating business opportunities (Mason & Stark, 2004). Venture capital funds are increasingly working together with business angels, investing in earlier stages of ventures, making the boundary between the category of venture capitalist and business angel more blurry than usual (Ernst & Young - Adapting and evolving - Global venture capital insights and trends 2014).

Given the similarities between the two categories, this study will focus on both business angels and venture capitalists, which will be referred as “investors” from now on. The next section will deal with business angels’ and venture capitalists’ decision process when evaluating a potential investment and with the means entrepreneurs have at their disposal to approach them.

2.4 Investors

This section will deal with business angels’ and venture capitalists’ decision process when evaluating a potential investment and with the means entrepreneurs have at their disposal to approach them.

Criteria used by Investors in their decision-making process

In this section, the main findings on investors’ decision process are presented. The focus is on criteria used by investors to evaluate proposals. Articles in table 2 are clustered by span, i.e. which particular moment or process of the whole investment decision the study focuses on. “Criteria identified” refers to the set of criteria that influence the decision and “Effect on” displays which particular aspect of the decision is influenced by the identified criteria.

Author(s)	Year	Methodology	Sample	Criteria identified	Effect on	Span
MacMillan et al.	1985	questionnaire	100 participants	entrepreneur's personality, entrepreneur's experience, characteristics of product/service, market characteristics, financial characteristics	investment decision	venture proposal evaluation
Hall & Hofer	1993	semi structured interviews and verbal protocol analysis	16 participants	PROPOSED BUSINESS: fit with venture capital firm requirements, characteristics of the proposal, characteristics of the entrepreneur/team, nature of the proposed business, economic environment of the proposed industry, strategy of the proposed business, financial information of the proposed business	investment decision	venture proposal evaluation

Muzyka et al.	1996	questionnaire	73 participants	Management team, Management competencies, Strategic-Competitive, Financial, Product-Market, Fund, Deal	evaluating potential investments	venture proposal evaluation
Petty & Gruber	2011	longitudinal archival data analysis	3631 deals	product, market, financial, management team, VC-specific	investment decision	venture proposal evaluation
MacMillan et al.	1987	questionnaire	67 venture capital firms, 150 ventures	entrepreneurial team, product/service, market, financial	future performance of the venture	venture performance evaluation

Table 2a: Literature review on investors' decision criteria

The first and biggest group of studies is focusing on “venture proposal evaluation”. Muzyka et al. (1996) studied effect is on the evaluation of potential investments, while all the remaining ones concentrate on the investment decision itself. It is possible to identify a group of criteria that will be recurrent in most of the mentioned studies, even if the wording may differ from time to time: entrepreneur (or management team), product, market and financials, the “big four”(MacMillan et al., 1985; Muzyka et al., 1996). The effect of the fit between venture capital firm requirements and proposed business is identified (Hall & Hofer, 1993); similarly, “venture capital-specific” criteria are detected (Petty & Gruber, 2011). The venture’s strategy is also mentioned as a criterion that influences the final investment decision by investors (Muzyka et al., 1996; Hall & Hofer, 1993). Observing the “venture performance evaluation”, criteria that correspond to the “big four” identified by the first group can be found (MacMillan et al., 1987). This study is evaluating the potential performance of a venture, but it could well be aggregated to the previous cluster, since evaluating potential performance indirectly means evaluating the proposal itself. The first outcome of the review of this cluster is the recurrence of the “big four” criteria on which the investment decision is based, with the addition of venture capital firm-related criteria. These studies have a descriptive approach and do not predict the effect of the single criterion on the final decision or a hierarchy between them. The only exception to this comes from MacMillan et al. (1985) and Muzyka et al (1996), which identify a predominance of entrepreneur/management team over the other criteria. This finding is, however, in contrast with Hall and Hofer (1993). Furthermore, the abovementioned studies do not analyse patterns of criteria configurations and their effects on decisions. Regarding the methodology used by these studies, Petty and Gruber (2011) chose a multi-year archival longitudinal analysis, while Muzyka et al. (1996) and MacMillan et al. (1985 and 1987) opted for questionnaires. Hall and Hofer (1993) had a slightly different approach, using semi-structured interviews and verbal protocol analysis. The latter methodology and, in a smaller extent archival analysis, gave the researcher the chance to work on real-time data, like oral expression for Hall and Hofer and extemporary annotations for Petty and Gruber.

Author(s)	Year	Methodology	Sample	Criteria identified	Effect on	Span
Lucey & Dowling	2005	literature research		feelings	equity pricing	decision-making

Table 2b: Literature review on investors' decision criteria

Conducting a study that spans on the whole investment decision-making, the effect of personal moods and feelings on investors' equity pricing is demonstrated. Therefore, investors are grounding their decisions not only on hard data, but also on their mood (Lucey & Dowling, 2005).

Author(s)	Year	Methodology	Sample	Criteria identified	Effect on	Span
Paul et al.	2007	interview	30 participants	entrepreneur, market, post-investment role, finance	proceed to negotiation or not	screening stage
Zacharakis & Meyer	1998	on-paper simulation	53 participants, 50 decisions	entrepreneur/team, product/service, market, financial	pass the screening stage	screening stage

Table 2c: Literature review on investors' decision criteria

The screening stage of the whole decision process is identified in the next cluster, made of two articles. Screening stage is the phase in which investors *“evaluate the ventures as they would during the initial screening stage of an actual decision and judge whether the venture will likely succeed or fail”* (Zacharakis & Meyer, 1998), or a stage in which the potential investor gathers all the possible data about the venture in order to ground the decision on a solid basis (Paul et al., 2007). Live observation of entrepreneurs is important, in order to avoid the so-called *“recall bias”*: people, even if experts in their field, tend to work on their memories and to rationalize them according to their mindset, adding a certain extent of bias to their reconstruction of events (Zacharachis & Meyer, 1998). Criteria to pass the screening stage correspond to the *“big four”*, with the addition of the post-investment role awaiting the business angels (Paul et al., 2007). Also Zacharachis and Meyer (1998) refer to the *“big four”*. Like argued for the previous group of studies, there is no exploration on the interactions between criteria and identifications of patterns of criteria and their effect on the decision. This cluster presents a segmentation of the whole decision process that was not contemplated in the previously mentioned studies. Zacharachis and Meyer (1998) posit the existence of a screening stage that precedes due diligence; Paul et al. (2007) describe five stages: familiarisation, screening, bargaining, managing, harvesting.

Author(s)	Year	Methodology	Sample	Criteria identified	Effect on	Span
Maxwell et al.	2011	verbal protocol analysis	150 pitches, 5 participants	adoption, product status, protectability, customer engagement, route to market, market potential, management experience, financial model	reject an idea	pitch
Clark	2008	questionnaire	3 pitches, 24 participants	PRESENTATION: clarity/understandability, level/type of information provided, persuasiveness of presentation/entrepreneur, personal characteristics of entrepreneur, structure	post-presentation interest in the venture	pitch

Table 2d: Literature review on investors' decision criteria

The next cluster of two articles has its span on a particular interaction between entrepreneurs and potential investors: the pitch. Literature on pitching will be also discussed in the upcoming sections, but these two articles have been included because of their analysis of the investment

decision following a pitch. The effect analysed is slightly different between the two of them: while Maxwell et al. (2001) verify whether a business idea is rejected or not, Clark (2008) studies the post-presentation interest in the venture. Maxwell’s criteria can be again linked to the “big four”, while Clark focuses on the presentation itself. Two interesting points can be taken out of these two studies. First, investors are influenced by presentation skills even if they are often unaware of it (Clark, 2008). Second, similarly to the previous cluster, a multiple-staged decision process in which a selection stage is followed by the actual investment decision is identified (Maxwell et al., 2001). Breaking the link with previous literature, Maxwell et al. (2001) observe interactions between entrepreneurs and investors live, and they hypothesize that investors apply elimination by aspects – described by Tversky (1972) – rather than rating each proposal on different criteria.

Author(s)	Year	Methodology	Sample	Criteria identified	Effect on	Span
Chen et al.	2009	laboratory experiment, field setting	51+55 participants	entrepreneur's preparedness	investment decision	business plan presentation
Mason & Stark	2004	verbal protocol analysis	3 business plans, 10 participants	entrepreneur, strategy, operations, product, market, finance, investor fit, business plan (as a whole) in the business plan	investment decision	business plan examination

Table 2e: Literature review on investors’ decision criteria

The last two studies deal with business plans (that will also be presented in an upcoming section), seeing their span on business plan presentation and evaluation. Consistently with the majority of the studies mentioned in this section, there is an appeal to the “big four” among other criteria on which a business plan is examined before investing in it (Mason & Stark, 2004). Preparedness exhibited during the presentation of a business plan, “*manifested in the verbal content and substance of a presentation*”, has a positive effect on the investment decision (Chen et al., 2009). These two studies, coherently with the others, highlight once again the “big four” on one side, and some other soft and irrational, generally unconsciously applied, criteria on the other side.

How to reach investors: business plan and pitch

This section will present two of the most common ways for entrepreneurs to approach potential investors: the business plan and the pitch. As it will emerge, often the pitch is a consequence of submitting a promising business plan. However, the two practices can be independent.

The business plan is a “document written to raise money for a growing company” (Mancuso, 1974), that contains a description of the venture, its products, its management team, and its finances, providing also forecasts for future developments (Rich & Gumpert, 1985). It may have several other functions, like motivating managers by setting goals (Delmar and Shane, 2003), gaining legitimacy by mimicking established practices (Honig & Karlsson, 2004), and enhance

planning and control inside the firm (Perry, 2001). However, its beneficial effects are widely debated and its beneficial effects are context-dependent (Brinckmann et al., 2010).

Recommendations for writing a good business plan include:

- not writing more than 40 pages, taking care of the external appearance of the document, make sound and backed projections (Rich & Gumpert, 1985)
- tailor the writing according to the needs of the reader, that, in most of the case, will not spend more than five minutes reading the whole document; be clear about the percentage of the company available for sale and the relative price (Mancuso, 1974)
- get feedback from trusted and expert outsiders (Timmons, 1980)
- do not overemphasise any of the aspects (marketing, finance, production and management) and do not exaggerate with optimistic financial forecasts (MacMillian & Subba Narashima, 1987)

Business plans are presented to potential investors by submitting them to venture capital firms, whose contacts are available on the internet, by using their social ties to reach investors (Shane and Cable, 2002), or by participating to business plan competitions (Kwong et al., 2012).

Companies whose business plans survive a first screening may be invited for live meetings, where entrepreneurs have the chance to present their business again through a presentation or pitch”, and answer eventual questions from investors (Payne & Macarty, 2002). This kind of meetings may be useful for investors and entrepreneurs to align on reciprocal expectations and perform a conjoint evaluation of the firm’s management team (Zacharakis & Meyer, 1998).

Typical questions investors seek answers for during a pitch are, according to Mason and Harrison (2003):

- "What does the company do?"
- "How big is the market?"
- "Who are the customers?"
- "What is the competition?"
- "What is the company’s [...] USP?"
- "How is the product/service a solution to the needs of potential customers?"
- "What is the route to market?"

Most of the investors suspend their final decision until they meet the entrepreneur live, but meetings can be a double edged sword, since trivial and non-business-related factors, like entrepreneur’s appearance, may affect the final decision (Zaharachis & Meyer, 1998)

The next section will discuss pitching in more detail, with a literature review that will identify what is the current status of research on the topic and what are the opportunities for further research.

2.5 The entrepreneurial pitch

Table 3 presents a literature review on the entrepreneurial pitch, the final destination of the theory part of this study. Elsbach's studies deal with pitching in general, while the other presented studies focus on the entrepreneurial pitch.

Autor(s)	Year	Methodology	Sample	Findings
Elsbach	2003	pitch observation	"dozens"	Three positive and four negative prototypes for pitchers
Elsbach & Kramer	2003	Interview, pitch observation	36 interviewees, 28 pitches	Pitchers are firstly associated to a prototype, then catchers match the eventual pairing to a winning or losing prototype
Mason & Harrison	2003	Real-time observation	1 presentation, 30 participants	Impression management skills affect investors' interest in financing a venture
Clark	2008	questionnaire	3 pitches, 24 participants	Not only hard data is influencing the decision to invest in a venture, but also presentation-related factors
Chen et al.	2009	laboratory experiment, field setting	51+55 participants	Perceived preparedness positively influences investment decision, while perceived passion has no significant effect
Mittiness et al.	2012	questionnaire	241 pitches, 64 participants	Perceived passion does influence the investment decision, but the effect is moderated by several investors' personal traits
Maxwell et al.	2011	Verbal protocol analysis	150 pitches, 5 participants	Investors use elimination by aspects to reduce the number of potential investments to be analysed in depth
Pollack et al.	2012	coding	113 pitches, 5 participants	The positive relationship between preparedness and amount of funding received is mediated by cognitive legitimacy

Table 3: Literature review on entrepreneurial pitching

"Humans can categorize others in less than 150 milliseconds. Within 30 minutes, they've made lasting judgments about your character" (Elsbach, 2003; Elsbach & Kramer, 2003). Building on this, the authors maintain that every pitcher is assigned to one out of seven human categories during a 30 minutes pitch in which their creativity is assessed. Three of these categories have positive connotations, denoting a good creativity, while the remaining four are characterised by a low creativity. When receivers of a pitch have no solid data to evaluate an elusive trait, like creativity, they rely on impressions and subjective criteria. The second study also evidences that, once a pitcher is positively rated, catchers rely on relational cues, such as collaborative potential, to further evaluate positively or negatively the content of the pitch.

Passing now to entrepreneurial-related pitches, it is proved that entrepreneurs' impression management skills affect investors' interest in financing a venture. However, investors with a background in the entrepreneurs' industry are less likely to be negatively influenced by impressions. Another interesting finding is that clearly illustrated and presented ventures are

evaluated and eventually rejected on business grounds, while poorly presented ones are rejected on presentational grounds only (Mason & Harrison, 2003).

On the same trend, also presentation-related factors, such as clarity, persuasiveness, style, structure, influence investors' interest in funding the presented firm. Anyway, investors are not aware of this or they are not willing to admit it and they state to rely only on business-related criteria to form their opinions (Clark, 2008).

The following two studies sustain arguments that are somewhat contrasting each other. Only the entrepreneur's preparedness, reflected in the quality of the business plan, influences investors' decision, but passion, defined as an *"intense affective state accompanied by cognitive and behavioral manifestations of high personal value"* has no effect on the final investment decision (Chen et al., 2009). On the other hand, perceived passion does influence the investment decision, but the effect is moderated by several investors' personal traits. Older investors, those that are more intuitive, or have a highly open personality, or those who are prone to mentor, experience a higher effect of perceived passion on their decisions. The effect is weaker for investors who are extraverted and those who have a promotion-dominated regulatory focus (Mittens et al., 2012).

Investors use elimination by aspects, based on business-related factors, to skim the business opportunities that are presented to them, and that after this selection stage, they use more subjective parameters to decide whether investing in the venture or not (Maxwell et al., 2005).

Pitchers' behaviours that denote preparedness are positively correlated to cognitive legitimacy, and the latter positively influences the amount of funding. Therefore, cognitive legitimacy mediates the relationship between preparedness and amount of funding (Pollack et al., 2012).

From this literature review it emerges that addressees of a pitch, when they have to evaluate subtle and evasive characteristics, often recur to mental prototypes and ground their judgment on subjective criteria. This can happen also when some parameters are measurable through consistent data, but the pitch is unclear to potential investors. Passion and transmitted by pitchers, even if the literature is not unambiguous on the matter, has a positive influence on investors' decisions. Literature is univocal in recognising the positive effect of perceived preparedness in the outcome of a pitch. At the same time, investors ground their decisions also on quantifiable data and they are not always inclined to recognise their irrational way of judging. These conclusions are really similar to the ones in the end of section 2.4, where the literature on investment decision process was discussed. Once again, there are highly rational, concrete and solid criteria on one side, like the "big four" and some subtle, elusive and unquantifiable criteria on the other side.

2.6 Conclusions

From this literature review it emerged that the approach to the topic of investment decision-making has always been descriptive, identifying groups of criteria on which decisions are based, but with little or no introspection on interactions between criteria or repeating patterns. In addition to that, only a few studies have observed the decision-process live; most of the literature is based on interviews or questionnaires.

The literature on pitching, likewise the one on decision-making, has identified several criteria, but there is still no comprehensive study on patterns of criteria and their effects on the outcome of a pitch. Apart from Elsbach and Kramer (2003) and Maxwell et al. (2011), that describe a multi-stage decision process, there is still not an overarching study that describes the mechanisms that lead to both positive and negative outcomes of a pitch. This study, through a micro-analysis of the pitch, aimed at identifying the abovementioned patterns, will investigate the whole process that leads to positive or negative outcomes of a pitch. The aim of the study is understanding what drives investment decision during an entrepreneurial pitch.

3. Research method

3.1 Sample

Dragon's Den UK

This study will analyse entrepreneurial pitches from Dragons' Den UK, a British TV show aired since 2005. See table 7 for a complete list of the analysed pitches. In the show, entrepreneurs present their business ideas to potential investors (the Dragons) in order to obtain finance in exchange of equity of their ventures. Entrepreneurs have to pitch their ventures and clearly state what amount of funding they are requesting and the correspondent level of equity offered. After an initial pitch, Dragons can interact with entrepreneurs, ask them questions and clarifications, and decide whether to make an offer or to refuse the deal, declaring themselves out. The initial pitch is usually lasting a few minutes in which the entrepreneur or the entrepreneurial team can pitch without interruptions. The pitcher can be supported by any possible visual or multimedia tool and, when possible, samples of the product are presented. In some occasions, more creative ways of presenting are used, e.g. entrepreneurs walking in costumes, dancing presentations or role playing in which potential investors are taking part. After this stage, Dragons quiz the entrepreneurs about several topics, including their background, the product, previous market performance and financial situation. If available, further material is presented, like received purchase orders, financial books, commercial deals, etc. The interaction stage can be very short, especially in all of the investors quickly decline the offer, otherwise it can take up to twenty minutes in the post-produced show. It has to be taken into account that the aired show is the result of a post-production work after which only the essential and most interesting interactions are shown.

Rules of the show

During the interaction phase, Dragons can call themselves out if they are not persuaded to invest in the venture. Usually, they are also refraining from further comments or interactions if they already called themselves out. Dragons have to clearly state the reason why they are walking away from the deal. The interactions continue until all the Dragons refuse the deal or make an offer to the entrepreneur, that is free to accept it or not. If interested in investing, Dragons offer an amount of financing and declare the percentage share they are requesting in exchange. It is possible to negotiate on the amount of funding or on the amount of equity. It is also possible to accept a combined offer by more than one Dragon, in case no Dragon is willing to offer the whole amount or two Dragons prefer to invest jointly, but no entrepreneur can accept an amount of financing lower than the initial request. When more than one Dragon offer the whole requested amount, it is up to the entrepreneur to choose one of the offers or negotiate the best deal for his or her venture. Dragons are not only offering funding, but also know-how, connections, experience and synergies. Dragons are not legally bind to invest in the venture after the show, as they can withdraw their offer for any reason, e.g. after performing due diligence.

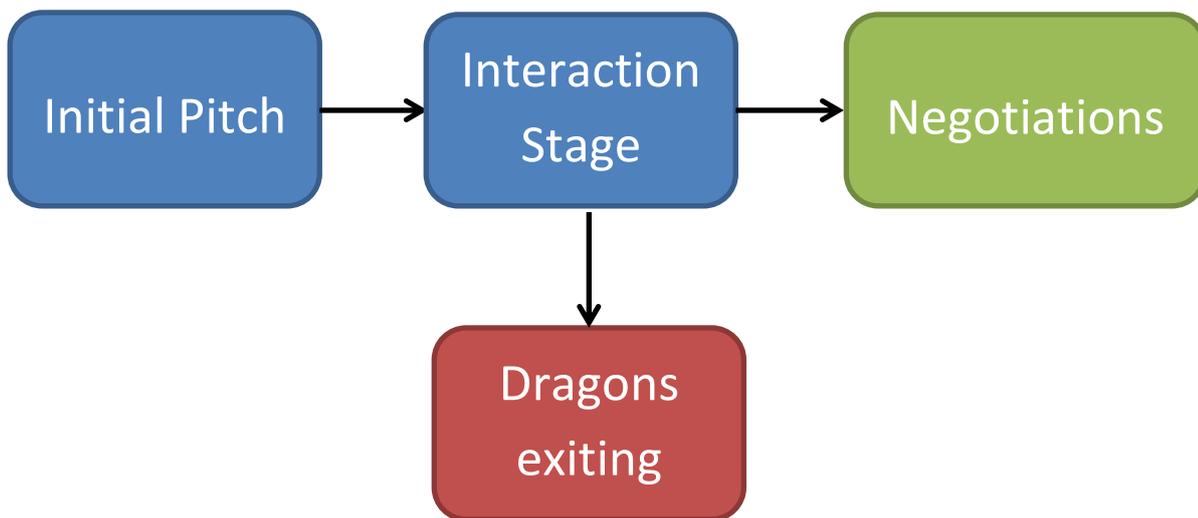


Figure 2: The pitching and interaction process at the Dragon's Den

3.2 Methodology

For each pitch, all interactions between entrepreneurs and Dragons are observed. All the reasons for non-investment are noted down. Reasons for non-investment may have a wide variety. Some investors may decline an opportunity because they are already involved in a similar business and this would lead to a conflict of interests, or they are not thrilled by the venture even if it can be promising, or they have ethical problems with the venture at hand. In other cases, Dragons are not investing because they spot a “fatal flaw” in the venture that is presented and they do not think the investment would pay back because the venture will eventually fail. Table 4 displays a presentation of some of the possible reasons for non-investment that can be encountered.

Reason for non-investment	Example	Reason for failure?
Ethical	The Dragon does not want to invest in a venture that could promote alcohol use between young people	No
Conflict of interest	The Dragon is already involved in a similar business	No
Lack of expertise	The Dragon considers another investor more suitable for the deal because of better expertise in the field	No
No willingness to beat another offer	Another Dragon has already made an offer that the investor is not willing to beat or match	No
No fascination	The Dragon is not thrilled by the industry in which the venture operates	No
Business valuation	The Dragon does not agree on the economical valuation of the venture	No
Presence of a flaw	The Dragon detects the presence of a flaw that will make it impossible for the venture to survive	Yes

Table 4: Reasons for non-investment

It is clear that only the reasons presented in the last row of table 4 indicate the presence of an imperfection that makes investors reject the deal and that will, eventually, lead the venture to fail. All the other reasons for non-investment, although having the same effect of letting the Dragon call himself or herself out, do not indicate that the venture is in danger of failing, but rather a mismatch between entrepreneur and investor. These kinds of reasons for non-investment do not imply a flaw or a weakness of the venture, thus they have a completely different nature when compared to reasons for failure. They are often linked to a particular turnout of events that occurs during the interaction stage or to the personal nature, expertise and business life of one of the Dragons. They can be extremely variable and they are not linked in any way to a judgment of the venture's potential by the investors. Reasons for failure are the only ones that discriminate between potentially successful and unsuccessful ventures and they are the only ones to be grounded on objective valuations of ventures.

This study will focus only on the reasons for failure. All the other reasons for non-investment will not receive further attention, since they do not imply an evaluation of the venture. Analysing all the reasons for non-investment together, without making the above distinction, would create a bias. Results driven by casual, contextual and personal evaluations have to be excluded from the study, focusing only on venture-related and objective assessments.

Among the reasons presented in Table 4, it is possible to deepen the focus on the reasons for failure, analysing their nature. Table 5 summarises this categorisation. As shown, reasons for failure always refer to the "Big Four" that emerged in the literature review. Dragons can either detect a "fatal flaw" in the entrepreneur, the product, the market or the financials of the venture.

Category	Example
Entrepreneur	<ul style="list-style-type: none"> • The Dragon thinks the entrepreneur is not skilled enough to lead the venture • The Dragon thinks the entrepreneur has no understanding of the market
Product	<ul style="list-style-type: none"> • The Dragon thinks the product is not satisfactory and cannot be improved • The product can be easily replicated and it is not patentable
Market	<ul style="list-style-type: none"> • There is not enough market for the product • Market is already saturated by bigger players
Financial	<ul style="list-style-type: none"> • The revenue model is based on wrong assumptions • The venture will not be able to recover the required investment

Table 5: Categorisation of reasons for failure

Pitch observation implies a particular attention given to the interaction stage, especially to the reasons for failure declared by the Dragons when calling themselves out. Reasons for failure are firstly recorded, then they can be assigned them to one of the "big four" previously identified in the literature review, as described in table 5. Observations can be collected in a four-column table, where each line is a presented pitch and there is a column for each of the "big four". Each pitch will thus have four Boolean variables that assume the value of 1 if the venture presents a reason for failure in the column's indicator. Also, the final investment decision is recorded as a Boolean

variable, which assumes the value of 1 if the venture succeeds to secure financing. The outcome of this process is presented in Table 8.

Pitch	Entrepreneur	Product	Market	Financials	Funding Result
Pitch A	0	1	0	1	0
Pitch B	1	0	0	0	1

Table 6: Example of two dummy pitches

Table 6 provides an example of the coding that will be performed. During the presentation of Pitch A, one or more Dragons rejected the deal because of a fatal flaw in the product, and one or more for financial reasons. Pitch A secured no investment. Pitch B saw one or more Dragons calling themselves out because of a “fatal flaw” addressable to the entrepreneur, but it succeeded in getting finance. It might be possible that during the presentations of Pitch A or Pitch B, some Dragons walked out because they lacked expertise in the industry or they were not willing to match an offer made by another Dragon. However, these will not be taken into account as they are not reasons for failure.

Once coding is complete, each case will be analysed singularly to draw the first general conclusions. Then, Qualitative Comparative Analysis will be used. This method overcomes the shortcomings of both case-oriented and quantitative methods. Followers of the first method are often accused of generalizing their findings that come from a small number of observations, while they criticize quantitative researches for ignoring the uniqueness of each case. Based on Boolean algebra, it allows identifying patterns in a group of observations and inferring logical implications from a relatively small number of cases. It is also a precious method to identify combinations of causes that generate an outcome (Ragin, 1987). This methodology is perfectly suitable for the study at hand. First of all, the number of observed pitches (63) sits between the small number of observations needed for a case study and the larger amount of observations needed for a quantitative one. In addition to this, Qualitative Comparative Analysis permits to identify trends and patterns out of observations, that is one of the main aims of this study.

3.3 Validity issues

It can be argued that a TV set might alter behaviours, making it unsuitable for academic research. A large number of studies have proved the generalizability of findings coming from TV shows observations. Pollack et al. (2012) and Maxwell et al. (2011) already used the Dragons’ Den and similar shows to perform their researches, while Post et al. (2008) demonstrated that risky decisions taken in a TV show do not differ from the ones in real life. Metrick et al. (1995) used “Jeopardy” to explore the effect of framing on decisions, Levitt et al. (2004) test theories on discrimination using “Weakest Link”, Hartley et al. (2014) use “Who wants to be a Millionaire” to study risk aversion, Gertner (1993) uses “Card Sharks” to study risk-taking behaviours, just to mention a few studies that deal with behaviours in TV shows. Applications span even into the medical field: Østbye et al. (1997) proved that the television series “ER” is a valid mean to teach methodologists about medical practices.

In addition to this, people participating in the show, either as Dragons or entrepreneurs, are making real decisions that will affect their lives outside the show. Dragons offer their personal

funds to entrepreneurs that are already operating with their ventures before participating in the show and are in real need of finance for their ventures. This should be a further support to the truthfulness of the decisions taken and the commitment of participants in defending their own interests during the show.

Two independent raters performed the coding. They coded every pitch individually and confronted the results afterwards. A pitch was able to be included in the final sample only if the results of coding of the two raters corresponded. As a proof of inter-rater reliability, only five pitches were excluded from the final results.

4. Results

As shown in Table 7, 63 pitches were analysed. Out of them, 32 did not secure an investment and 31 did. For each pitch, in case of successful result, the funding Dragons are reported. In 18 cases Dragons opted for investing solo, while the remaining 13 cases are joint investments between two Dragons.

Pitch	Description of product	Funding Result	Investor(s)
Bizzy Bits	Construction toy	Negative	-
Blooming simple	Personalised flower vases	Negative	-
BUKcase	Handmade Ipad case	Negative	-
Dot Range	Design electric toothbrush	Negative	-
Earcandi	Custom headphones and plugs	Negative	-
Easy Bulb	Smartphone-operated light bulbs	Negative	-
EasyLegs	Pneumatic stoveaway table for gardens	Negative	-
EasyLift	Drain cover lifter	Negative	-
Fat Lad at the Back	Oversized cycling garment	Negative	-
Frame Again	Online service for picture framing	Negative	-
Gourmet Trotter	Mobile luxury picnic hamper	Negative	-
Gousto	Online food sale	Negative	-
Graffitiartist.com	Wallpapers made out of graffiti art	Negative	-
Hornit	Loud bicycle horn	Negative	-
Karisma Kidz	Children toys to improve self-esteem, emotional intelligence and positive attitude.	Negative	-
Morella	Umbrella cup holder	Negative	-
Nappies to Go	Nappy recycling service	Negative	-
Norfolk Cordial	Luxury non-alcoholic fresh fruit cordials and drinks	Negative	-
Pimped-up stick	Alarmed LED lightweight walking stick	Negative	-
Purl Alpaca Design	Alpaca wool wedding dresses	Negative	-
Rio - Taste of Brazil	Brazilian cooking sauces	Negative	-
Scrubbys Crisps	High-quality crisps	Negative	-
Snugglebundl	Baby lifting wrap usable as a blanket	Negative	-
Spice to Go	Indian cuisine takeaway	Negative	-
Stunt City	Mobile gaming	Negative	-
The Makery	Workshop to create your own puppet	Negative	-
The Wild Peanut	Flavoured peanut butter	Negative	-

Pitch	Description of product	Funding Result	Investor(s)
Treatmentsaver.com	Website for saving on medical treatments	Negative	-
Ukick	Feather kicking shuttlecock	Negative	-
Urban Coco	Glamour magazine	Negative	-
WeSold.co.uk	Pay per view estate agency	Negative	-
Yu Yu	Long hot water bottle	Negative	-
Baggers Originals	Children's rainwear	Positive	Peter Jones and Deborah Meaden
Bare Naked Foods	Low-carb, low calorie, gluten-free noodles and pasta	Positive	Peter Jones
Bobo Buddies	Backpack, pillow and blanket in one.	Positive	Peter Jones and Deborah Meaden
Clean Heels Ltd	High heel attachments to prevent sinking in grass and damage to floors	Positive	Deborah Meaden and Kelly Hoppen
Enclothed	Men's online clothing and delivery service	Positive	Piers Linney and Kelly Hoppen
EnergyEGG	Energy-saving automatic sensors to switch off appliances when not needed	Positive	Piers Linney
Equisafety Ltd	High-visibility clothing and gear	Positive	Piers Linney and Duncan Bannatyne
Grip It Fixings	Plasterboard fixings	Positive	Deborah Meaden
iGlove	Touch screen gloves	Positive	Duncan Bannatyne
JK Worldwide (PlayAway Case)	Children's suitcases and games system combined	Positive	Duncan Bannatyne
Just For Tiny People	Handcrafted tents and accessories	Positive	Deborah Meaden
Lost my Name	Personalised children's books	Positive	Piers Linney
Mainstage Travel	Package holiday tour operator	Positive	Piers Linney
minicabit	Website and mobile phone app for booking and comparing mini-cabs	Positive	Peter Jones and Deborah Meaden
Original Jerky	Flavoured beef jerky snack	Positive	Peter Jones
Pants On Fire Games Limited	Board games and party games	Positive	Peter Jones and Duncan Bannatyne
Phom Teas	Loose leaf tea	Positive	Kelly Hoppen
RemPods	Small pop-up rooms set up from past decades used to calm people who have dementia	Positive	Deborah Meaden and Peter Jones
Reviveaphone	Repair kit for water-damaged mobile phones	Positive	Kelly Hoppen
Skinny Tan	Naturally derived tanning lotion and cellulite-reducing cream	Positive	Piers Linney and Kelly Hoppen
Skribbies	Kids' shoes which can be drawn on	Positive	Piers Linney and Kelly Hoppen

Pitch	Description of product	Funding Result	Investor(s)
Spoon	Breakfast cereal	Positive	Deborah Meaden and Peter Jones
Swing Patrol London	Swing dancing classes in London	Positive	Deborah Meaden
The Little Coffee Bag Co.	Coffee bag company	Positive	Peter Jones and Deborah Meaden
The Running Mat	Portable wearable exercise mat and boot-camp business	Positive	Deborah Meaden and Kelly Hoppen
Umbrands	Nanotech suction technology (UK distribution rights)	Positive	Duncan Bannatyne
Victor's Drinks	Make your own cider	Positive	Duncan Bannatyne
Vini & Bal's Rustic Indian	Chilled, fresh Indian cook-in sauces	Positive	Piers Linney
Yee Kwan	East Asian ice cream and sorbet company	Positive	Deborah Meaden
YogaBellies	Franchise business for yoga classes for pregnant women and mothers and their babies	Positive	Duncan Bannatyne
Young Ones	Clothing and accessories company aimed at university and college students	Positive	Duncan Bannatyne

Table 7: Pitches analysed

Table 8 shows the results after coding. The presence of a 1 in any column from Entrepreneur to Financials indicates at least one Dragon refusing the deal because of a reason for failure in the given category for that pitch. Funding Result = 0 implies no investment from any Dragon and Funding Result = 1 indicates investment. All the ventures whose pitches did not secure an investment present a reason for failure in at least two different categories. Wesold.co.uk, Treatmentsaver.com, Frame Again, Ukick and The Makery present flaws in three different categories and did not manage to obtain an investment. Successful pitches are either flawless or present a single reason for failure. The six exceptions are Skribbies, Pants On Fire Games Limited, Yogabellies, Young Ones, Vini & Bal's Rustic Indian, and EnergyEGG, which present at least two different reasons for failure.

Pitch	Entrepreneur	Product	Market	Financials	Funding Result
Bizzy Bits	0	1	1	0	0
Blooming simple	0	1	1	0	0
BUKcase	1	1	0	0	0
Dot Range	0	1	1	0	0
Earcandi	0	1	1	0	0
Easy Bulb	0	1	1	0	0
EasyLegs	0	1	1	0	0
EasyLift	0	1	1	0	0
Fat Lad at the Back	0	1	1	0	0
Frame Again	0	1	1	1	0
Gourmet Trotter	0	1	1	0	0
Gousto	0	1	0	1	0
Graffitiartist.com	1	0	1	0	0

Pitch	Entrepreneur	Product	Market	Financials	Funding Result
Hornit	0	1	0	1	0
Karisma Kidz	0	1	1	0	0
Morella	0	1	0	1	0
Nappies to Go	1	0	1	0	0
Norfolk Cordial	0	1	1	0	0
Pimped-up stick	0	1	1	0	0
Purl Alpaca Design	0	1	1	0	0
Rio - Taste of Brazil	0	1	1	0	0
Scrubbys Crisps	0	1	0	1	0
Snugglebundl	0	1	0	1	0
Spice to Go	1	1	0	0	0
Stunt City	1	0	1	0	0
The Makery	1	1	1	0	0
The Wild Peanut	0	1	0	1	0
Treatmentsaver.com	0	1	1	1	0
Ukick	0	1	1	1	0
Urban Coco	0	1	1	0	0
WeSold.co.uk	0	1	1	1	0
Yu Yu	0	1	1	0	0
Baggers Originals	0	0	0	0	1
Bare Naked Foods	1	0	0	0	1
Bobo Buddies	0	0	0	0	1
Clean Heels Ltd	0	1	0	0	1
Enclothed	0	0	0	0	1
EnergyEGG	0	1	0	1	1
Equisafety Ltd	0	0	0	1	1
Grip It Fixings	0	0	0	1	1
iGlove	0	1	0	0	1
JK Worldwide (PlayAway Case)	0	1	0	0	1
Just For Tiny People	0	0	0	0	1
Lost my Name	0	0	0	1	1
Mainstage Travel	0	0	0	0	1
minicabit	0	1	0	0	1
Original Jerky	0	0	0	0	1
Pants On Fire Games Limited	0	0	1	1	1
Phom Teas	0	1	0	0	1
RemPods	0	1	0	0	1
Reviveaphone	0	0	0	0	1
Skinny Tan	0	0	0	0	1
Skribbies	0	1	1	1	1
Spoon	0	0	1	0	1
Swing Patrol London	0	0	0	0	1
The Little Coffee Bag Co.	0	0	1	0	1

Pitch	Entrepreneur	Product	Market	Financials	Funding Result
The Running Mat	0	1	0	0	1
Umbrands	0	1	0	0	1
Victor's Drinks	0	0	1	0	1
Vini & Bal's Rustic Indian	0	1	1	1	1
Yee Kwan	0	0	1	0	1
YogaBellies	0	1	1	0	1
Young Ones	0	1	1	0	1

Table 8: Boolean table of pitches and funding results

Qualitative Comparative Analysis provided the following results:

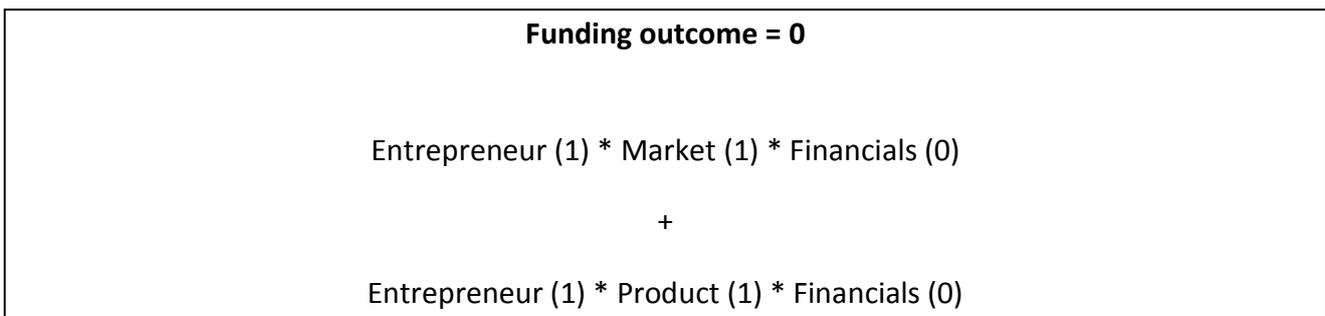


Figure 3: Qualitative Comparative Analysis results for Funding Outcome = 0

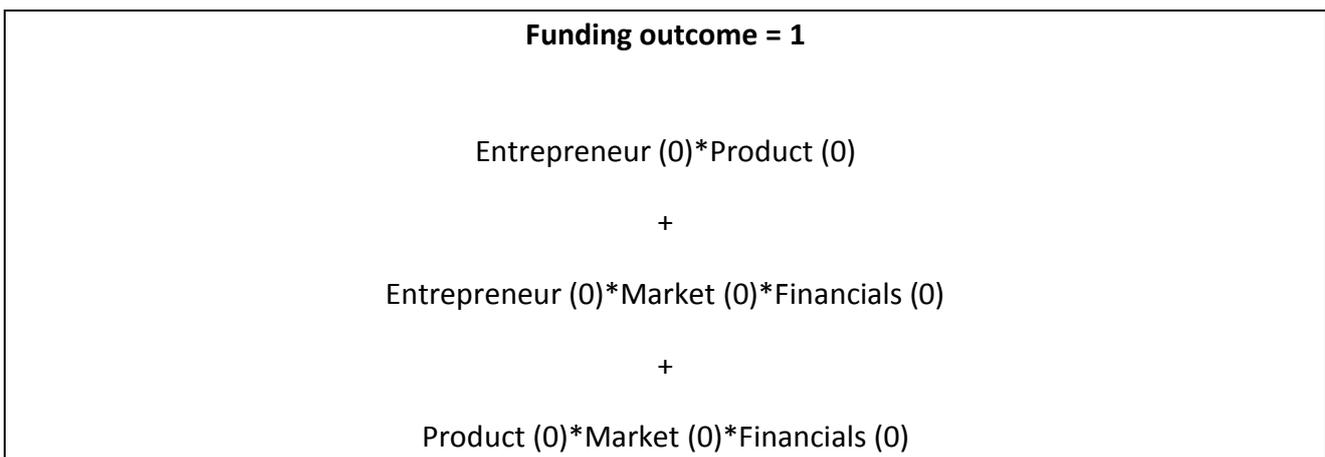


Figure 4: Qualitative Comparative Analysis results for Funding Outcome = 1

Analysis

A first look at table 5 lets us draw the conclusion that flaws in at least two different categories drive a negative outcome, while a positive outcome of the speech is driven by no more than a single flaw detected, with the notable exceptions pinpointed above. These six exceptions have been analysed further, highlighting that three of them were funded by Duncan Bannatyne (Pants On Fire Games Limited, Yogabellies, and Young Ones) and the other three by Piers Linney (Skribbies, Vini & Bal's Rustic Indian, and EnergyEGG). This suggests that some of the Dragons may have a more “reckless” approach and decide to invest into a venture that presented more than a fatal flaw during its presentational speech. It has to be stressed out, again, that Dragons are not legally bind to invest the offered amount after the show and that they can withdraw their offer

after due diligence or for any other reason. In this light, it can be assumed that investors like Duncan Bannatyne and Piers Linney may be more prone to invest in less-promising ventures when they are in doubt and prefer to take some time after recording the show to decide whether to proceed with the investment or not. Crucially, none of the six exceptions show a flaw in the Entrepreneur category, suggesting that in all of these cases investors decided to finance a promising entrepreneur regardless of the detected flaws.

Qualitative Comparative Analysis provided the results shown in Figures 3 and 4. Negative funding outcomes are explained by the simultaneous presence of a flaw in Entrepreneur and Market or Entrepreneur and Product, both coupled with flawless Financials. An example for the first case is represented by Stunt City. Duncan Bannatyne called himself out because the entrepreneur was not able to assess if the venture was making profit or not, while all the other Dragons walked away because they considered the videogame market too risky for the venture presented, leaving Stunt City with no investment. An example for the second case is provided by Spice to Go. Deborah Meaden called herself out because the entrepreneur did not know the venture's financial data and the unique selling proposition, Peter Jones because he considered the product not to be unique and innovative. This result highlights, once again, the importance of the entrepreneur, since both explanations of a negative result contain a flaw in the Entrepreneur category. The flawless Financials driving a negative result can be explained by the little disclosure of financial data during the speeches and by the possibility offered to investors to perform due diligence after the recording of the show is completed. The initial inference that a flaw in two different categories drives negative outcomes is thus confirmed by Qualitative Comparative Analysis, specifying that the mentioned categories are Entrepreneur coupled with either Market or Product. Positive founding outcomes are explained by flawless Entrepreneur and Product, Entrepreneur, Market, and Financials, or Product, Market, and Financials. An example for the first case is Victor's Drinks, which received an investment despite two Dragons refusing the deal because they thought the product was sitting in-between two different markets. The second case is represented by Phom Teas, which received investment even if Piers Linney called himself out because the product had a "cheap-looking packaging". Bare Naked Foods is a powerful example of the third case. Deborah Meaden and Kelly Hoppen walked away because they valued the entrepreneur to be too unprepared to conduct a business, while Peter Jones decided to invest because he wanted to "give a deserved opportunity" to the entrepreneur. This results stresses out, once again, the importance of the entrepreneur in driving the final investment decision. In the absence of a flawless entrepreneur, all the other factors have to be flawless in order to obtain a successful outcome. A flawless Entrepreneur, coupled with either flawless Product or Market and Financials also drives the positive outcome. Same applies to Product: if there is a reason for failure in the Product, all the other factors have to be flawless to drive positive investment outcome.

5. Discussion and Conclusions

Main findings

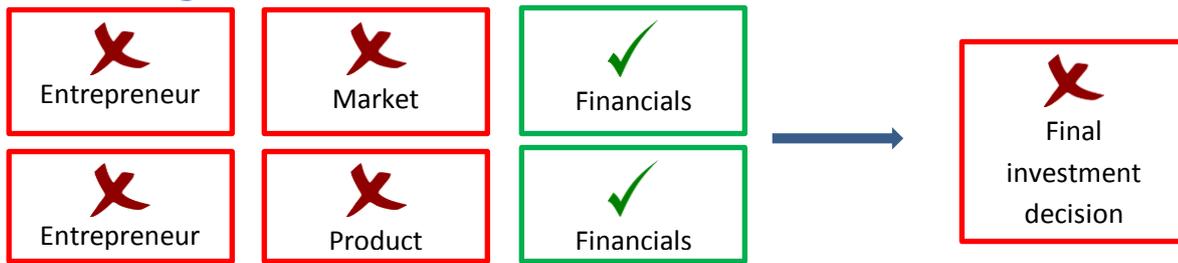


Figure 5: Summary of drivers of negative investment decision

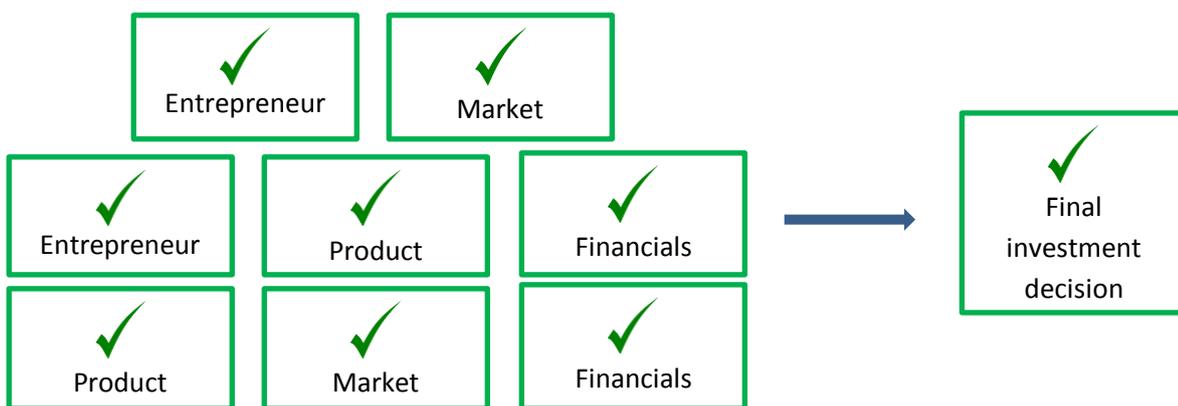


Figure 6: Summary of drivers of positive investment decision

Summarising the results and the following conclusions, investors seem to pay special attention to the Entrepreneur, both when it comes to reject and finance a proposed venture. Product and Market still play a secondary but determinant role in driving the rejection of a deal. Market, in particular, is as powerful as the Entrepreneur in driving the positive outcome of a pitch. The couple Entrepreneur+Market alone can drive a positive outcome. Financials seem to play a “reverse” role in determining the rejection of a business opportunity, while they are still participating in driving the positive outcome. This somewhat ambiguous result suggests that investors may not pay great attention to the financial aspects of pitched ventures. The explanation is twofold: a venture led by a good Entrepreneur, with a solid Product in a promising Market has surely the potential to recover from financial turmoil, while good Financials can be meaningless and temporary if the other components of the “Big Four” are not at the same level. Furthermore, Financials are really difficult to assess through a short pitch and are, both in the TV show and in real life, evaluated cautiously and thoroughly after an initial deal, involving a process that takes much longer time than the aired pitch. An ideal hierarchy of the “Big Four” would see Entrepreneur first-placed, followed by Market, then Product and Financials.

The above results are in contrast with Maxwell et al. (2011), that stated that investors use elimination by aspect and thus a single detected flaw is sufficient to drive a negative outcome. This study evidenced that pitches that highlighted flaws obtained financing anyway, and, in some exceptional cases, even pitches that highlighted up to three flaws obtained backing.

The findings are in line with MacMillian et al. (1985), who state that *“above all it is the quality of the entrepreneur that ultimately determines the funding decision. [...] There is no question that irrespective of the horse (product), horse race (market), or odds (financial criteria), it is the jockey (entrepreneur) who fundamentally determines whether the venture capitalist will place a bet at all.”* Also, the results confirm what Mason and Stark (2004) found out about business angels and venture capitalists, i.e. their little initial attention to financial information when compared to bankers. The findings also confirm what Muzyka et al.(1996) stated about investors: *“Overall we conclude that the venture capitalists interviewed would, as a group, prefer to select an opportunity that offers a good management team (entrepreneur in this study; author’s note) and reasonable financial and product-market characteristics, even if the opportunity does not meet the overall fund and deal requirements. It appears, quite logically, that without the correct management team and a reasonable idea, good financials are generally meaningless because they will never be achieved.”*

Scientific implications

This study has contributed to the existing literature in several ways. Firstly, analysing the entrepreneurial pitch in its positive and negative outcomes simultaneously is a novel approach that observes the phenomenon as a whole, overcoming the limitations of previous studies that focused on one of the two aspects only. Secondly, this study explored interactions between the “Big Four” and undisclosed recurring patterns among successful and unsuccessful entrepreneurial pitches, eventually identifying a hierarchy between them. Last, but not least, live observation of investment decision-making is a novel approach whose potential has not been fully exploited.

Practical implications

This study has also several practical implications. Entrepreneurs may prepare their pitches with a different awareness, knowing what will drive the investors’ final decisions. They may also set priorities in strengthening their ventures before pitching for investments and decide to highlight some aspects of their ventures instead of others during their pitches. On the other side, investors can face entrepreneurial pitches knowing more about their investment decision-making and they may be able to challenge entrepreneurs in different ways in the light of the above discussed findings.

Limitations and further research

The main limitation to this study comes from the choice of using a TV show as a research setting, instead of observing entrepreneurs and investors in their normal activities. If this proved to be an advantage, given the possibility to observe the same pitch multiple times, it is also a limitation to the external validity of this study. As discussed before, TV shows have already been used as an acceptable academic research setting and the external validity of results obtained in such a setting have already been demonstrated. Another limitation linked to the research setting is given by the post-production of recorded videos, that might have eliminated from the final aired show interactions that could have been interesting for research, but not for the general audience. In order to reduce this effect as much as possible, the shortest and visibly synthesized pitches have been excluded from the sample. It can be argued that the non-binding decisions taken by the

Dragons after the pitch may alter their truthfulness, especially regarding the valuation of Financials, which can be performed after the show. However, also investors that receive a pitch outside of a TV setting gather the same amount of information that Dragons get during the TV show and take a final decision only after examining the financial situation of ventures they are going to invest in. Repeating a similar study in a non-TV environment would enhance the external validity of the results of this study.

Some may also argue that Dragons are influencing each other, namely the exit or investment decision of a Dragon would influence the remaining others and make them follow in the same direction. While this possibility cannot be excluded, it has to be taken into account that Dragons are professional investors with a proven and documented experience. Repeating a similar study with a single investor instead of a panel of investor would easily remove this doubt.

The size of the sample may not be indicative of the full array of ventures and pitches that investors may face during their professional life. A study with a wider sample, and thus a different methodology, may further contribute to the existing literature.

Lastly, the literature review highlighted the presence of intangible parameters, like behaviours or presentation style, which drive the final investment decision. Future studies may also include these kinds of criteria along the “Big Four”, in order to obtain a more comprehensive point of view.

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