

Startup valuation reassessed: against celebrity, sustainability and state intervention

Startup
valuation
reassessed

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Abstract

Purpose – The purpose of this study is to showcase that the valuation of startups is still considered to be more “art than science”. Moreover, such non-rigorous approaches often lead to valuations, which turn out to be too high, which in turn has become a well-known phenomenon to a broader audience due to shining examples such as We Work. This is reason enough to revisit the important topic of where we stand today with startup valuation procedures and methodologies.

Design/methodology/approach – Literature synthesis and exploratory analysis.

Findings – While some studies describe sound results about how to assess startups, what the authors found was that many questions remain open or have not been covered at all. This is the reason why the authors needed to apply a substantial amount of reasoning in the analysis of studies, which do not exactly deal with startup companies. The authors provided some interesting impulses for future research.

Originality/value – Based on an original overview of the current state of research about the valuation of startup companies, this paper makes the following principal contribution to both the literature and practice: on the one hand, the authors assess four impact factors on startup values critically; on the other, the authors provide an outlook on promising future research avenues.

Keywords Entrepreneurship, Startup, Founders, Startup valuation

Paper type Research paper

1. Introduction

Due to missing historic data and capital structures, which are substantially different from established companies, the valuation of startups is often referred to as being more “art than science” (Köhn, 2018). Furthermore, startup companies particularly lack data “for estimating competitive effects” (Bryan and Hovenkamp, 2020, p. 331), and Gornall and Strebulaev (2020) found that post-money valuations by venture capitalists for unicorns (“private companies with reported valuations above \$1 billion”) were on average 48% above the threshold the authors call the company’s “fair value”. This inconsistency between subjective and actual value shows where factors, like missing information, can lead.

According to Tyebjee and Bruno (1984), a venture capital investment follows a clear structure, with the valuation being one of the most important and challenging issues for both the entrepreneur as well as the venture capitalist. The authors furthermore state that startup companies usually have almost no existing history of performance, meaning that the



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venture capital (VC) needs to “rely on a subjective assessment procedure, based upon the business plan presented by the venture’s management”. It is thus natural to assume that the management is interested in presenting a particularly high valuation in order to be well prepared for their exit.

According to [Samdani \(2019\)](#), the usage of the discounted cash flow (DCF) method is not as precise for unlisted firms as it is for listed. He also states that valuation multiples like the price/earnings ratio (P/E) or the earnings per share (EPS), which are commonly used as a substitute of the DCF, do not take into account the fact that “the price accuracy of new equity issues is also effected by market-demand information”, referring to [Kim and Ritter \(1999\)](#), [Banerjee et al. \(2011\)](#) and [Butler et al. \(2014\)](#). Again, this shows that typical valuation methods cannot be used as easily for startups as they can be used for companies with a well-established capital structure.

While, for example, [Armerin \(2014\)](#) tries to deliver axioms for the valuation of cash flows in general, an approach to provide an overview of which aspects influence the valuation of startup companies has not been made yet. With our paper, we summarize recent findings about the valuation process of startup companies and particularly contribute by identifying three important and promising research avenues, which we advertise to be put into further research focus. Startup valuation is an important topic as entrepreneurial activities seem to be rising substantially ([Kelley et al., 2020](#)), and being able to value them is not only essential from an academic perspective, but even more from a practical point of view because (as stated above) the more common assessment procedures cannot be applied so well for startups. Therefore, given the research gap consisting of an identified inconsistency between subjective and actual value of startups, the present paper pursues the guiding question of how to assess the startup valuation primarily by means of a literature synthesis.

To address this research question, we proceed as follows in the remainder of the paper at hand: in Section 1, we summarize recent findings on how entrepreneurs/founders affect the valuation of their firms. Section 2 deals with the factor of innovation and how this influences the value of a company in general. Section 3 analyses governmental and social factors and their impact on the valuation of startup companies. In Section 4, we take a look at VC-backed companies, how VCs determine the valuation of a startup and how their presence influences the startups valuation. Next, we give three ideas on promising future research avenues. In the last section, our key findings are summarised.

2. Methodology

This paper establishes a systematic synthesis of the both academic and practice-oriented literature on the important, yet not consolidated topic of startup valuation which primarily takes place in the following four Sections 3 to 6. In Section 7, by contrast, emphasis is put on deriving lessons and an agenda for future research.

3. Impact factor 1: the entrepreneur’s influence on startup valuation

A primary factor that affects the valuation of a startup company is the question whether the startup’s founder is a serial entrepreneur (a person who has founded more than a single company) or not. According to [Nahata \(2019\)](#), companies founded by (previously successful) serial entrepreneurs receive higher valuations as well as equity purchase prices, which he gives two explanations for. Firstly, previously successful entrepreneurs might have a better negotiation power (“leverage”) over the VC, resulting in contracts in favour of the founder. Alternatively, due to “the importance of entrepreneurial effort which is further reinforced by their prior experience”, it seems only logical that venture capitalists offer previously unsuccessful founders encouragement in form of cash flow or control rights, while keeping

the valuation low at the same time to compensate. However, Nahata found that previously unsuccessful serial entrepreneurs received better contracts from VCs than inexperienced founders did. Additionally, the study shows a positive correlation between startup valuations and the number of funding rounds, which is explained by the fact that successful IPOs are typically funded with higher valuations in later venture rounds. Another major finding of Nahata's research is the fact that "serial founders are more likely to retain their CEO positions", which also shows that the valuation depends on the prior experiences of the startup founder, and therefore need to be taken into account. However, it is important to mention that those findings have only been verified for VC-backed companies.

Matching with Nahata's statements about the positive correlation between previously successful entrepreneurs and the "goodness" of their VC contracts, [D.H. Hsu \(2007\)](#) found that entrepreneurs with "successful previous founding experience are both more likely to receive VC funding through a direct tie and to have higher VC valuations". The author also found that for companies within the (at the time of research) emerging internet industry, founding teams with a member holding a doctoral degree are more likely to get funded by VCs and also receive higher valuations, which the author explains by a "signal [l]ing effect to external resource providers". Furthermore, the author found that "measures of human capital and social capital are positively related to venture valuation".

According to [Köhn \(2018\)](#), the valuation of a startup company is positively influenced by the following factors: "having more than one founder, having a complete management team, previous startup experience, management and relevant industry experience, and also a higher level of education", referring to [D.H. Hsu \(2007\)](#), [Miloud *et al.* \(2012\)](#), [Sievers *et al.* \(2013\)](#) and [Wasserman \(2017\)](#). However, other findings, such as those of [Gompers *et al.* \(2010\)](#) suggest that there is no evidence of serial entrepreneurs receiving higher valuations for their companies, as Köhn refers to it. In our opinion, this shows the importance of further verifying the results of the previous studies, as (as stated above), the results of [Nahata \(2019\)](#), for example, have only been verified for firms backed by VCs.

The findings of [Faleye *et al.* \(2020\)](#) suggest that especially smaller firms and R&D-intensive (such as biotech) or competitive industries (such as many B2C sectors) benefit from entrepreneurial-minded directors on their boards as they bring in valuable strategies on how to evolve in such fast-paced environments. The authors explain this by the "attributes, skills, and experiences" the entrepreneur brings into the firm. In our opinion, those findings can be transferred to startup valuation as well, as it shows that the entrepreneur himself has a large impact on the value of small and R&D-intensive firms – company characteristics that can be found especially in startup firms. For us, a verification of this hypothesis for the specific case of startup companies could be a substantial aspect of future research in this field. Faleye *et al.*'s findings further show that the concerns that "founder-managed firms perform better partly because entrepreneurs usually consider their firms as extensions of themselves and thus have a stronger intrinsic motivation to pursue value-enhancing strategies", and that entrepreneurs are more likely to have significant firm-specific skills, do not hold. Rather, their results show that the value entrepreneur directors add, are derived "from their human capital rather than their special relations to the firms they found". The similar conclusion by [He \(2008\)](#), furthermore, supports their findings. This shows that our assumptions made about the influence of entrepreneurs on the value of a firm holds, as it confirms that the entrepreneurial behaviour, rather than their status within the firm, is the reason for this effect. However, as we have already stated it, those results are just derived from a process of logical reasoning, instead of own empirical verification, which is why we

think that an empirical analysis of reasons for the effect of value addition by entrepreneurs on the companies they found still needs to be verified for companies within the startup phase.

4. Impact factor 2: how innovation influences a company's value

Research done by [Nemlioglu and Mallick \(2020\)](#) indicates that companies with a high degree of intellectual capital (IC) tended to outperform non-IC-intensive firms after the global financial crisis. Their research, furthermore, suggests that high research and development (R&D) activity, patents, advertising intensity and debt tend to increase the market valuation. Trademarks, however, only had a positive effect on the valuation of large firms. The authors also state that even though “leverage distorts market valuation for large [...] firms, the impact is possible for SMEs [Small and medium-sized enterprises] that are innovation intensive”. According to Nemlioglu and Mallick, IC-intensive firms also seem to have higher market valuations in general, with lower uncertainty in those valuations, irrespective of their debt structure during economically bad times. In their study, the authors additionally investigated the “impact of sectoral heterogeneity on valuation and its uncertainty”. They did so by the three-sector classification (primary, secondary and tertiary) as well as “knowledge-intensive service sectors and high KIS [Knowledge intensive service sectors] with low-technology and low KIS sectors”. The findings of the first type of sectoral classification indicate that companies in the second sector tend to receive higher valuations if they “jointly focus on R&D and patenting along with debt”, while patents and R&D also contributes to higher valuations in the tertiary sector. With the second type of classification, Nemlioglu and Mallick found that high-tech manufacturing companies “benefit from patenting and R&D irrespective of their debt-intensity, whereas low- KIS firms benefit from trademark and advertising in general”. Furthermore, R&D and patents reduce the uncertainty in valuations, which is why the authors conclude that especially high-debt firms should focus on those aspects to reduce the valuation uncertainty. In their final conclusion, the authors state that high-tech firms achieve better valuations and are also able to reduce valuation uncertainties by patents and R&D investments, regardless of their debt level, while low-tech firms tend to profit more from trademark and advertising investments.

[Jia \(2018\)](#) refers to [Sorescu and Spanjol \(2008\)](#) by stating that an exploratory innovation strategy benefits shareholder “by increasing both profits and long-term abnormal returns”. Sorescu and Spanjol, furthermore, found that incremental innovations can help to preserve a company's value, while breakthrough or disruptive innovations are “the key to achieving sustained long-term growth”. [Jia \(2018\)](#), however, states that the finding of his studies show that those “exploratory” innovations also bear the risk of extremely negative returns (including bankruptcy). He furthermore refers to [Litov et al. \(2012\)](#) by mentioning that the uniqueness of a company's strategy is positively related to the firm's value. We think that those findings can be transferred to startup companies, as they are commonly seen as innovative in their business models.

[Wilson et al. \(2018\)](#) state that for companies, involved in new technologies, innovations and a lack of tangible assets as securities, “classic valuation techniques are of little use”, referring to [Manigart et al. \(2000\)](#). As those information asymmetries might remain and result in problems with the company valuation, companies “at the later venture stage may face an equity funding gap” ([Wilson et al., 2018](#)).

In their study, [Kwon and Lee \(2019\)](#) present several findings about strategic determinants of high-tech company market valuations. As the authors also investigated those determinants for companies of different capacity levels, we think that their findings can be transferred to startup companies as well, due to their mostly innovative spirit.

According to Kwon and Lee, two of the most impactful factors regarding a high-tech company's market value are operational efficiency and corporate reputation. The authors therefore conclude that those results empirically prove “the conventional wisdom of harmonizing internal best practices and external attractiveness as a precondition for enhancing the market valuation of a firm”.

5. Impact factor 3: the influence of governmental and social factors on startup valuation

Questioning how governmental and social factors influence the valuation of startups, [Berger and Köhn \(2020\)](#) state that the valuation of startup firms that benefit, for example, from public, non-dilutive funds, is directly connected with the motivation of the entrepreneur, referring to [Hsu *et al.* \(2013\)](#) and [Miloud *et al.* \(2012\)](#). Furthermore, they mention that a link between the protection of VCs through formal institutions and investor uncertainty exists, i.e. the more VCs are protected the lower the uncertainty of investors, creating the basis for “high early-stage start-up valuations” and vice versa. Additionally, they mention that they consider startup valuation to be a “complex combination of different conditions of the institutional setting and a country's innovativeness”, meaning that, for example, startups based in innovation-friendly countries should consequently be assigned a higher valuation. In support of this statement, [Liu *et al.* \(2019\)](#) state that “both the home country and the host country significantly affect foreign firms' valuation and the success of their IPO”, referring to [Bell *et al.* \(2014\)](#). The authors also found that foreign (non-US) IPO firms with a higher entrepreneurial orientation receive significantly higher valuations. In our opinion, those findings can be transferred to startup valuation as well, as it shows that young companies with an entrepreneurial and therefore innovative approach are assigned higher valuations.

Although, government contractors have lower risk and therefore a lower cost of equity, which the authors explain by the more stable cash flows as an effect of the government as a main customer. Those more stable cashflows seem to weigh more heavily than “any increase in risk due to greater information asymmetry and agency costs” according to [Esqueda *et al.* \(2019\)](#). [Esqueda *et al.* \(2019\)](#) also found that companies, which are predominantly government contractors, tend to have lower valuations than firms without those government contracts. On the downside, however, firms that mainly sell their products to the government have a significantly lower sales growth, compared to other companies, which leads to the lower net valuation, as stated above. During recessions and industry downturns though, those lower valuations disappear “when the relative stability stemming from having a recession-proof counterparty compensates for the negatives”. Nevertheless, the overall lower valuations for government contractors is caused by strategically less important firms in this business, as the more important ones have significantly higher valuations. While they have a higher cost of equity, their overall performance is significantly higher, even regardless of the economic conditions as [Esqueda *et al.* \(2019\)](#) state. While startups, theoretically, might tender for government contract, there are still a number of obstacles that explain why some startups do not take this opportunity. [Orazem *et al.* \(2017\)](#), all of whom are in executive positions at Boston Consulting Group, state that in practice, startups generally seek to gain government contracts, although they are commonly deterred by, for example, a lengthy time for closing the contracts, complex processes, as well as a common assumption made by startups “that only established players with the right connections and sunk infrastructure have a chance of winning government work”.

According to findings made by [Poczter and Shapsis \(2018\)](#), there also seems to exist a gender disparity in startup valuation. The authors analysed the likelihood, as well as the valuation of startup teams to receive angel financing (early-stage financing by affluent

individuals) and found that, depending on the industry, women-owned companies received valuations which, on average, were more than half a million US dollars below those of their male counterparts. Those findings, furthermore, suggested that “even a non-zero amount of women on entrepreneurial teams is associated with lower company valuations”. However, Poczter and Shapsis state that the lower valuations might be caused by their finding that entrepreneurial teams, which only consist of women, tend to ask for less funding themselves, suggesting that “limitations to funding may be partly self-imposed”.

Referring to [Eccles *et al.* \(2014\)](#), [Lee \(2012\)](#) and [Nidumolu *et al.* \(2013\)](#), [Kwon and Lee \(2019\)](#) state that environmental sustainability is becoming an essential indicator for “current performance and future potential of a firm” as it will enhance a company’s market valuation and competitiveness. However, the authors also state that even though it is generally perceived that environmental sustainability improves a firm’s performance and competitiveness, there is still some uncertainty regarding the relationship between sustainability and firm valuation. They furthermore refer to [Trumpp and Guenther \(2017\)](#) by mentioning that this uncertainty can be abstracted into two questions: “It pays to be green” or “It costs to be green” (cf. also [Lăzăroiu *et al.*, 2020](#)).

As startup companies usually tend to be a more (socially minded/community oriented) environment, due to their more innovative character, we think that the question how corporate social responsibility (CSR) affects a firm’s valuation can be considered to be essential for valuing a startup company. According to [Rjiba *et al.* \(2020\)](#), other authors like [Hillman and Keim \(2001\)](#), [Eccles *et al.* \(2014\)](#), [Fatemi *et al.* \(2015\)](#), [Ghoul *et al.* \(2017\)](#) and [Nguyen *et al.* \(2020\)](#) have already established a positive relationship between CSR and corporate financial performance (CFP). [Rjiba *et al.*](#) state that this positive effect is caused by increased stakeholder engagement, resulting from a firm’s commitment to run a long-term relationship with its stakeholders. In their study, they additionally found that during times of high economic uncertainty, this positive valuation effect seems to be higher in developed markets.

6. Impact factor 4: how venture capitalists determine the value of a startup

According to [Gornall and Strebulaev \(2020\)](#), the analysis of VC-backed companies can be seen as rather difficult, as they differ substantially from debt or common stock being traded in financial markets, for example, because investors receive convertible preferred shares (which are better protected against the failure of a company, due to their seniority, and profit from the potential of converting them into common stocks in the case of the firms success). The authors also state that those shares issued to investors are profoundly different between companies and financing rounds, as the different share classes generally allow different rights over cashflows and control. Furthermore, [Gornall and Strebulaev](#) claim that the post-money valuation of a company (share price for the last financing round multiplied by the total number of shares outstanding), which is usually seen as the fair value of the firm, works for publicly traded companies with only one asset class, while it does not work for VC-backed companies, due to the different classes and financing rounds. Therefore, they conclude the fair value and the post-money valuation are not to be equated, although they cite [Scott Kupor](#), partner of the venture capital firm [Andreessen Horowitz](#), according to which “[s]ome venture firms value their companies by taking the last round company valuation in the private market and assigning that value to the VC firm’s ownership in that company”. This, again, shows the importance of our research question, as even some professional investors tend to simplify their valuations substantially.

[Röhm *et al.* \(2018\)](#) found that investment motivations of corporate venture capital (CVC) investors do not only influence their behaviour in the market for startup investments, but

they are also a determinant of the valuation CVCs assign to startup companies. Their findings suggest that CVCs, which have a more strategic investment motivation tend to assign lower valuations to startup companies than analytically motivated CVCs which have moderate levels of the examined dimensions (financial and strategic) do. This suggests “that entrepreneurs trade off these CVCs’ value-adding contributions against a valuation discount”. Furthermore, the authors found that CVCs with an unfocused investment motivation (lack of a clearly defined investment motive) tend to pay purchase prices, which are significantly higher, “supporting the hypothesis that they have a so-called liability of vacillation”. By contrast, the valuations of financially motivated CVCs do not significantly differ from those of their analytically motivated counterparts.

According to Köhn (2018), “VCs assign higher valuations to ventures operating in highly differentiated industries and industries with higher growth rates”, referring to a study conducted by Miloud *et al.* (2012). Köhn, furthermore, refers to research undertaken by Davila *et al.* (2015), stating that VCs tend to assign a premium to startup companies, which adopt management control systems, “believing that they improve decision-making and execution”. This finding is underlined by Köhn’s reference to the study by Davila and Foster (2005) where a positive association between the early adoption of management accounting systems and valuations was found.

But also the competition among VCs seems to have an effect on the valuation of entrepreneurial enterprises. Colombo *et al.* (2019) state that in regions with higher competition among venture capitalists and a lower number of attractive firms, VCs tend to offer entrepreneurs a higher valuation, referring to Gompers and Lerner (2000).

7. Outlook and implications

7.1 Research Avenue 1: celebrity angels as a source of equity and their effect on startup valuation

As shown above, the current state of research regarding the sources of equity funding mostly deals with funding by venture capitalists. While we, being practicing entrepreneurs ourselves, agree on the importance of this investor category, especially for the growth phase of startups, we witness that the current focus of research misses an important aspect when it comes to early stage startup equity funding. Our hypothesis is supported by Harrison, Bock and Gregson (2020) who state that the “facts” of angel investing have not been consistently explored. Due to our experience as entrepreneurs and investors, we have exclusive access to representative knowledge from a leading business angel club in Switzerland. However, even the information gathered from a club like this does not answer the question sufficiently about how angel investors add value to a company they fund. According to the president of the respective club, most angels pursue a full-time job next to their investments and see their investments more like a hobby, which limits their ability to conduct a proper due diligence process. On the other hand, once they invest, they do usually not act as passive investors, rather, they offer their knowledge, network and experiences to the startup they invest in, which is why angel capital is also referred to as smart money. A startup team that onboards one or more angels and makes them, or the lead among them, visible by offering a seat (or seats) on the board of directors is giving a strong signal to its stakeholders, first and foremost a signal of trust to customers in B2B contexts. As a bottom line, our interview results simply put the expertise and networks of angels as the two essential benefits and hallmarks of smart money. Yet, we believe that, those aspects need to be investigated far more deeply, as it is neither clear how the factors of network and expertise are actually defined, how they interact in different contexts, nor which additional factors drive the value added by angel investors for a startup company. This lack of a clear understanding leads to

the question how “positive networking effects”, provided by angels should actually be defined. Taking “celebrity” angel investors from TV shows like “Shark Tank” as an example, it can be seen that those investment pitches differ substantially from those in a non-TV setting (Greathouse, 2018). Professional investors like Paul Graham even criticised the show substantially by stating that startups should focus on “building great products, not on marketing”, and for that reason, he thinks shows like “Shark Tank” are a distracting waste of time for entrepreneurs (Ranj, 2016). Therefore it can be questioned how engagements with such “celebrity” angel investors contribute to the valuation of a startup in later funding rounds and if the expertise and network of “celebrities” constitute a positive signal to other investors.

Those problems in estimating the actual consequences of such “celebrity” deals only arise as research has not yet investigated which factors actually drive the value addition by angels, deeply enough. Furthermore, a clarification on what should be understood by advantages of networks and the expertise provided by angel investors is required.

7.2 Research Avenue 2: sustainability as a driving factor in startup valuation

Within our literature synthesis, we covered the influence of innovation on the valuation of firms. For example, we were able to find that R&D and innovation-intensive firms, regardless of their debt, are able to reduce their valuation uncertainties through patents or R&D investments.

However, in our opinion, another aspect, which has received much attention in recent years, might have an even greater impact on the valuation of young enterprises. We are talking about the factor of sustainability. Kwon and Lee (2019), for example, demonstrate in their study that, among other factors, sustainability can be used as a “major competitive determinant [...] for a firm’s market value performance”, which is also backed by the findings of Yu and Zhao (2015). Even though sustainability is given considerable importance in today’s firm behaviour, the question remains of how VCs act regarding sustainability, specifically regarding the sustainability of the business models of their investments. As startups play a leading role in developing sustainable goods, as found by a survey of techfounders – a German startup accelerator program (Yokoyama and Melde, 2020), venture capitalists definitely need to ask themselves the question if, and to which extent the factor of sustainability is important for them. In opposition to the trend that some funds are explicitly established to foster sustainability (e.g. Telos Impact in Belgium or Coninco in Switzerland), we set up the hypothesis that VCs tend to overvalue the factor of sustainability when it comes to the valuation of their target firms, and that this factor can have a distorting effect on startup valuation as it might nurture the risk that VCs are distracted from the economic ideal, that is, that they should only be interested in the profitability of their investments. Taking the example of a startup for combustion engine parts, we simply assume in a reasonable thought experiment a market that is thriving and competitive for the next 20 years and then, in 2040, is very likely to break down abruptly (e.g. because it is no longer in line with the sustainability regulations of a country, etc.). We hypothesize that VCs tend to overvalue the prospect of market collapse in 20 years when valuing the company, even though the market is flourishing for the common VCs’ holding period – typically eight years (Swildens and Yee, 2017) – and some significant time after (relevant for finding buyers of the VC’s shares). As a bottom line, we, therefore, admit that the sustainability alignment of a target firm’s business model plays a role for VCs, but sometimes, it does not, namely, when the prospects look perfectly fine for the VC’s limited holding period. We furthermore claim that in this way, two dimensions, which generally do not belong together – social, environmental versus economic aspects – are mixed, which

leads to a valuation, which is away from what economists would refer to as the “fair value” of an asset. Those hypotheses should be investigated, as they offer a variety of new research objectives – from behavioral finance to entrepreneurship – and especially new insights for professionals.

7.3 Research Avenue 3: should the state even play a role in startups? A different measures approach and the hypocrisy of the term “social enterprise”

Our literature analysis showed that governmental factors definitely have an influence on the valuation of a startup firm. As stated above, the entrepreneurial orientation of a country and even more of local hubs like the Silicon Valley, London, Paris, Tel Aviv, etc. plays a substantial role in how a startup is valued – not least because mainly a startup does not stand on its own, but forms part of a larger ecosystem. And as we learn from [Hoffmann \(2019\)](#) and others, the economies of the future are determined by such clusters and no longer by individual players or industries. Also, the question regarding the valuation of companies with government contracts has been answered, showing that although government contractors seem to receive lower net valuations, those asymmetries disappear during recessions, due to the more stable cashflows. We asked ourselves how those findings relate to the valuation of startup companies as no scientific work has been based on this question yet. As stated earlier, findings by BCG indicated that while startup companies are generally interested in contracting with governments, a number of aspects deterred them from taking the opportunity, however.

But, already before the question if startups should or should not begin a business relationship with governmental organisations, emerges, we wonder if the state should even play a role in financing and evaluating a startup at all. Some states support the founding of startup proactively, as for example Michigan. [Zhao and Ziedonis \(2020\)](#) investigated the effect of this specific Michigan state loan programme on the survival of startup companies, showing that this funding is significantly positively correlated with the survival of the startup in question (“awardees are 20%–30% more likely to remain in business four years after the competition”). From a liberal’s perspective, those governmental promotion programmes, which allocate resources, replace the market-based mobility of goods on the basic prices, as [Hoffmann \(2020\)](#) states. The reason why this needs to be stretched out is the fact that prices that are generated on free markets contain valuable information for market participants, which represent the “changing appreciation for certain goods” (ibid.). This leads to a key problem in the valuation of startup entities as the possibility remains that due to the allocation of financial resources by the state, entities, which would have been outcompeted otherwise by more efficient entrepreneurs, will remain in the market, distorting it. This fear is supported by [Hoffmann’s \(2019\)](#) observation that “even if public spending is relatively low in the overall funding mix [in Switzerland], it is sufficient to distort free markets”.

Another important aspect in this context is the overall term of “Corporate Valuation”. Those governmental programmes evaluate firms that are “worth” being promoted, based on their own criteria, which may differ substantially from those of a non-governmental investor. For example, public investors will take the fact that startup companies add value to an economy’s performance by creating a substantial amount of new jobs into consideration when it comes to the evaluation while this factor remains unimportant or secondary to non-governmental investors. Furthermore, we observe that the fuzz around *social enterprises* contributes to such unsystematic valuation approaches even more as it causes the valuation of such firms to be mostly based on their social “returns”, rather than their economic. We therefore see social enterprises as a kind of excuse for not being efficient

as a company, underlining the need for a strict separation between public and non-public corporate valuation. We even go a step further, hypothesising that the government should not take a leading role in the financing of startup companies as it renders the market mechanism inefficient or even ineffective, and therefore may lead to a misevaluation of startups by non-governmental organisations, such as VCs as well.

8. Conclusion

With this paper, our goal was to summarise the current state of research about the valuation of startup companies. While some studies describe sound results about this topic, what we experienced during the research for this project was that many questions remain open or have not been covered at all. This is the reason why we needed to apply a substantial amount of reasoning in the analysis of studies that do not exactly deal with startup companies. In Section 7, we highlighted rather practical implications of our work. In terms of more theoretical contributions to the body of knowledge, we arrive at a mainly negative result: We doubt that at least a singular rigorous approach is suitable for assessing the capital value of startups, which is reinforced by the fact that heuristics and rules of thumb are actually applied in the economic practice.

Thereby, we hope that we have been able to provide some interesting impulses for future research in this exciting and growing research field with high practical relevance and, therefore, we are looking forward to new findings on this topic in the future.

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