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From Signalling to Endorsement

The Valorisation of Fledgling Digital Ventures

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Abstract

Despite extensive research on the *liability of newness* of young firms and what they can do to reduce information asymmetries, relatively little is known about how young digital ventures' growth and scaling is affected by different forms of endorsement. With a focus on third-party endorsements from industry analysts, I approach this question using a two-stage research design. First, I empirically examine the connection between awards given by industry analysts and the funding of digital ventures. I use the example of the *Cool Vendor* award given by the analyst firm *Gartner* and focus on the fintech domain. Using semi-structured interviews, I then identify and explain different forms of endorsement from a digital venture perspective, thereby differentiating between pure market signals and more sophisticated mechanisms. This differentiation is presented in a conceptual framework, which I propose as a supplement to the signalling literature. This paper promotes a better understanding of what helps fledgling digital firms to develop and prosper.

JEL Codes: D83, G24, M13, O33

Vom Signalisieren zur Unterstützung

Die Aufwertung junger digitaler Unternehmen

Zusammenfassung

Trotz umfangreicher Untersuchungen zur sogenannten *Bürde der Neuheit* junger Unternehmen und darüber, was sie tun können, um Informationsasymmetrien zu verringern, ist relativ wenig darüber bekannt, wie das Wachstum und die Skalierung junger digitaler Unternehmen durch verschiedene Formen der Unterstützung beeinflusst wird. Mit einem Fokus auf die Unterstützung durch Branchenanalysten gehe ich dieser Frage mit einem zweistufigen Forschungsdesign nach. Zunächst untersuche ich empirisch den Zusammenhang zwischen der Vergabe von Auszeichnungen durch Analysten und der Finanzierung junger digitaler Unternehmen. Ich benutze das Beispiel der *Cool Vendor*-Auszeichnung der Analystenfirma *Gartner* und konzentriere mich auf den Fintech-Bereich. Mit Hilfe halbstrukturierter Interviews identifiziere und erkläre ich zudem verschiedene Formen der Unterstützung aus Perspektive junger digitaler Unternehmen und unterscheide dabei zwischen reinen Marktsignalen und komplexeren Mechanismen. Diese Unterscheidung wird in einem konzeptionellen Framework dargestellt, welches ich als Ergänzung zur Signalling-Literatur vorschlage. Dieser Beitrag fördert ein besseres Verständnis davon, was junge digitale Unternehmen in ihrer Entwicklung unterstützt.

Im Internet unter:

http://www.wiwi.uni-muenster.de/io/forschen/downloads/DP-IO_03_2020

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From Signalling to Endorsement

The Valorisation of Fledgling Digital Ventures*

1. Introduction

For some time now, the scientific literature has been thoroughly describing the teething problems faced by young firms. With the frequently cited *liability of newness*, Stinchcombe (1965) drew attention to the fact that new ventures more often fail than old ones. Since then, scholars have taken up the liability of newness construct and validated (Freeman et al. 1983) as well as differentiated it (Pollock et al. 2019; Singh et al. 1986). In addition, the entrepreneurship literature has contributed by describing the survival patterns of young ventures, whereby it distinguishes the *exploration* of new solutions and the *exploitation* of existing solutions (Holmberg & Mathiassen 2001; March 1991). In this context, the ambidexterity literature has contributed significantly to the understanding that no clear line can be drawn between the survival patterns of exploration and exploitation; instead, they rather represent the endpoints of a continuum, on which new firms have to find the right balance with respect to their individual context (Junni et al. 2013; O'Reilly III & Tushman 2013).

Regardless of which survival strategy is chosen, young ventures face the challenge of reducing information asymmetries to, for example, (potential) customers, investors, and partners, thus reducing uncertainty. Here, too, the literature reaches back into past decades and finds its origins, especially in agency theory (Jensen & Meckling 1976; Mitnick 1975) and signalling theory (Akerlof 1970; Spence 1973). Since new ventures usually cannot point to a performance

* Acknowledgements: The idea for this project was developed together with Professor Neil Pollock during a research stay at the University of Edinburgh Business School in February 2019 and is closely linked to (ongoing) research projects by him and his *Analyst Observatory* research group (e.g., Pollock et al. 2019). Professor Pollock and his team are conducting extensive research on the role and influence of industry analysts as part of a three-year ESRC-funded project entitled "The Second Most Important Pitch – How Digital Ventures Navigate the Endorsement Economy", focusing mainly on pitches given by young ventures to industry analysts and the mechanisms underlying the valorisation associated with analyst endorsements. The main contributions of this paper to the research by Professor Pollock and his team are as follows: It investigates the role and influence of analyst endorsements in the fintech domain; it includes a quantitative part to analyse the impact of analyst awards on the funding of young digital ventures; it identifies different forms of endorsement considered crucial by entrepreneurs; and it conceptually differentiates between signals and endorsements. I would like to thank Professor Pollock and his team for providing me with relevant insights into their research and literature. Together with Professor Carsten Sørensen, the research idea was further developed during a subsequent research stay at the London School of Economics and Political Science (LSE) in March 2019. Professor Sørensen gave valuable strategic advice for the project, for which I would like to thank him. I would also like to thank Professor Alexander Dilger for worthwhile suggestions and Maximilian Fink for his valuable research assistance in data collection for the propensity score matching.

history and often use uncertain technologies, it is particularly challenging for them to credibly signal some sort of value (Conti et al. 2013). This is particularly true in the digital age, where start-ups emerge and grow at an unprecedented speed (Huang et al. 2017), where separate technologies can be merged to create something new (Sørensen 2011), and where boundaries between products and services become fluid (Nambisan 2017). However, these developments affect not only the high-technology sector but also more conservative areas such as the financial industry, where it is particularly difficult for newcomers to gain a foothold due to regulatory hurdles and numerous established organisations (Hornuf et al. 2020; Klus et al. 2019).

Since Stinchcombe's paper from 1965, scholars have investigated how young firms can overcome the liability of newness, especially to obtain venture capital (Petkova et al. 2013). Until today, however, little is known about how intermediaries such as industry analysts (Pollock et al. 2019; Pollock & Williams 2016) and other endorsements influence the growth and scaling of fledgling digital ventures. This is where the present study is situated: It investigates the research questions which forms of endorsement help fledgling digital ventures to grow and prosper and what role industry analysts play in this context. The paper contributes to the literature in three ways. First, to better understand the influence of analyst endorsements, it uses propensity score matching to empirically show whether awards given by industry analysts affect the funding of young digital ventures. Second, to obtain explorative insights into the origination and value of analyst relations as well as the (potential) value of different endorsements for young digital firms, the study involves semi-structured interviews. Third, as a supplement to the signalling literature, this work develops and proposes a conceptual framework that differentiates pure market signals and more sophisticated forms of support.

2. Literature Review

The *liability of newness* postulated by Stinchcombe (1965) is essentially based on four reasons why new ventures find it harder to compete in the market than established firms: 1) New organisations take on new roles that need to be learned; 2) establishing a new venture is associated with high costs in terms of time, worries, conflicts, and inefficiencies; 3) new companies have to rely on the social relationships between strangers; and 4) new ventures do not have existing customer relations.

For a start-up, the most important internal measure for laying a solid foundation for long-term success is likely its strategic orientation. Specifically, it is crucial for new firms to find the right balance between exploiting existing solutions and exploring new ones. If start-ups overemphasise the exploration of new solutions at the expense of exploiting existing ones, they are likely to remain stuck on underdeveloped and thus uncompetitive ideas (March 1991). If the focus is too much on exploitation, they are "*likely to find themselves trapped in suboptimal stable equilibria*" (March 1991, p. 71). The growing body of literature on organisational ambidexterity deals with the ability to both exploit and explore (Birkinshaw & Gupta 2013; Gibson & Birkinshaw 2004; O'Reilly III & Tushman 2013; Raisch & Birkinshaw 2008), which seems particularly important in service and high-technology sectors (Junni et al. 2013).

Besides the ability to simultaneously exploit and explore, new ventures must also credibly communicate their value proposition to (potential) customers, investors, partners (Conti et al. 2013), and talents (Backes-Gellner & Werner 2007), whereby they must reduce uncertainty (Akerlof 1970) and build legitimacy (Delmar & Shane 2004). As discussed in the literature, reducing such information asymmetries can be accomplished via various signals, whereby a rough distinction can be made between cases in which a new venture itself acts as the sender of a signal and cases in which a third party is involved (see Section 2.1.).

There are some indicators that overcoming the liability of newness relies more heavily on external legitimacy than it does on internal organisational measures (Goode 1978; Singh et al. 1986; Stuart et al. 1999). However, external and internal measures are not mutually exclusive, as third-party endorsements can validate and complement the information provided by a signaller (Courtney et al. 2017; Plummer et al. 2016), whereby the signaller can be a person, company, or product (Connelly et al. 2011).

2.1. Signals and Endorsements

Signalling theory is useful for understanding situations in which one party sends information to another party to reduce information asymmetries (Connelly et al. 2011). A signal is characterised, above all, by the fact that it is observable (Courtney et al. 2017; Plummer et al. 2016; Spence 1973; Zhang & Wiersema 2009) and costly to obtain/imitate (Certo et al. 2001; Connelly et al. 2011; Park & Mezias 2005; Spence 1973). Furthermore, the literature suggests that the sending of a signal is a *conscious* effort to convince a party with incomplete information (Hochwarter et al. 2007; Pollock & Gulati 2007; Spence 1973), whereby it can be argued that these conscious actions are *voluntary* (Spence 1973). From the understanding in the literature that signals are conveyed consciously (and voluntarily), it follows that they can be manipulated by the signaller (Hochwarter et al. 2007; Karamanos 2003; Spence 1973). Examples of signals (most of which are typically used by venture capitalists to evaluate firms) include background/ experience of the founder/founding team (Backes-Gellner & Werner 2007; Beckman et al. 2007; Burton et al. 2002; Higgins & Gulati 2006; Higgins et al. 2011; Hoenig & Henkel 2015; Macmillan et al. 1985; Petkova et al. 2013; Zhang & Wiersema 2009), financial resources (Busenitz et al. 2005; Macmillan et al. 1985) including an entrepreneur's own investment (Downes & Heinkel 1982), firm age and size (Higgins & Gulati 2003), product features (Courtney et al. 2017), patents (Conti et al. 2013; Hoenig & Henkel 2015; Hsu & Ziedonis 2008), geographic location (Tyebjee & Bruno 1984), and further observable attributes (Kang 2008), which today are more and more often conveyed via digital media (Courtney et al. 2017). In this context, a number of studies have shown that the constellation of start-up teams and especially the background of the founders are particularly important to reduce uncertainty and acquire venture capital (Burton et al. 2002; Chandler & Hanks 1994; Ratzinger et al. 2018; Zhang 2011).

However, the sending of a signal alone is not sufficient to reduce information asymmetries, since the signal's effect depends decisively on how it is perceived by the recipient (Pollock & Gulati 2007). Possible scenarios here are that a signal is clear and highly visible but conveys little value or, conversely, that it is valuable but not easily observable (Plummer et al. 2016). This is where third-party endorsements come into play, which can add value to signals and legitimise them (Plummer et al. 2016).

According to Zimmerman and Zeitz (2002, p. 419), an "*endorsement is a favorable opinion given by one organization to another, which serves as a vote of confidence in the endorsed organization*." The idea is that the legitimacy of the endorser spills over to the endorsed venture, which is particularly important for young firms that are not yet established in the market (Goode 1978; Zimmerman & Zeitz 2002). Endorsements, thus, result from interactions (Sauder & Fine 2008) in which one party advocates for another (Castilla & Rissing 2019). The context can be very different, as endorsements can be found, for example, in politics (e.g., recommendation of a candidate), in marketing (e.g., celebrity endorsements), or between organisations (Castilla & Rissing 2019). Examples of endorsements named in the literature include celebrity endorsements (Choi et al. 2005; Spry et al. 2011), business alliances (Aharonson et al. 2016; Baum et al. 2000; Higgins & Gulati 2003; Stuart et al. 1999), and, more recently, industry analyst endorsements (Pollock et al. 2019; Pollock & Williams 2015b, 2016).

Third parties can support firms and their products by making a criteria-driven comparison with the competition, issuing an award, or making a non-comparative statement (Dean & Biswas

2001). Courtney et al. (2017) see the value of such endorsements especially in the validation/ legitimisation of (start-up-originated) signals, and their conclusion is supported by others such as Pollock and Rindova (2003). Prestige plays a role in this context as well, which can be defined as "*esteem, respect, or approval that is granted by an individual or a collectivity for performances or qualities they consider above average*" (Goode 1978, p. 7), and results from the interaction between two individuals and a third party (Goode 1978). Prestige is relevant for the context of this study because, on the one hand, it is not possible to withdraw from the prestige market, and, on the other hand, prestige-giving awards or decorations lose weight and credence over time (Goode 1978). Accordingly, young ventures must be aware that a one-time endorsement, however strong it may be, does not bring them into the safe harbour.

However, if young ventures continuously strive for a positive and, above all, credible public image, they can benefit from endorsements in various ways. Examples include improved access to financial as well as human and technological resources, which they would find more difficult to obtain without an external advocate (Doh et al. 2010). Accordingly, signals such as the age and size of a firm or the product stage alone are not necessarily sufficient to credibly convey legitimacy (Higgins & Gulati 2003), especially for start-ups.

2.2. Industry Analysts

Overall, endorsements are particularly associated with experts who conduct analyses and present their evaluations in the form of reviews (Dean & Biswas 2001). Biswas et al. (2006) examined expert endorsements and celebrity endorsements and found that expert endorsements are particularly effective for high-technology products in reducing consumers' perceived risks. Instead, celebrity endorsements only led to a comparable result if there was a high degree of congruence between the celebrity and the product (Biswas et al. 2006). A group of experts specialised in the analysis of companies and their services are industry analysts such as Gartner, Forrester and IDC, who have proven to be particularly influential in the information technology industry (Bernard & Gallupe 2013; Pollock et al. 2019; Pollock & Williams 2009, 2010). Despite the analysts' great influence on the market, particularly through written evaluations of firms and presentations to an often vast number of tech buyers and investors, so far there has not been much research on the role and influence of industry analysts (Bernard & Gallupe 2013; Pollock & Williams 2009, 2015b). Furthermore, not much is known about how analysts evaluate and screen fledgling ventures (Pollock et al. 2019).

Nonetheless, of the few studies that have been done, initial investigations indicate that analyst firms such as Gartner influence markets particularly through their categorisation of services (Pollock & Williams 2011, 2016), since these categories provide orientation for strategic decisions of (potential) customers, investors, and partners but also for other ventures seeking market potential for their own services. A study conducted by Chang et al. (2006) shows that analysts are able to reduce information asymmetries and that analyst coverage increases a firm's probability of issuing equity instead of debt. In addition to analyst firms' industry reports and presentations, the reduction of information asymmetries between vendors and potential buyers is achieved by engaging analysts like Gartner to help navigate firms through the mass of IT innovations (Firth & Swanson 2005). One might think that analysts have become redundant in the digital age, since massive amounts of information are available on the internet, but this is not the case, as relevant information is often hard to locate and difficult to distinguish from less relevant information (Firth & Swanson 2005). Based on their analyses, industry analysts identify relevant information and communicate it to their customers (Firth & Swanson 2005), such that analysts can be seen as translators of signals into advice. This advice can be helpful not only for (potential) buyers, investors, and partners but also for new ventures, especially if the founders have little experience in the targeted market. Companies can, therefore, use analysts not only to pitch their business model and services in order to get coverage but also, through signing consulting contracts with them, to obtain market information (Pollock & Williams 2016). In this context, Kirk (2011, p. 182) found that the willingness to pay for analyst coverage is particularly high among firms with "*greater uncertainty, weaker information environments, and low turnover*", with the empirical results of the study indicating a subsequent increase in liquidity.

3. Hypotheses and Research Question

Although relatively little research has been done on how endorsements from industry analysts affect young digital ventures, there are indications that analysts can influence markets (Bernard & Gallupe 2013; Pollock & Williams 2009, 2010, 2011, 2015b, 2016) and that analyst coverage is a positive buy signal for investors (Chang et al. 2006; Pollock et al. 2019). Since awards from industry analysts signal to the outside world that the awarded company is vouched for by the respective analyst firm, the first hypothesis of this study is as follows:

H1: *Receiving an award from a major industry analyst firm has a positive effect on the funding of young digital ventures.*

Pollock and Williams (2016) describe the work of industry analysts as a complex interplay that requires intensified scientific investigation. This complex interplay, as well as the favourable opinion anchored in the definition of an endorsement by Zimmerman and Zeitz (2002) and the fact that industry analysts typically do not advertise directly but instead channel attention to certain firms or groups of firms and their services (particularly through reports and presentations) (Pollock et al. 2019; Pollock & Williams 2009, 2011, 2016), leads us to expect that analyst endorsements go beyond pure market signals. Accordingly, the second hypothesis is as follows:

H2: *The value of analyst endorsements goes beyond a market signal and lies particularly in a less visible exchange of information between the analysts and both the endorsed venture and its (potential) customers, investors, or partners.*

Lastly, in order to generate additional insights into which endorsements are perceived as central by young digital ventures to grow and prosper, the following research question will be examined:

RQ1: *Which forms of endorsement are perceived as central by young digital ventures to build up credibility and scale?*

4. Empirical Approach

According to Bernard and Gallupe (2013), the influence of industry analysts is particularly strong in the automotive and financial services industry. Considering that a rapidly growing number of financial technology start-ups (fintechs) are entering the financial industry (Hornuf et al. 2020; Klus et al. 2019) and that there is relatively little (industry-specific) research on the influence of industry analysts and different forms of endorsement so far, the analysis of this paper is focused on the fintech domain.

Laws et al. (2014) provide an overview of which analyst firms report on ventures operating in the financial industry (fintechs). Based on this, I have researched the number of fintechs that have received an award by the respective analyst firms, whereby the firm Gartner has reported on the most ventures (see Chapter 5). To avoid biased results caused by different selection criteria for issuing an award, I follow Pollock and Williams (2009, 2010, 2011, 2015a, 2015b, 2016) and focus my analysis on the analyst firm Gartner, as it is the leading analyst firm worldwide (Firth & Swanson 2005; Pollock & Williams 2015a), has regularly designated high-potential ventures as *Cool Vendor* in various categories since 2004 (Pollock et al. 2019), and, as mentioned above, considers a relatively large number of fintechs.

It should be noted that while Gartner does not have a specific fintech category, fintechs can be found in different Cool Vendor categories such as *AI for Banking and Investment Services*, *Banking*, but also rather unspecific categories like *Services* or *Digital Commerce* (see Table 2 in Chapter 5). To identify Cool Vendor fintechs in a reliable and standardised way, all Gartner categories for each year since 2004 were checked manually, and the included firms were entered into the *Crunchbase* database. Crunchbase not only contains finance-related information but also categorises the core business of young ventures. After careful review of all categories included in Crunchbase, the following selection was made to identify fintechs within the award winners: *Asset Management*, *Banking*, *Finance*, *Financial Services*, *Fintech*, *Mobile Payments*, *Payments*. I have decided to add the category *Blockchain*, as blockchain technology is closely related to the financial services industry and represents a fast-growing sector (Risius & Spohrer 2017; Swan 2015).

Essentially, Gartner uses the following three criteria to determine whether a young firm is a Cool Vendor: The venture must be innovative ("*technologies/products that enable users to do things they couldn't do before*"), impactful ("*technologies/products that have or will have business impact; it's not just 'technology for the sake of technology'*"), and intriguing ("*the vendor has caught Gartner's interest/curiosity during the past 12 month[s]*") (Hare 2019). These aspects are evaluated, for example, by analysts talking to potential Cool Vendors and matching their claims against customer experiences (Hare 2019) – see Subsection 6.2.4. for experience-based information on the process leading to the Cool Vendor award.

To generate a sample for the control group, all firms included in Crunchbase were selected from the above categories and two additional filters were applied. First, only those ventures for which information on funding was available were considered for further investigation, and second, ventures founded before 2000 were excluded as they no longer correspond to *young* digital ventures.

4.1. Propensity Score Matching

To measure the effect of the Cool Vendor designation on funding – measured by the natural logarithm of the total funding amount, since the funding amount has a skewed distribution – I follow Brynjolfsson et al. (2011) and use propensity score matching as suggested by Rosenbaum and Rubin (1983). According to this approach, data on observable dimensions are matched. In this study, I use data on the age of a fintech, its number of employees, and the country of its headquarters (see Table 1 in Chapter 5 for the summary statistics). Nearest neighbour propensity score matching (one-to-one matching) was performed without replacement and, in line with DeFond et al. (2017), the maximum distance of the propensity scores (calliper) was set to 0.03.

4.2. Interviews

To gain qualitative insights into the importance of analyst relations and different forms of endorsement for young digital ventures, semi-structured interviews were conducted with the CEOs and/or founders and marketing managers of firms that have been recognised as Cool Vendors by Gartner (see Chapter 5 for information about the sample). The interviews were conducted via Skype or Zoom, audio recorded, and transcribed. An interview guideline (see Appendix A) was used to ensure comparability of the results. The coding was done according to the Gioia method (Gioia et al. 2013) and using the software MAXQDA. The Gioia method represents a data compression process in which 1st order concepts are combined to 2nd order themes, which in turn are compressed into 3rd order dimensions. Despite the framework provided by the interview guide, this procedure allowed a coding scheme to be developed based on actual data instead of predefined categories.

5. Data

Across all analyst firms identified by Laws et al. (2014), 143 award winners were operating in the financial industry. Among them were 107 Gartner Cool Vendors, 16 Aragon Hot Vendors, one HFS Hot Vendor, 11 IDC Digital Transformation Award winners, four Javelin Award winners, one 451 Research's 451 Firestarter, and three Ovum Payments Innovation Award winners. This finding confirms that Gartner takes a relatively large number of fintechs into account. Thus, in order to create as comparable a sample as possible for further investigation, the data is limited to Cool Vendor fintechs. In Chapter 4 it was mentioned that blockchain was considered as an additional category, 18 of which are among the 107 identified Cool Vendors. Accordingly, they do not make up a large part of the sample but were still removed from the empirical analysis for testing the robustness of the results. At this point it can already be said that this has not led to any significant changes.

Since data on the firms' age, country of headquarters, funding, and number of employees are required for the propensity score matching, the sample was limited to companies for which data on all of these variables were available. This reduced the sample to 88 Cool Vendors.

To create a group of firms from which to select the control group for the propensity score matching, data on 6,769 fintechs included in Crunchbase were collected (using the search terms listed at the beginning of Chapter 4). Data on all variables listed in the above paragraph were available for 3,530 firms. Accordingly, these 3,530 firms were considered for further investigation. Table 1 shows the summary statistics for the ventures considered in this study, differentiating between the 88 Cool Vendors and the unmatched control sample.

Cool Vendors					
Variables	**Mean**	**SD**	**Min**	**Max**	**Obs.**
Dependent Variable					
ln(Total Funding Amount)	16.59	1.70	11.61	20.83	88
ln(Total Funding Amount after Award)	16.68	1.97	12.21	20.56	41
Explanatory Variables					
Country HQ (Categorical)	6.19	3.22	1	17	88
Founding Year	2012.55	3.07	2004	2018	88
Employees (Categorical)	2.84	1.32	1	7	88
Year Awarded	2016.72	2.32	2008	2019	88
Control Sample (Unmatched)					
Dependent Variable					
ln(Total Funding Amount)	15.24	2.34	6.91	22.68	3,530
Explanatory Variables					
Country HQ (Categorical)	5.57	2.54	1	17	3,530
Founding Year	2011.41	4.62	2000	2018	3,530
Employees (Categorical)	2.33	1.41	1	9	3,530

Note: Country HQ and Employees are categorical variables. Country HQ: 1=Australia; 2=UK; 3=Germany; 4=India; 5= Singapore; 6=USA; 7= France; 8=Canada; 9=Israel; 10=Netherlands; 11=Switzerland; 12=Sweden; 13=Gibraltar; 14=Japan; 15=South Korea; 16=Brazil; 17=Belgium. Employees: 1=1-10; 2=11-50; 3=51-100; 4=101-250; 5=251-500; 6=501-1,000; 7=1001-5,000; 8=5,001-10,000; 9=10,001+.

Table 1: Summary Statistics

For the interviews, I contacted executives of the identified Cool Vendor fintechs via *LinkedIn*, and 21 of them agreed to be interviewed (see Table 2). Fifteen of them were also included in the final sample for the propensity score matching.

ID	Position	Headquarters	Gartner Cool Vendor Category
1	Co-Founder & CEO	India	Cool Vendors in AI for Fintech in Asia/Pacific
2	CEO	Germany	Cool Vendors in Insurance
3	Senior Director, Analyst & Influencer Relations	USA	Cool Vendors in Procurement and CLM
4	Co-Founder & CEO	USA	Cool Vendors in Consumer Financial Services
5	Senior Vice President of Marketing	USA	Cool Vendors in Integration
6	Founder & CEO	India	Cool Vendors in Asia/Pacific
7	Global Head of Marketing	UK	Cool Vendors in Identity and Access Management
8	Executive Vice President Business Development	Netherlands	Cool Vendors in Banking
9	Co-Founder & Head of Strategic Partnerships	Israel	Cool Vendors in Blockchain Technology
10	Founder & Managing Director	Austria	Cool Vendors in Insurance
11	Vice President Product	UK	Cool Vendors in Blockchain Technology
12	Founder & CEO	USA	Cool Vendors in Finance and Procurement
13	Founder & CTO	USA	AI for Banking and Investment Services
14	Chief Marketing Officer	Canada	Cool Vendors in Digital Commerce
15	Co-Founder & Chairman	Switzerland	Cool Vendors in Blockchain Technology
16	Senior Director of Corporate Communications	USA	Cool Vendors in Procure-to-Pay Applications
17	Co-Founder & CEO	Israel	Cool Vendors in Insurance
18	Director of Marketing	USA	Cool Vendors in Blockchain Technology
19	Director of Marketing	Israel	Cool Vendors in Banking
20	Director of Marketing and Communications	USA	Cool Vendors in IT Services
21	Co-Founder & Managing Director	UK	Cool Vendors in Human Capital Management

Table 2: Interview Sample

6. Empirical Results

6.1. Results of the Propensity Score Matching

One-to-one matching (without replacement) of Cool Vendor ventures with non-Cool Vendor ventures led to 88 pairs. Table 3 shows the balance of matching variables between the treatment group and both the entire sample and the matched sample. This table reveals that both the number of employees and the fintech age differ significantly between the Cool Vendor sample and the entire sample, as indicated by statistically significant differences in mean values. Through the matching process, alignment was achieved for all matching variables, which is visualised in Figure B1 in Appendix B.

Matching Variables	Award Sample	Whole Sample	Matched Sample
Employees	2.841	2.327*** (0.001)	2.832 (0.869)
Fintech Age	6.455	7.595* (0.021)	6.506 (0.839)
Country HQ			
Australia	0.011	0.025 (0.417)	. (0.319)
Belgium	0.011	0.005 (0.355)	0.023 (0.563)
Brazil	0.011	0.011 (0.978)	. (0.319)
Canada	0.011	0.040 (0.176)	0.011 (1.000)
France	0.011	0.026 (0.383)	0.011 (1.000)
Germany	0.011	0.024 (0.439)	0.011 (1.000)
Gibraltar	0.011	0.002 (0.064)	0.011 (1.000)
India	0.023	0.059 (0.152)	0.023 (1.000)
Israel	0.068	0.017*** (0.000)	0.080 (0.775)
Japan	0.011	0.003 (0.120)	0.011 (1.000)
Netherlands	0.011	0.012 (0.964)	0.011 (1.000)
Singapore	0.023	0.029 (0.711)	0.023 (1.000)
South Korea	0.023	0.004** (0.009)	0.011 (0.563)
Sweden	0.023	0.018 (0.767)	0.011 (0.563)
Switzerland	0.023	0.014 (0.469)	0.023 (1.000)
UK	0.135	0.130 (0.903)	0.148 (0.830)
USA	0.580	0.589 (0.859)	0.591 (0.879)
Sample Size	88	3,530	88

Note: Sample means are used to measure the balance of matching variables between the treatment group (Cool Vendor ventures) and both the whole sample and the matched sample. *P*-values (in parentheses) measure the difference in means. * denotes significance at the 5 % level, ** at the 1 % level, and *** at the 0.1 % level.

Table 3: Balance of Matching Variables

A comparison of the funding between the treatment and control group is presented in Table 4, where the t-statistics indicate that the Cool Vendor ventures have significantly more funding than those without this designation. This result can be seen in comparison with the whole sample as well as with the matched sample, which supports hypothesis H1.

Sample	With Award	Without Award	Difference	S.E.	t-Stat.
Unmatched	16.594	15.243	1.351	0.251	5.39
Matched (ATT)	16.594	15.886	0.707	0.333	2.13

Note: The table presents mean comparisons of ln(Total Funding Amount) between ventures with and without the Cool Vendor designation in the unmatched and matched sample. ATT stands for average treatment effect on the treated and S.E. for standard error.

Table 4: Average Treatment Effect on the Treated

Of the 88 Cool Vendor ventures, 41 received additional funding after getting the Cool Vendor designation. When excluding these 41 firms from the sample and applying the propensity score matching again, I no longer find any significant differences between the ln(Total Funding Amount) of firms with and without the Cool Vendor designation (t-statistic of 1.62), indicating that being financially well equipped did not necessarily lead to receiving the Cool Vendor designation. Rather, as depicted in Figure 1, I found that in many cases, after-award financing sums make up a large share of the total funding amount.

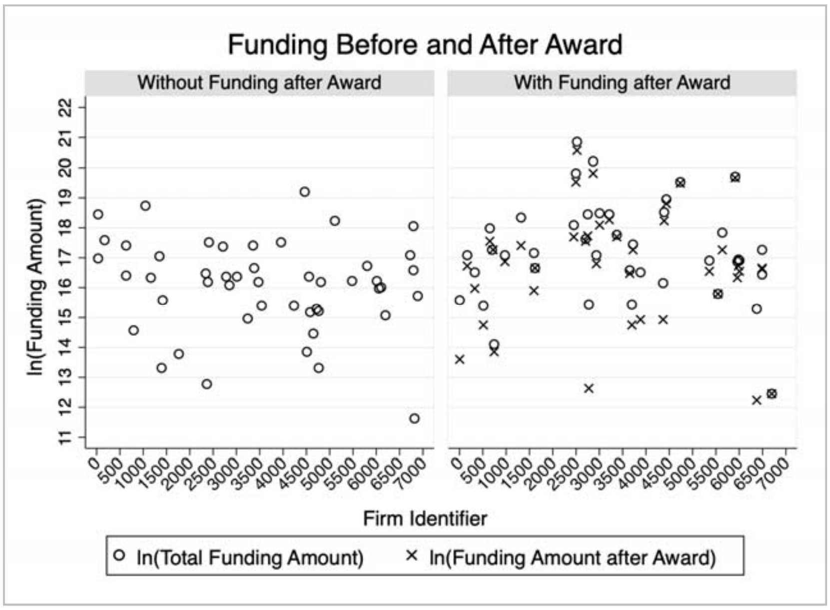

Figure 1: Funding Before and After Award

Of course, it must be considered that ventures receiving the Cool Vendor designation in earlier years were more likely to have received further funding after the award than ventures given the designation in later years. For this reason, I limited the sample to award winners from 2018 (13 without and 11 with subsequent funding) and found that the picture does not change much (see Figure 2). This indicates that the Cool Vendor designation has helped the awarded ventures to attract substantial funding and not the other way around, which is in line with hypothesis H1.

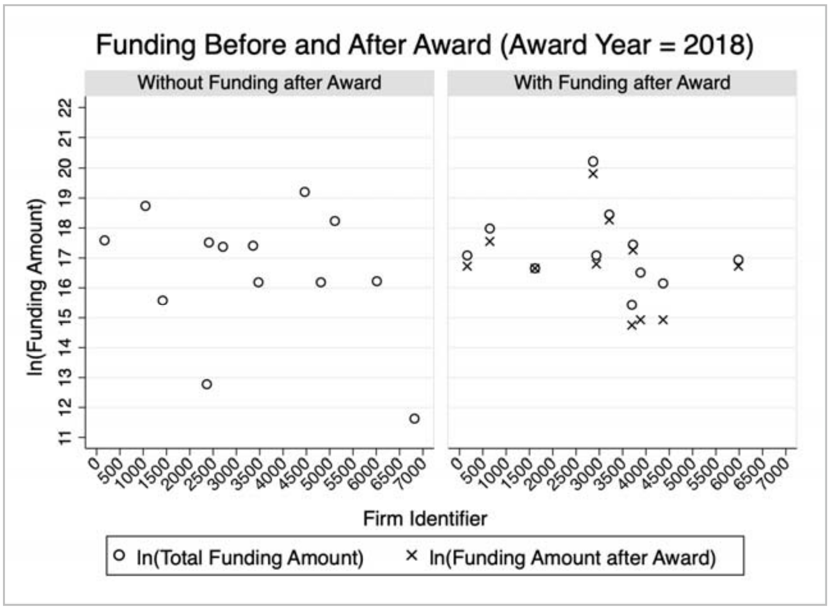

Figure 2: Funding Before and After Award (Award Year = 2018)

6.2. Results of the Interviews

In total, 1,283 text passages were encoded, which were then further compressed and finally transferred to superordinate dimensions, the most revealing of which are presented in this section. In addition to illustrations showing how often different aspects were mentioned by the interview participants, quoted statements are included to provide deeper insights.

6.2.1. The Digital Age and the Financial Industry

One characteristic feature of the digital age is the possibility to disseminate information via the internet that can reach a large number of people in real time. This opens up numerous opportunities for entrepreneurs and young ventures to send signals into the marketplace that create noise: "*so [for] attracting talent and attracting investors, the normal signals don't really matter as much. I mean you have to have a nice-looking website and be able to communicate well, but like I said the barriers to doing that stuff is super low, and it doesn't legitimise you in any sort of way, other than its one repository. So, what a lot of, you know, the software talent that we're after and of course, the third-party investors [are] looking for other higher-level credibility factors to validate who we are*" (ID 14). In line with that, another interview participant stated that "*the amount of information, the amount of targeted ads that are coming through across the spectrum just makes everyone blind to digging in – to learning more. […] the way people today navigate the mass of information is simply they become biased at some point, they put on blinders, and they trust a select few sources, that's just, I think, human nature*" (ID 13). In addition to the multitude of information, "*the pace of change is very vast and very fast*" (ID 1), so that references or third-party endorsements can form an important basis for quick decision-making.

The above-mentioned characteristics of the digital age seem particularly relevant for young ventures operating in the financial industry, as indicated by the following statement: "*Fintech is interesting because not a lot of banks want to be first, but no one wants to be last, so you know, it is really helpful to have… you know, again referenceable case studies, or being able to name a bank as a customer or partner*" (ID 11). Trust plays an important role in this context, on the one hand for finance people, which are sometimes described as "*fairly conservative, not the most up-to-date and savvy people*" (ID 3) and on the other hand for customers who "*don't want someone to hold their money that they don't trust*" (ID 4).

With regard to the financial services industry, interview participants further stated, for example, that it is "*an industry that has been the same for a very long time, in their processes, […] they're really stuck in their ways, […] so yeah, just validating a technology that is so new can be a challenge in this market*" (ID 16). One interviewee even stated that "*the reason we exist is largely because the financial institutions are extremely challenged by upcoming digital platforms, new additional banks or other financial technology companies which are looking to expand*" (ID 1). This situation has led the quoted entrepreneur (ID 1) to see business potential in helping established incumbents: "*So these two pillars, one technology and one regulatory, forced us to think that somebody has to be on the side of the, you know, incumbents. We almost toyed with an idea of building our own digital bank because we have a lot of experience in doing that, but we saw that there were too many banks and institutions; what is missing was actually the banking piece or the interaction piece which was the engagement piece which is really quite bad. So that's where we went*".

Other interview participants tended to see a business in developing completely new solutions or pursuing a mixture of exploration and exploitation. More detailed information on the survival patterns of the digital ventures considered in this study is presented in the following subsection.

6.2.2 Survival Patterns

Figure 3 shows how the interviewees would classify the survival pattern of their company. As suggested by the ambidexterity literature (e.g., O'Reilly III & Tushman 2013), the majority of interview participants would describe their survival pattern as a mixture between the exploitation of existing solutions and explorative elements. In order to use the advantages of both survival patterns and to minimise the respective disadvantages, one interviewee stated: "*we borrowed a lot of concepts I think. But I also think we went greenfield in trying to focus purely on strategy rather than holistic planning. And so I think that caught a lot of people off guard, so I'd say we did a little bit of a blend of both. How well we marketed that could be another argument, but I wouldn't say we went all-in on one or the other*" (ID 12).

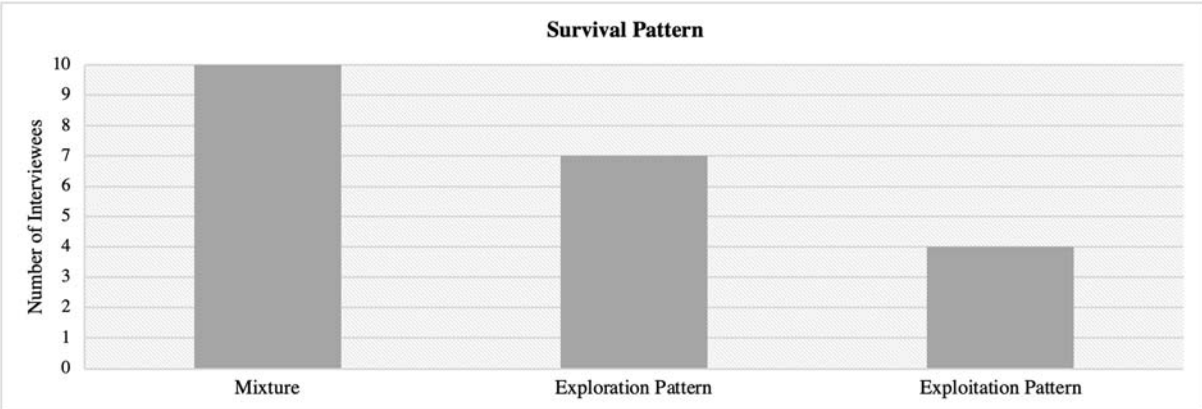

Figure 3: Survival Pattern

A somewhat smaller number of interviewees described their survival pattern as explorative and stated, for example, "*we really disrupted the market and now it's really hot and there are lots of new start-ups who have come up underneath us as a result*" (ID 3). Another interview participant even stated that "*we are alone in the field, which actually, as it ties back to analyst relations, comes with a whole lot of, another set of issues, of problems, because there is a fine market, so there's players, there's established players who do tangential stuff, but not what we do, and then there's very few who claim that they do what we do, but it's basically marketing, so yeah, it's disruptive*." (ID 16). From this statement in particular, we can already see that being alone in the field can be accompanied by a number of problems.

So, there could be good reasons for exploiting existing solutions: "*if you feel like a start-up entrepreneur in a greenfield it's nice, but if you feel like you don't have any competitors and there's nothing done in that direction anywhere else, then you should look very closely because that's a big danger that you'll just be in nowhere. Nowhere is also a greenfield*" (ID 2). Another aspect concerns (potential) customers' willingness to change: "*What we find is that we may want to disrupt, and we think the disruption is great, that's the sort of mindset of the entrepreneur, but what we find on the ground is that people don't want to change much. […] if it's too hard, they don't pick it up. So, we've moved into a pattern of exploitation as survival, which is incrementally making things better*" (ID 21).

The peculiarities of the digital age as well as the financial services industry, coupled with the pros and cons of different survival patterns, indicate that young ventures are facing numerous (strategic) challenges, the most relevant of which will be presented in the next subsection.

6.2.3 Challenges

Even if the Cool Vendor designations indicate that all companies considered for the interviews have certain market potential, they still have to overcome different (strategic) challenges, of which the ones mentioned more than once are shown in Figure 4. Accordingly, most interview participants see a challenge in finding their place in the market, whereby "*it can be incredibly hard to differentiate*" (ID 13). Blockchain technology plays an interesting role in this context, as indicated by the following statement: "*One of the peculiar challenges for us as an organisation is [that] we use blockchain technology, so extricating the use of the tech away from financial services and away from cryptocurrency to practical and credulous application within a non-financial services context is hard*" (ID 21). The second most frequently mentioned challenge was (sustainable) scaling, which is not only about "*customers and revenue*" (ID 15) but also about "*making sure we always have that balance and that we can serve places that are really remote and we can keep our brand promise to our customers*" (ID 20). Further challenges mentioned several times include (in descending order) getting recognised, building trust and credibility, regulatory burdens, and stiff competition in the market.

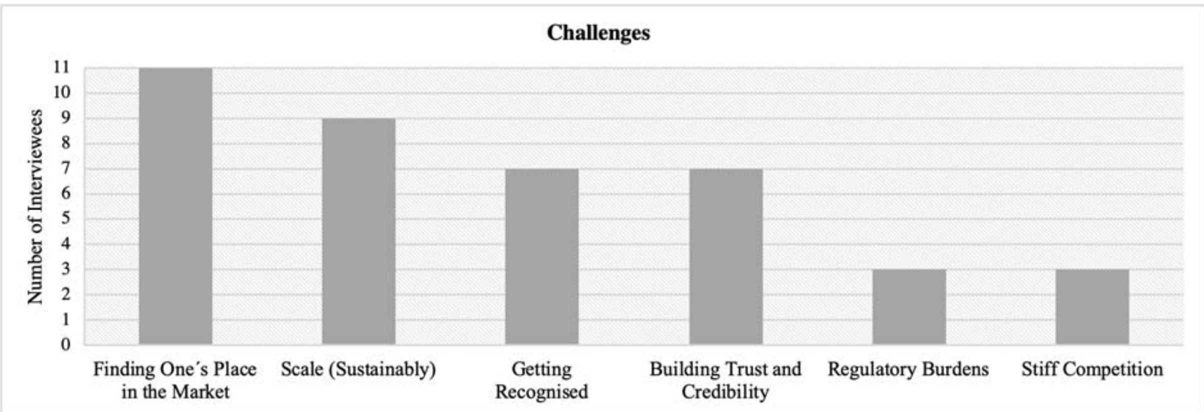

Figure 4: Challenges

6.2.4 Analyst Relations and Awards

What the interviewed companies have in common, regardless of their survival pattern and (strategic) challenges, is that they have attracted the attention of the analyst firm Gartner and have been recognised by it as Cool Vendors.

I started by asking the interviewees about their experiences with industry analysts in general, which revealed that some already had established analyst relationships long before they received the Cool Vendor award. "*We actively approached them. So we actively approached, I think, several industry analysts. I think we looked at both the big, kind of, the big ones like Gartner but then I think we also looked at some of the smaller ones as well, so we had relationships with different levels of industry analysts. And so yeah, I think we were proactive at the beginning. So yeah, that's how the relationship got started, I think we reached out to them, and I think we presented initially for their, like, intake or on-boarding and then it just escalated from there*" (ID 12). Others had little experience in this regard, and some did not even know that they had been designated a Cool Vendor. "*To be honest, I have not had a great deal of experiences with analysts*" (ID 13). "*I almost missed the Cool Vendor designation […]. So, I was just, it was something that a random email, saying, 'Cool Vendor'. And it was one of those I just flipped through and I think I went back after two or three days […]. And then I clicked and it was like, it provided more clarity as to what it was all about. And even then, I was like, what is a Cool Vendor?*" (ID 21). However, in most cases multiple analyst briefings preceded the Cool Vendor designation: "*we had a series of calls also with some in-depth questions coming from them and they also did a quite long reference call with [name of a customer] and I guess also based on their questions, I also assume they talked quite a lot with [name of another customer]*" (ID 15). Some of the interviewees had a great interest in getting recognised as a Cool Vendor and were quite proactive: "*yeah, we absolutely wanted it. So we did everything we could, provided them all the information they wanted to know, we gave presentations to multiple analysts*" (ID 12).

Regardless of how much experience with industry analysts existed before the Cool Vendor designation and how much effort went into getting it, most interview participants see some value in analyst relations from their current perspective. In this context, many interviewees saw a mutual benefit of analyst relations for analysts and young ventures. The benefit for analysts is mainly to be informed (especially about new services), and the benefit for ventures to be named in presentations, reports, and conversations and to get information about the market development. "*And it's a relationship, right, you build up a relationship and you hopefully have a win-win, that you're providing them with something, they're providing you with something and I think that's the best way in any relationship, really, that you can bring value to each other*" (ID 19). From the analysts' perspective: "*they are also very curious about what we do in fact because they don't come across any company that does what we do, so a lot of times it becomes like an exercise where we will explain what we do and then give them data, help them*

[…] understand what we do so that they really get our point of view" (ID 6). Educating analysts not only helps them better understand the services of a young firm, but in many cases it encourages them to report on it: "*If you talk to them sufficiently, they automatically going to cover you either in the reports or articles, or more formal ways of reports, like a Magic Quadrant or a tender report*" (ID 8). In addition to reports, analysts can pass on their knowledge directly to companies. One interview participant even described them as tour guides who can help break new ground: "*we are travelling in fields where we are not at home […] as if one would travel to a foreign country and say: 'I would like to do something there now'. And then there's a tour guide, if you like, who says: '[…] that's the providers, that's the rules' and so on*" (ID 2).

With regard to getting information and advice from industry analysts, critical views were also voiced, pointing out that two-way exchange of information often only occurs if a venture has a consulting contract. "*Gartner was not sharing a lot of information because we're not a customer of theirs. You have to become a customer if they start advising you*" (ID 19). Some, however, are quite willing to pay and think highly of the information analysts can share: "*You know, getting good market intelligence was a thing that I was struggling with, so I was actually very receptive to a pitch that was like, well hey, how about turning the tables and being able to just grill these analysts on the space of this sort of stuff? You know, it's a big-ticket item, right? It was like, over $40,000 but that's less than half of what I would have to pay if I was hiring someone in the US to work on my team and so I looked at that and thought, well that's a fairly low-risk thing to do*" (ID 11).

Opinions on the (potential) value of industry awards such as the Cool Vendor designation vary (see Figure 5). For many, it is simply a positive market signal: "*I'm convinced that it's a strong signal and it's really helpful for pitches at new customers*" (ID 10); "*when you say Cool Vendor, people pick up their eyes, whether it's your supplier or whether it's your customer or whether it's investors. It definitely carries weight with it*" (ID 19).

However, the same number of interviewees had a more differentiated view and associated the Cool Vendor designation with trust and credibility: "*So, I think that the recognition piece is huge, it gives a lot of credibility, and we're really grateful and happy and honoured to be recognised*" (ID 20). "*And it's a quality stamp, you know, if these guys say you're good, you're good, that's how it works a lot in our world, especially in the banking world, where people tend to – are risk averse and also take a butt-out position, of course, you know. It just adds to your reputation, and in the end that leads to more clients*" (ID 8).

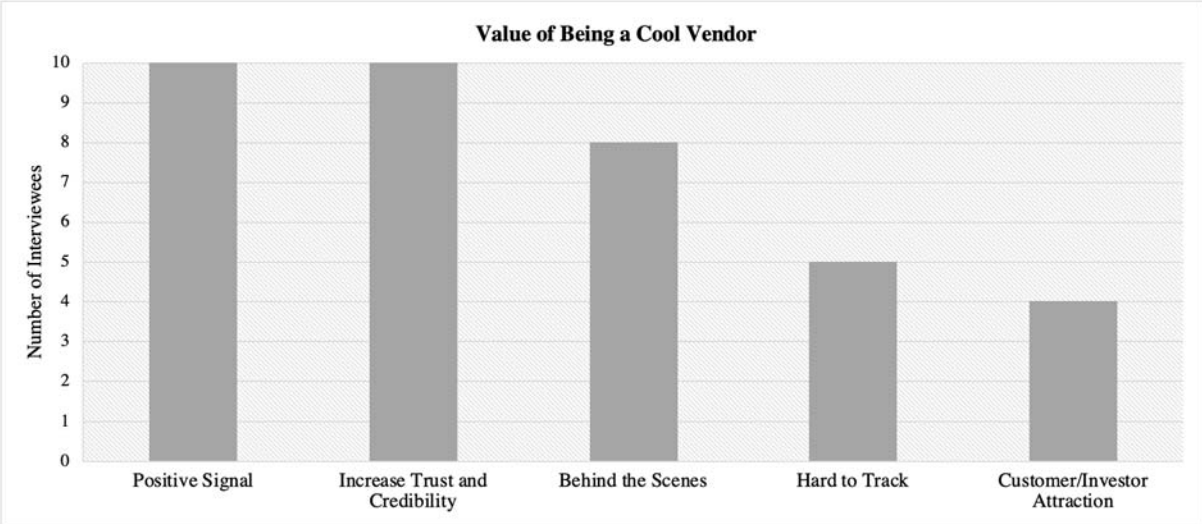

Figure 5: Value of Being a Cool Vendor

Many interviewees see the value of being a Cool Vendor in the less visible analyst relations and in what happens behind the scenes, which supports hypothesis H2: "*And I think it's less about the award itself, it's more that they have kind of cornered the market in terms of people that pay for consulting services and industry research. I mean there is nobody else in the market, they have bought everybody. So if you want to do something in the enterprise market, like it or not you have to be involved with Gartner at some point*" (ID 5). "*There is the public endorsement, but there is also what is happening behind the scenes. So, the analysts are […] Gartner and Forrester, especially Gartner are […] working directly with end-users to help them with vendor selection but they are actually involved in […] behind the scenes, in pretty much every enterprise field that we're in. We don't hear directly about it, right […] it's all confidential between them and their customers, but we know, they tell us, and we know*" (ID 3).

A somewhat smaller number of interview participants find the effect of being a Cool Vendor hard to track: "*it's always really hard to link lead generation directly to the type of activity. Because you post a report and you might get a couple of hundred downloads and a lot of them are just people that wanted that report, anyway*" (ID 7). What might play a role here is that the effects and the process leading to the effects are not necessarily visible.

Only relatively few interview participants made a direct connection between the Cool Vendor award and specific effects: "*large organisations come to us, we've seen investors actually come to us and one of the things they do see is that we are a Cool Vendor and Gartner is something that does come up*" (ID 6). "*I would say that we had interests in terms of customers on the back of, 'I saw your press release and I wanted to reach out.' Or, 'I heard about and I wanted to* *reach out'. So, I think in terms of that, not hundreds and thousands but there were a couple of those*" (ID 19).

From the results of this subsection we can see that analyst relations and awards, however valuable they may be, are not a panacea for young digital ventures. Accordingly, the next subsection sheds light on further relevant forms of endorsement (RQ1).

6.2.5 Relevant Forms of Endorsement

To generate knowledge about endorsements relevant to the growth and scaling of young digital ventures, I included an open question on this aspect in the interview guide. The results are presented in Figure 6.

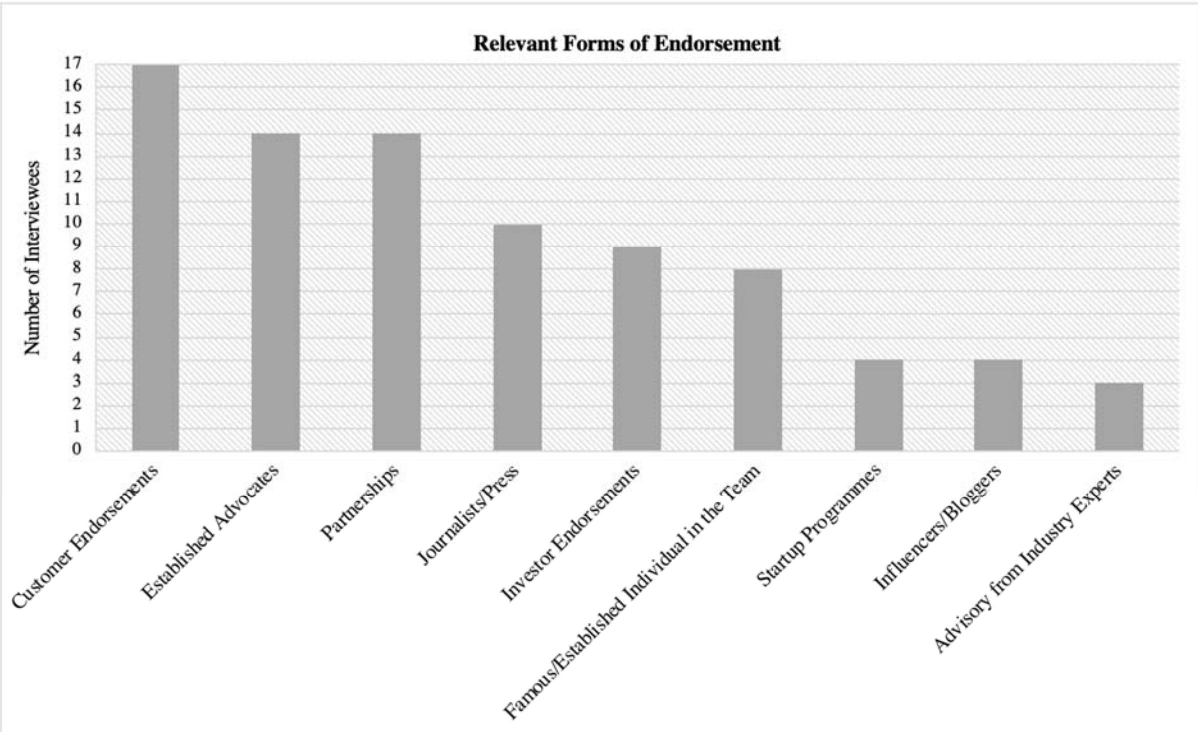

Figure 6: Relevant Forms of Endorsement

Thus, many interviewees stated that having customer references is particularly valuable to gain trust: "*The biggest endorsement you can have is finding an anchor tenant for your platform in an industry that is reputable*" (ID 21). In accordance with that, another interviewee stated that "*the best thing is a customer reference, like a customer saying, 'I used this because they're great.' That's the very best thing*" (ID 11). In this context, the degree of complexity may vary, as putting a customer's logo on the website may well be a positive signal, but active recommendations from customers are probably more powerful but also less visible – at least if they are given bilaterally.

Established advocates (which may include industry analysts) and partnerships with other ventures or institutions were mentioned second most frequently: "*The next best thing is someone saying, you know, 'we're experts and you should use this because it's great'*" (ID 11). "*It's those types of, you know, endorsements either through industry, or respected entrepreneurs. You know, you can pick one, so Richard Branson, Elon Musk, you know and all they have to do is say that they like this idea […]. If you get that on record, it's massive*" (ID 14).

Others see value in working with "*partners, so we do a tremendous amount of work with [name of a partner] and [name of another partner] and […] those are all things that we use as we engage with new people because that's a level of endorsement*" (ID 5). Interestingly, it was also pointed out that partnerships with larger corporates are a double-edged sword, since "*partnering with dinosaurs […] slows you down as hell. I mean that's a real burden because for a start-up, it doesn't matter how innovative a corporate is. It's always too slow – always. I mean that's always the pros and cons for something like this, but I think the key takeaway we could take out of this was basically on the one side our whole team, where not everybody was basically before in a corporate setting actually learned how corporates work, which is also important to know for a start-up and I also think that many B2B start-ups have exactly a lack of this know-how*" (ID 15).

Also, journalists and press were perceived as a potential source of endorsement by some interview participants: "*journalists who write positively about you also helps, definitely*" (ID 8). However, it must also be said that journalists were critically discussed as a source of endorsement: "*So, I think a lot of those journalists were kind of informal, not very sophisticated, not very consistent, right? So, as opposed to like, a well-researched pieced by a respectable publication*" (ID 4).

Investors were named in the context of relevant forms of endorsement, with less emphasis on financial support at this point. Rather, the "*endorsement comes from investors who are [on] your board, who back you to say, listen, we've got to keep money in this company because it's making sense for its customer and we believe they have a future because anything that a techfin company like us does, as banks look at a long-term contract, and they expect you to be there*" (ID 1). Besides the fact that "*investors that endorse and show support is obviously helpful*" (ID

17), it is important how well known they are, as “*customers are looking for some external validation, and a notable investor that invented the technology, and trusts the company, and supports the company, is definitely helpful*” (ID 17).

The next aspect goes more in the direction of a signal created by a young venture itself and concerns a famous or at least established individual in the team: “*If you’re able to attract to your team someone prominent, you know, either someone who is known in industry, or some far more successful company and whether they, if they join a leadership team, or if they become an advisor […] that’s a pretty powerful kind of endorsement because […] they’re choosing to throw their lot in with reviews opposed to all the other opportunities that a senior person like that might be able to do and again, you know, if it is financial services for example, if it’s someone who knows what things are ripe on the inside, I think that does make banks and things comfortable because, you know, they know that it’s going to be slightly easier dealing with you because you’re not going to have all these crazy ideas about trying to do the impossible*” (ID 11).

Start-up programmes and influencers/bloggers were named by four interview participants: “*So, there were a number of start-up programmes that nominated us for different designations, such as Plug and Play, well we participated in one of their programmes, as well as start a boot camp and some of the others, and we found those engagements impactful by connecting us to the right type of people from our client base, as well as from the investor community*” (ID 17). Some interviewees also saw a potential source of endorsement in influencers/bloggers, as “*they have big followers and people look to them as thought leaders, and so those people can be influential. Maybe not as purchasing decisions directly but at least in helping people understand, for example, why you might need a solution like [name of a company]*” (ID 3).

Finally, expert advice was named as a relevant form of endorsement: “*Even though we had tremendous experience in the States, I think we relied very heavily on the advice of other people who had run into similar issues of trying to start a product that might be regulated as money transmission*” (ID 4). Another interviewee pointed to the fact that advisors not only bring knowledge into a firm but also have – if they are well known in the respective domain – a signal effect to the outside world: “*an advisor would typically bring in new capabilities […]. And ideally, that person has enough credibility in the market that when you introduce something new and you start flowing that through your marketing channel, you can say we are working with [name of a advisor] […] because that’s kind of the venue*” (ID 5).

At this point, it is important to note that the different endorsements identified in this study should not be considered independently. Accordingly, one should take into account the different layers of endorsement, which are outlined in the next subsection.

6.2.6 Different Layers of Endorsement

One interview participant stated that "*once an organisation has traction, and they have a line of revenue, that's when the analyst engagement happens, I think prior to that, they're just too early and therefore any endorsement from the larger research companies just wouldn't occur*" (ID 21). Furthermore, "*there has to be a certain number of end-user enquiries etc. […]. It's a sort of frustrating cycle because the end-users won't do enquiries unless the analysts are talking about it so that the end-users get educated. So, that is kind of the dance you have to do*" (ID 3).

Accordingly, upstream stepping stones seem necessary to attract higher-level endorsements (Pollock et al. 2019), as supported by the following statement: "*For early-stage companies, before you've got lots of customers you need to show momentum, right? You show momentum, so a drumbeat of announcements, whether it is customer launches, press mentions, awards, accolades and industry mentions and all of that sort of stuff, that's all really helpful. It helps with customers. It helps with recruiting and it helps with investors and so, you know, to some extent at the very early stage it doesn't really matter where those things come from and I think people understand at a very early stage that yeah, you know, you went to a conference and maybe you paid some money and they gave you more, but at least you didn't get booed off stage, right?*" (ID 11).

However, even if a young venture manages to obtain higher-level endorsements, there is no guarantee for a long-term positive effect, as both the literature (e.g., Goode 1978) and statements from the interviewees indicate that the effect of endorsements such as the Cool Vendor award decreases over time: "*Gartner Cool Vendor recognition is a really important part in the beginning stages of a company, but that kind of fades within a year, so it's really yeah, it's forward motion that you have to be making within the analyst firm, or, you know, Cool Vendor just makes you seem like a start-up, like very start-uppy*" (ID 16).

Furthermore, it is probably rarely sufficient to send one particularly strong signal or to have one specific endorsement: "*I think the combination of multiple things is a good thing, that is impactful, it creates momentum, that is greater than each one of those specifically*" (ID 17). Another interview participant brought up the relevance of different forms of endorsement and came to a similar conclusion: "*I don't know about the most important form. I feel like you need* *to have all of those boxes ticked, you need some awards, you need some testimonials, you need the articles. So, we've kind of worked out all of those channels and it is working. It's a strategy, it's a plan, it's an execution, and we go for it. And it's not necessarily something that you have, I mean, an award you don't have the power to decide if it's going to happen or not but you definitely have the power to decide if you're going to put it into play*" (ID 19). In the context of different layers of endorsement, some interviewees offered examples of how certain signals can be supported by third-party endorsements: "*I mean having a good product; I mean that's one thing, but people from the outside look differently at this. I mean if you're a start-up they start asking about […] especially in a regulated market, about everything and people […] tend to, let's say, trust implicit or explicit references*" (ID 15).

Just as the endorsements identified in this study should not be considered independently of each other, the conceptual differentiation between signals and endorsements is fluid, as outlined in the conceptual framework presented in the following section.

6.3. Conceptual Framework

Based on the existing literature and the knowledge generated during the interviews, I propose a conceptual framework which differentiates pure market signals and more complex mechanisms associated with the term *endorsement* (see Figure 7).

Typical attributes of signals and endorsements are marked on the sides of the framework, while examples from the literature and my own investigation are assigned within the framework. Above all, the framework indicates that no clear line can separate the terms *signal* and *endorsement*, as they overlap both conceptually and in practice. Conceptually, endorsements can be observable but do not have to be ("*happening behind the scenes*" (ID 3)). An overlap can be seen in the aspect *costly to obtain*/*imitate*, even though the effort needed to obtain a signal or an endorsement can vary greatly.

While market signals such as product features can be assigned relatively clearly, endorsements (can) have elements of both sides. For example, customer endorsements can take the form of a pure market signal if a venture places the logo of a named customer on its website. The situation is different if a customer expresses a favourable opinion to (potential) customers, investors, or partners (perhaps even without the knowledge of the endorsed venture). Here, the endorsement lies outside the control of the endorsed venture and does not necessarily have to be publicly observable (if the favourable opinion is conveyed bilaterally). The same applies to other forms of endorsement, which are positioned at the intersection between signals and endorsements.

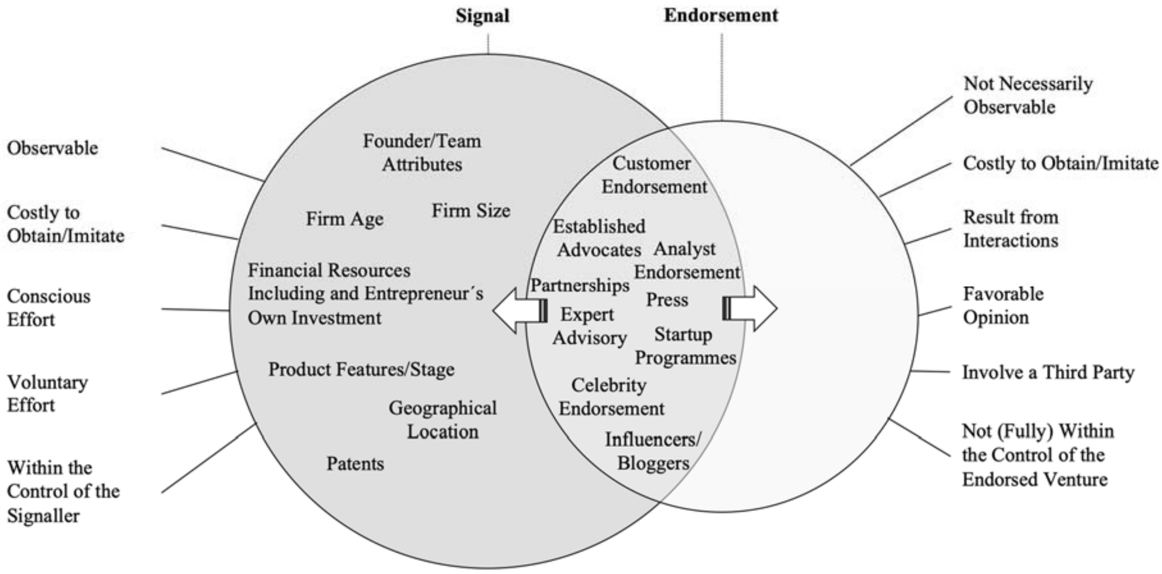

Figure 7: Conceptual Framework

An unambiguous assignment, therefore, depends strongly on the perspective and, above all, the respective context. Accordingly, the arrows indicate that the aspects collected in the overlap can take on the form of a signal or an endorsement. Since endorsements probably most often incorporate some elements of a signal, and since signalling is strongly anchored in the academic literature, the circle representing signals is slightly larger than the one embodying endorsements.

7. Discussion

Both the literature and the interview results of this study have shown that the digital age offers an interesting context for investigating how young digital ventures can overcome the *liability of newness* and reduce information asymmetries to (potential) customers, investors, and partners. The fact that digital start-ups emerge and grow rapidly (Huang et al. 2017), that boundaries between products and services become fluid (Nambisan 2017), and that information can easily be conveyed via digital channels in real time and to a large number of individuals make it difficult for (potential) customers, investors, and partners to identify credible providers. In this context, the interview results suggest that self-created market signals, such as a professional-looking website, do not seem sufficient to reduce uncertainty (ID 14). This appears to be particularly true for the financial industry, which is dominated by established players (Hornuf et al. 2020; Klus et al. 2019) and characterised by a rather conservative mindset (ID 16).

In line with previous studies (e.g., Biswas et al. 2006; Singh et al. 1986; Stuart et al. 1999), the results of this study support the idea that third-party endorsements play a critical role in the reduction of uncertainty, whereby it is not only important that the endorsing party has a high level of awareness but also that they have associated expertise in the respective domain. This concerns celebrity endorsements but also other sources of endorsement like journalists, as their articles are not always perceived as sophisticated and well researched (ID 4). A relevant but under-researched endorsement comes from industry analysts, who have a reputation for their expertise and can, for example, send buy signals to investors. My empirical analysis has revealed that young ventures that have been recognised as Cool Vendors by the analyst firm Gartner have significantly more funding than comparable firms without this award, and that in many cases large shares of the total funding were invested in a venture after it was designated a Cool Vendor. The second finding is particularly interesting, as one might have suspected that young ventures got on Gartner's radar precisely because they were well funded. Although adequate financial resources are certainly relevant for attracting the attention of large analyst firms, the results of this study suggest that awards such as Gartner's Cool Vendor help young ventures reduce investor uncertainty and obtain funding.

However, in accordance with hypothesis H2, the value of analyst relations seems to go beyond an award and lies both in highly visible mentions of a young venture in presentations as well as reports and in less visible bilateral interactions between analysts and potential customers and investors. Here, in line with Firth and Swanson (2005), the role of analysts can be seen as intermediaries who examine signals and translate them into information that is comprehensible to (potential) customers, investors, and partners. In addition, analysts can serve as a valuable source of information for the endorsed venture, at least if a consulting contract exists. The sophisticated mechanisms associated with analyst endorsements provide an interesting field of research, as they have strong links to the signalling literature but cannot be fully explained by it. Accordingly, the highly visible elements of analyst endorsements such as an award can easily be explained with the signalling literature, whereas less observable analyst interactions go beyond the control of the endorsed firm and thus lose the elementary properties of a signal. I propose a conceptual framework for the differentiation of signals and endorsements (see Figure 7), which shows that no clear-cut separation between signals and endorsements should be made. Rather, depending on the context, an endorsement can take on more or fewer attributes of a signal. I consider this differentiation as a supplement to the mechanisms already discussed in the signalling literature.

As mentioned in the above paragraph, in most cases a consulting contract is needed for a venture to benefit from the expertise of industry analysts like Gartner. In this context, some interview participants stressed that, especially in the very early stages of a company, it is difficult to raise the financial resources needed for such contracts as well as other costly signals and endorsements. In addition, some endorsements such as partnerships with established players most often only occur if a firm has reached some traction and credibility, especially in the conservative financial industry. Accordingly, it is important to know different signals and endorsements (subject of research question RQ1) and at the same time to understand that they should not be considered independently. Here, this study contributes to the literature by identifying relevant endorsements for young digital ventures and by providing insights into how these are related.

The last aspect of the discussion concerns the categorisation of services by major analyst firms such as Gartner, as these categories considerably influence the market (Pollock & Williams 2011) and create a dilemma for new ventures. On the one hand, start-ups have to make sure that their services fit into a predefined category if they want to get on an analyst's radar (Pollock et al. 2019). On the other hand, these categories only exist because several firms already offer comparable services, so the competition is high. From my point of view, the strategic balancing act for young ventures is to align new services with existing categories without imitating the services of the competition. As soon as the new venture begins to establish itself in the market, it can try to convince analysts to create a new category for the services it has introduced to position itself as the leader in that category. Until that point, however, it seems that new ventures have to play according to the rules of the market, at least if they want to be backed by a leading analyst firm.

8. Limitations

The study has some limitations that should be considered when interpreting the results. First, the quality of propensity score matching depends decisively on the number and quality of the matching variables. In this study, the matching is based on the ventures' age, number of employees, and country of headquarters (in addition to the treatment variable). Even though these variables cover elementary data of a company, it must be assumed that a further reduction of heterogeneity could have been achieved by considering additional variables. However, even if further attributes were considered, the treatment and control group could still be different in unobservable dimensions (Brynjolfsson et al. 2011). Accordingly, it cannot be claimed with absolute certainty that the higher funding of Cool Vendor firms was caused by the award, although the supplementary descriptive analysis reveals that in many cases large parts of the total funding amount were invested after the award. What should be taken into account is that an additional relevant filter has already been applied in the pre-selection of the ventures through the industry focus. However, even if such a focus leads to increased comparability within the sample, it also limits the transferability of the results to other domains. Lastly, the sample size of the treatment group is relatively small, which negatively influences the robustness of the results.

The interview part also has limitations, primarily a relatively small sample size. Furthermore, the exploratory nature of semi-structured interviews makes it difficult to ensure solid testing of hypotheses, which must be taken into account with regard to the results on hypothesis H2. Nevertheless, it should be considered that 21 interviews are sufficient to generate decent explorative insights (Guest et al. 2006) and that the number of potential interviewees is strongly limited by the relatively small number of fintechs recognised as Cool Vendors by the analyst firm Gartner.

Lastly, my conceptual framework illustrates the differentiation between pure market signals and endorsements, whereby the assignment of examples is not empirically backed. Accordingly, I do not claim completeness of the framework but propose it as a possible addition to the signalling literature.

9. Implications and Future Directions

Based on the results of this study, implications can be formulated for both research and practice. First, I encourage future research to further investigate the influence of (analyst) awards on the funding of young digital ventures. If propensity score matching is applied, further matching variables could be considered. Also, my analysis could be replicated for other domains and awards from other analyst firms to test the transferability of the results. Further potential for future research lies in taking up the different forms of endorsement that have been identified as relevant in this study and examining their specific effects. Finally, more research should be conducted into the role and relevance of industry analysts both for young digital ventures and for the development of markets, as these aspects have so far been relatively weakly anchored in the literature.

I recommend entrepreneurs to not only concentrate on self-created market signals, as these can easily get lost in the noise of other ventures' signals and seem insufficient to effectively reduce uncertainty among (potential) customers, investors, and partners, which seems to be particularly true for an increasingly digitalised competitive environment. Instead, entrepreneurs should seek to obtain a well-managed mix of signals and endorsements to increase credibility. In this context, entrepreneurs should take into account that it is difficult to get on the radar of powerful intermediaries such as large analyst firms shortly after the founding of a company and that preparatory, lower-level endorsements may be necessary. In the financial industry, for example, winning the trust of traditional players like banks normally requires that a certain market potential has already been identified (by a believable third party).

Since the degree of awareness by a third party alone is not sufficient to reduce uncertainty, young digital ventures might strive for expert endorsements by industry analysts. In addition to opening the door to established players, the potential benefit of analyst endorsements lies in getting market insights (at least if a consulting contract exists) and attracting funding. However, when considering which endorsements are desirable, entrepreneurs should further take into account the individual context of the respective venture because, for example, the founders' background and the survival pattern can influence the value of information provided by analysts or other experts. Also, the relevance of an established advocate can be relativised if, for example, the founder is an established individual with a decent track record in the targeted domain.

10. Conclusion

This paper examines the influence and role of analyst endorsements for the development of young digital ventures. Using the example of an award given by the analyst firm Gartner in the context of the fintech domain, I first examine whether analyst awards such as Gartner's Cool Vendor serve as a buy signal for investors and have a positive influence on the funding of awarded ventures. The results of propensity score matching indicate a significant positive effect. This study further shows that analyst endorsements can go beyond pure market signals when analysts write reports about firms, mention them in presentations, or express a favourable opinion in bilateral interactions with potential customers, partners, or investors. Based on semi-structured interviews, I further provide insights into different forms of endorsement considered crucial by entrepreneurs and develop a conceptual framework that differentiates pure market signals from more complex mechanisms, which I propose as a complement to the signalling literature.

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Appendix A

Interview Guide

1. **Opening and Organisational Matters**
   - Brief introduction of the interviewer and the project.
   - Answers and statements made in the interview will be anonymous.
   - There are no right or wrong answers.
   - The interviewee will be allowed to ask questions throughout the interview.
   - No leading, but open questions will be asked.
   - Get permission to record the interview.
   - Inform that the recording starts now.

---

2. **Introduction of the Interviewee**
   - Could you please introduce yourself and briefly describe your position and core tasks?

– After approximately 10 - 15 minutes –

3. **General Information about the Venture**
   - What does your venture offer and what are its core competencies?
     - Would you describe your services as being aligned with the financial industry? In other words: Would you rather say that you are exploiting existing solutions or that you are treading a completely new path?
     - Which aspects have led you to take this strategic path?
   - You have a potential greenfield when it comes to innovation but an existing (highly regulated) business sector with established companies (particularly banks). How do you manage it? What drawbacks and advantages/opportunities are related to this context?

4. **Analyst Relations/Endorsement**
   - What are your experiences with industry analysts?
     - Have you been involved in any analyst briefings in the past? If so, what did you do and how did it go?
     - What do you think about the role/importance of industry analysts and their support for digital start-ups and your company in particular?
   - Your venture has been designated a "Cool Vendor" by Gartner, which means that Gartner sees your business as *impactful, innovative,* and *intriguing.*
     - How did you learn that your company was designated a Cool Vendor?

        - Why do you think your company got on Gartner's radar?
            - Did you do anything specific to get the designation?
            - Was there any interaction with Gartner before the Cool Vendor designation? If so, what did it look like?
- What has been done to utilise the Cool Vendor award?
- How would you describe the effect of the Cool Vendor award? What benefits do you think you can get from it?

5. Other Forms of Endorsement

- What other forms of endorsement do you think are relevant?
    - How would you rate their importance (also compared to analyst endorsements)? What are the (potential) effects?
    - What did you do to get these endorsements?

– After approximately 45 minutes –

6. Prospects

- What strategic challenges does your company face at the moment?
- Can you think of any further aspects regarding signalling and endorsement that you believe are relevant but that have not been mentioned in our interview so far?

Appendix B

Unmatched Sample	Matched Sample

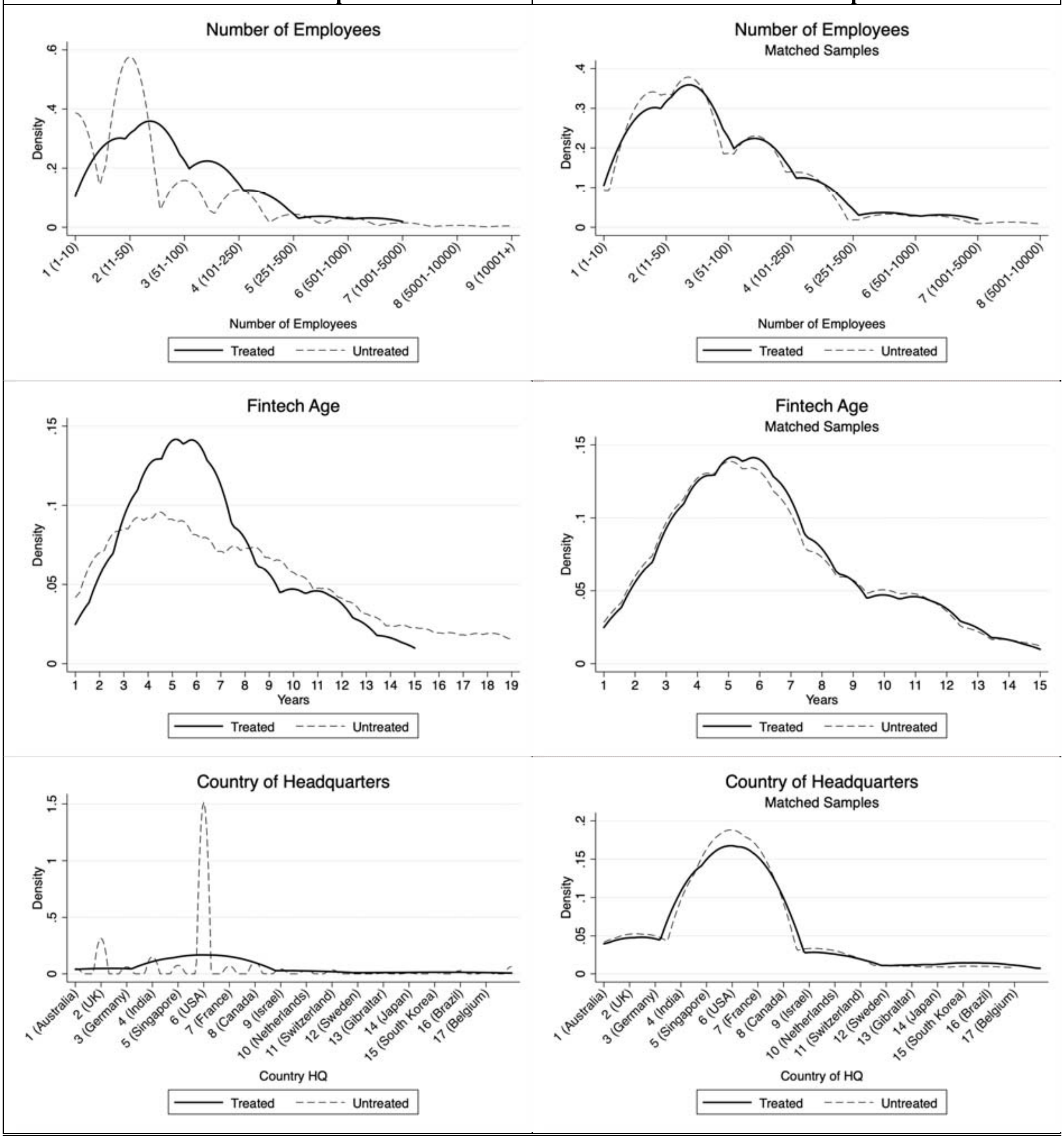

Figure B1: Visualisation of the Propensity Score Matching

Diskussionspapiere des Instituts für Organisationsökonomik

Seit Institutsgründung im Oktober 2010 erscheint monatlich ein Diskussionspapier. Im Folgenden werden die letzten zwölf aufgeführt. Eine vollständige Liste mit Downloadmöglichkeit findet sich unter http://www.wiwi.uni-muenster.de/io/de/forschen/diskussionspapiere.

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Milan Frederik Klus
März 2020

DP-IO 2/2020 Internet-Publikationen gehört die Zukunft
Alexander Dilger
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Alexander Dilger/Katrin Scharfenkamp
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Ute Schottmüller-Einwag/Alexander Dilger
April 2019

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