

Equity capital financing of Swedish SMEs, innovation, and decentralized management

Equity capital
financing

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Abstract

Purpose – The purpose of this paper is to investigate the potential link between Sweden's high reliance on equity capital financing among small and medium-sized enterprises (SMEs) and its recognition as the most innovative economy in Europe according to the European Innovation Scoreboard (EIS). This paper examines the idea that the high levels of trust within Swedish society can explain why private equity financing is more prevalent among Swedish SMEs.

Design/methodology/approach – To test these ideas, the authors use data from the Survey on Access to Finance for Enterprises to measure the private equity reliance of firms. The authors also use the EIS to measure the innovation capacity of nations and various aspects of SMEs' innovation activities. Finally, societal levels of trust are measured through the World Value Survey.

Findings – First, the authors find that European countries with a higher proportion of SMEs relying on equity financing tend to be ranked as more innovative by the EIS. Second, the authors find that the correlation between a nation's share of SMEs relying on equity financing and their level of innovation activities is marginally stronger for product innovations than for business process innovations. Third, the authors find that countries with higher levels of trust tend to have higher equity capital reliance among SMEs.

Originality/value – This study builds upon previous research on equity capital and SMEs' innovation activity while introducing new insights into the relationship between societal trust and equity financing.

Keywords Equity capital, Finance, Product innovation, Business process innovation, Decentralized management, Trust, SMEs, Sweden

Paper type Research paper

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1. Introduction

According to the [European Innovation Scoreboard \(EIS\) \(2022\)](#), Sweden is ranked as the most innovative European Union (EU) member state. This marks the sixth consecutive edition of the EIS, where Sweden has scored the highest overall innovation capacity in Europe. Another observation is that Sweden is an outlier in its unusually high reliance on equity capital among small and medium-sized enterprises (SMEs). The joint European Commission and European Central Bank Surveys on the access to finance of enterprises measure the share of SMEs that have reported using or considering using equity capital as a source of financing. To better compare the general levels of equity capital reliance among SMEs of various European nations, a five-year average of data is used.

From 2017 to 2021, on average, 55% of Swedish SMEs have reported using or considering using equity capital as a source of financing, which is a five times higher rate than the average EU nation ([Table 1](#)). Between 2017 and 2019, just below 60% of Swedish SMEs relied on equity capital, indicating even stronger reliance before the coronavirus pandemic. During the pandemic in 2020 and 2021, the share of reliance on equity capital among Swedish SMEs fell to approximately 50%, although this rate is still significantly higher than in the rest of Europe. It is worthwhile noting that Sweden's Nordic neighbors, Finland and Denmark, also have relatively high shares of SMEs relying on equity financing (21% and 16%, respectively). However, Sweden stands out as having an even higher reliance on equity capital among SMEs compared to these Nordic neighbors.

The purpose of this paper is to examine if the high reliance on equity capital financing among Swedish SMEs is associated with Sweden's ranking as the most innovative economy in Europe. In addition, this paper seeks to provide insights into the idea that high levels of trust in Sweden can explain why private equity financing is more prevalent among Swedish SMEs. Reliance on equity capital financing is measured by the share of SMEs that, in the Survey on the Access to Finance of Enterprises (SAFE), answered that they have used or considered using equity capital as a source of financing, where equity capital finance can be sourced from business venture capital funds, business angels, initial public offerings, other businesses and government equity finance sources. It is important to note that the data source does not differentiate between those who have used or considered using equity capital financing, which is a limitation of the study.

The research presented in this paper is consistent with existing literature, which emphasizes the crucial role of equity capital in promoting innovation activity among SMEs ([Blach et al., 2020](#); [Carpenter and Petersen, 2002](#); [Duran et al., 2022](#); [Eldridge et al., 2021](#); [Kortum and Lerner, 2000](#)). The analysis, moreover, revealed a particularly strong association with

	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	Average (2017–2021) (%)
Sweden	49	50	57	64	58	55
Finland	18	23	18	25	23	21
Denmark	15	14	17	17	17	16
France	14	15	16	16	18	16
United Kingdom	15	13	14	16	17	15
Germany	13	12	12	13	14	13
EU average	11	10	11	12	12	11
Spain	4	3	4	4	4	4
Italy	1	2	1	2	2	2

Table 1.
Share of SMEs that have reported using or considering using equity capital as a source of financing

Sources: Authors' own work; data from SAFE

product innovation activity, which is a more capital-intensive form of activity. In addition, the statistical analysis confirms a connection between trust levels and the share of SMEs that have used or considered using equity capital as a financing source, particularly when considering the market size and examining European countries with more than 10 million inhabitants. This finding supports prior literature (Zak and Knack, 2001; Manigart *et al.*, 2002; Dowling *et al.*, 2019).

The main argument in this paper is that Sweden's high levels of trust, which enable decentralized management, foster improved interaction between entrepreneurs and equity capital investors. As a result, equity capital is a more prevalent source of financing for Swedish SMEs compared to other parts of Europe. We propose that cultural differences, rather than economic policy differences, explain this phenomenon, as Sweden's economic policies and tax systems align closely with those of other European nations in this context. While the focus of the paper is on Sweden as an outlier, statistical tests reveal overarching patterns across Europe. By using empirical data, this paper contributes to the research literature by demonstrating that European countries with higher trust levels have a greater reliance on equity capital among SMEs, which is linked to higher innovation capacity. These original findings are relevant to increasing our understanding of innovation activity in Europe, particularly regarding the role that culture plays in SME funding.

The rest of this paper is organized as follows. Chapter two discusses relevant literature and proposes three hypotheses. Chapter three presents the data and methodology. Chapters four and five present and discuss the results, respectively. Finally, chapter six concludes and provides recommendations for future research endeavors.

2. Previous literature

While SMEs are vital for economic progress and development (Autio, 2007; Birch, 1981), they face many serious challenges, such as competition and resource constraints (Stinchcombe, 1965). Financial resources are a major inhibiting factor for technological inventions (Indrawati and Suarman, 2020). According to a survey of almost 12,000 SME employees in the UK, obtaining finance has become even more challenging since the financial crisis in 2007–2008, suggesting that financial resources became an even bigger constraint after this financial crisis (Lee *et al.*, 2013). SMEs can acquire the necessary capital via two pathways: debt financing and/or equity financing. Previous literature has demonstrated that equity financing can be valuable for SMEs (Carpenter and Petersen, 2002), particularly in the context of funding innovation (Duran *et al.*, 2022; Kortum and Lerner, 2000).

Compared to other European countries, Swedish SMEs rely considerably more on equity capital as a source of financing (Torfs, 2020). At the same time, the EIS shows that Swedish SMEs often engage in different forms of innovation activities and introduce a relatively large number of product innovations to the market. Previous research has pointed out that Swedish SMEs rely strongly on private equity as a source of financing (Copenhagen Economics and SVCA, 2020; Torfs, 2020; Yazdanfar and Öhman, 2016). However, there is a gap in the literature regarding why Sweden differs so much from the rest of Europe in this regard. This paper aims to bridge this gap by proposing that culture, specifically the phenomenon of high trust levels, serves as an explanatory factor. Previous theoretical literature has shown that high levels of trust can affect the pull and push of equity capital to SMEs. For example, Zak and Knack (2001) suggested that high trust levels are conducive to investments, leading to a push for equity capital, while Dowling *et al.* (2019) argued that SMEs' decision to take on equity capital requires trust. We expand upon these theoretical explanations by positing that the prevalent decentralized decision-making practices in Sweden (Håkanson and Zander, 1988; also see Sanandaji *et al.*, 2023), made feasible by

elevated levels of trust, empower SME entrepreneurs to maintain their entrepreneurial roles even after experiencing growth through equity capital.

The vital role played by equity capital in innovation financing is already well established. For instance, [Kortum and Lerner \(2000\)](#) conducted a study on the impact of venture capital on patented innovations in the USA, covering 3 decades and 20 industries. Their research indicates that an increase in venture capital activity within an industry is significantly associated with higher patenting rates. Furthermore, they reveal that a policy shift that promoted fundraising of venture capital spurred innovation, establishing a causal relationship between increased venture capital funding and innovation. The findings of the research show that early-stage investments accounted for about 3% of corporate R&D but were responsible for approximately 8% of industrial innovations, indicating that firms receiving early-stage investment support were nearly three times more innovative than similar firms lacking such support. In a subsequent study, [Lerner et al. \(2011\)](#) investigated investments in innovation, as measured by patenting activity. They discovered that leveraged buyout activities did not lead to shifts in the fundamental nature of the research but were linked to patents being cited more frequently (a proxy for economic importance; [Hall et al., 2005](#)).

[Brown et al. \(2009\)](#) showed that the boom in R&D in US firms during the 1990s was linked to external equity flows into young (but not mature) firms. Relatedly, [Müller and Zimmermann \(2009\)](#) analyzed the effect of equity capital on R&D activities in German SMEs using a representative survey of German companies. The authors argued that equity financing is important for R&D activities, as bank loans are difficult to obtain for this purpose, particularly for young firms. Their findings showed that companies with higher equity ratios were more likely to engage in R&D and had a higher R&D intensity (ratio of expenditure to sales). By using bank competition at the district level to control for reverse causality, the authors found that a higher equity ratio was conducive to more R&D activities for young firms but not for older ones. The positive influence of equity capital was found for R&D intensity but not for the decision to perform R&D or not. Thus, functioning markets for external equity are crucial for younger companies engaging in R&D to access the capital needed to scale up their innovation activities. In another study, [Link et al. \(2013\)](#) examined a project-level data set of entrepreneurial firms that received small business innovations research awards. The authors found that firms that attract equity investments were significantly more likely to succeed in licensing and selling their technology rights and to engage in collaborative agreements for R&D. The results suggested that equity investments accelerated the development and commercialization of research-based technologies and, through this mechanism, contributed to economic growth.

In a sample of 38 nations and data between 1980 and 2005, [Brown et al. \(2017\)](#) found a positive correlation between a nation's equity market development and the size of its high-tech sector. However, they found no correlation between credit market development and high-tech production. In a more recent study, [Zhang et al., 2019](#), p. 698 studied data from 35 developed countries during the period 1996–2015 and found that “equity financing, which has higher risk tolerance, has a more positive impact on innovation than debt financing in terms of both economic uptrend and economic downtrend.” But to receive the sought-after equity finance as an SME, you have to gain the financiers' trust, which can prove to be difficult due to asymmetry in information ([Akerlof, 1978](#); [Mishkin, 1991](#)) and as a consequence of the principal-agent problem ([Eisenhardt, 1989](#); [Jensen and Meckling, 1976](#)). Indeed, it has been shown in general equilibrium growth models that high levels of trust are conducive to investments, because trust can be seen as an absence of the need to verify other people's actions ([Zak and Knack, 2001](#)). [Dowling et al. \(2019\)](#) suggested that the decision of SMEs to take on

equity capital requires trust due to the reliance on the good intentions of the parties involved. The authors argue based on this that the national levels of interpersonal and institutional trust can positively affect SME attitudes toward equity capital and that trust in society is linked to equity financing of SMEs.

This paper proposes that the exceptionally high levels of trust in Swedish society, as measured by the World Values Survey, contribute to the nation's distinctive position within Europe. Specifically, Sweden exhibits significantly greater reliance on private equity among SMEs. The high levels of trust in Sweden have been shown to have long historical roots (Bergh and Bjørnskov, 2014). Such a trust-based environment facilitates a decentralized decision-making approach in Swedish management practices (Håkanson and Zander, 1988), which, in turn, allows SMEs to retain greater control even after using equity capital to finance expansion and innovation. One crucial reason why SME entrepreneurs may be reluctant to depend on equity financing is their desire to retain influence (Brettel *et al.*, 2009). Nevertheless, the Swedish tradition of decentralized management reduces this obstacle, making equity financing more accessible to SMEs. Recent empirical research supports this argument by illustrating that entrepreneurial SME leaders highly value being acquired by firms that adopt a decentralized approach, as it enables them to preserve their leadership roles posttransaction (Ström *et al.*, 2023).

We contend that a nation's SMEs, which rely more heavily on equity financing, exhibit higher levels of innovation activities. Furthermore, in line with prior findings, we posit that this relationship is particularly pronounced for product innovations because they rely more on capital investments compared to process innovations. For example, Will and Mellor (2019) have showed, based on a study of 1,200 firms in the Czech Republic, Germany, Hungary, Poland, Romania and the Slovak Republic, that higher institutional quality, which allows for more R&D financing, fosters product innovations. Conversely, firms situated in European countries with lower institutional quality tend to prioritize process innovations over product innovations, likely due to the limited availability of capital. Based on these premises, we put forward the following three hypotheses:

- H1. European countries with a higher share of SMEs relying on equity financing have a higher innovation summary score, according to the European Innovation Scoreboard.
- H2. The correlation between a nation's share of SMEs relying on equity financing and SMEs' level of innovation activities is stronger for product innovations than for business process innovations.
- H3. European countries with higher levels of trust tend to have a higher share of SMEs that have used or considered using equity capital as a source of financing.

3. Method

The methodology used in this paper is to test the three aforementioned hypotheses through data analysis. The innovation ability of different European economies is in this paper approximated using the EIS, which is a European Commission project that measures the innovation scores of various European countries. Previous research using EIS data includes, for example, Onea's (2020) correlation of overall innovation scores with firm investments and employment, and Hervás-Oliver *et al.*'s (2021) study of the role of internal R&D, external collaborations and non-R&D inputs for SME innovation in different regions of Europe using regional EIS data. This study uses EIS data to study the overall innovation score of high-income European economies, the share of SMEs with product innovations and the share of SMEs with process innovations. The EIS is based on the latest available innovation data for

European countries, and all dependent variables in this study are from this source. The analysis uses the average values for the EIS from 2017 to 2021 to study the current situation in Europe while minimizing the risk of drawing conclusions on outlier variables. The independent variable is the share of SMEs that have used or considered using equity capital as a source of financing, collected from the joint European Commission and European Central Bank Surveys on the access to finance of enterprises for the years 2017–2021 (SAFE, 2017–2021).

Four other variables were also included from the same surveys as background information: the share of SMEs that identify access to finance as the most important problem facing their firms, how important access to finance has been as a problem for each business during the past six months period, the share of SMEs that have used or considered using grants or subsidized bank loans as a source of financing and the share of SMEs that have used or considered using bank loans as a source of financing, excluding subsidized bank loans, overdrafts and credit lines. Finally, trust is measured by the share of respondents in the average nation who agree with the notion “Most people can be trusted,” in the 2017–2022 wave of the World Value Survey. The variables included in this study are summarized in [Table 2](#) below.

This approach is original in showing, with quantitative data, that the cultural attribute of high general trust levels in European countries is indeed linked to firm financing, which, in turn, is linked to innovation capacity. These findings help us better understand why Sweden is a European outlier in private equity reliance of SMEs and is being ranked as the most innovative economy in Europe by the EIS. While Swedish exceptionalism motivates this research, the results are important for European nations in general and add to the understanding that cultural differences can affect firm financing and indirectly through this mechanism, innovation activity.

4. Results

Access to finance remains an important challenge to SMEs throughout Europe. The joint European Commission and European Central Bank Surveys on the access to finance of enterprises (SAFE, 2017–2021) find that on average in the EU, 7.8% of SMEs identify access to finance as the most important problem facing their firms. In Sweden, during the same period, an average of 8.5% of SMEs identifies access to finance as the most important problem. As shown in more detail below, one notable difference is that Swedish SMEs rely less on grant and bank financing and considerably more on equity capital financing, compared to other European countries. One important source of financing for SMEs is grants and subsidized bank loans. This form of financing is less common in Nordic countries, though. As can be seen in [Table 3](#) on average during the period, 36% of SMEs in the average EU nation relied on grants and subsidized bank loans, compared to merely 12% in Denmark, 19% in Sweden and 32% in Finland. However, the share of SMEs that used or considered using grants or subsidized bank loans as a source of financing increased in 2020 for all countries listed in [Table 3](#), reflecting the various programs launched to help SMEs deal with the economic hardships brought on by the coronavirus pandemic. Nonsubsidized bank loans are another critical source of financing, as shown in [Table 4](#). On average during the period, 34% of SMEs in Sweden relied on or considered seeking bank loans (excluding subsidized bank loans, overdrafts and credit lines), which is considerably lower than the EU average of 47% of SMEs. In comparison, Denmark has an even lower share (28%), while relatively many Finnish SMEs (59%) have used or considered using nonsubsidized bank loans as a source of finance.

Concept	Variable	Operationalization	Data source
SME product innovations	Share of SMEs with product innovations	Share (%) of SMEs engaged in product innovations	EJS, average for 2017–2021
SME process innovations	Share of SMEs with process innovations	Share (%) of SMEs engaged in process innovations	EJS, average for 2017–2021
Innovation ability	EJS innovation summary score	Overall score 0–1 range (1 highest theoretical score)	EJS, average for 2017–2021
Equity financing reliance of SMEs	Share of SMEs that have used or considered using equity financing	Share (%) of SMEs that report they are relying on equity financing	SAFE, average for 2017–2021
Bank financing reliance of SMEs	Share of SMEs that have used or considered using bank financing	Share (%) of SMEs that report they are relying on bank financing	SAFE, average for 2017–2021
Grants or subsidized bank financing reliance of SMEs	Share of SMEs that have used or considered using grants or subsidized bank financing	Share (%) of SMEs that report they are relying on grants or subsidized bank financing	SAFE, average for 2017–2021
Access to finance as most important obstacle for SMEs	Share of SMEs that identify access to finance as the most important problem facing their firms	Share (%) of SMEs that identify access to finance as the most important problem facing their firms	SAFE, average for 2017–2021
Degree to which firms identify access to finance as a problem	To what degree on 1–10 scale that SMEs identify access to finance as a problem	The average score given by SMEs on 1–10 scale on how important access to finance is as an obstacle for the business	SAFE, average for 2017–2021
Trust in society	Share of respondents in the average country which agree with the notion “Most people can be trusted”	The share of respondents in the World Value Survey which answer that “Most people can be trusted”	World Value Survey 2017–2020 wave

Notes: ^aEJS = European Innovation Scoreboard; SAFE = European Commission and European Central Bank Surveys on access to finance
Source: Authors’ own work

Table 2.
Operationalization of variables

4.1 Correlation between equity financing and innovation summary score

Previous research literature points to equity capital playing a key role in innovation, not least for younger companies requiring capital to finance innovation activities. The first hypothesis to be tested in this paper is that those European economies in which SMEs rely more on equity capital have a higher overall innovation capacity, as measured by the EIS. [Figure 1](#) shows the relation between the share of SMEs that have used or considered using equity capital as financing and the innovation summary score of European countries according to the EIS. Both measures are average for the years 2017–2021. Among the European economies, the link between summary innovation score and equity financing of SMEs is clear [1]. Sweden has the best performance, with an average summary innovation score of 0.696, while Romania has the lowest performance, with a score of 0.158. The difference between these two nations is 0.538, which is the innovation summary score range in Europe. Each percentage point higher share of SMEs that rely on equity capital is linked to 1.2 percentage points higher innovation summary score range ($R^2 = 0.22$). [Figure 2](#) shows the same pattern when comparing the more similar economies of Northern and Western Europe. The difference in innovation summary score is between Sweden at the top with an average of 0.696 scores and the lowest score of 0.577 for France, giving the innovation summary score range of 0.119. Each percentage point higher share of SMEs relying on equity capital is linked to 1.6 percentage points higher innovation summary score range ($R^2 = 0.41$). In general, European countries where SMEs rely more on equity financing tend to be ranked as

Table 3.
Share of SMEs that have used or considered using grants or subsidized bank loans as a source of financing

	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	Average (2017–2021) (%)
Italy	59	62	50	51	50	54
Spain	53	53	35	38	37	43
Germany	43	43	31	34	33	37
EU average	43	44	31	32	31	36
United Kingdom	56	55	22	22	22	35
France	40	41	26	27	28	33
Finland	39	45	24	26	26	32
Sweden	20	29	15	12	16	19
Denmark	14	15	11	10	9	12

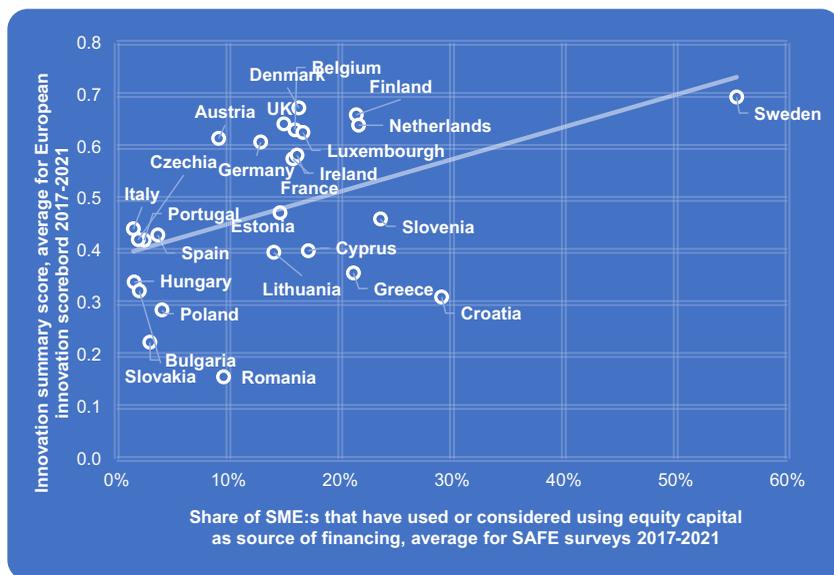
Sources: Authors' own work; data from SAFE

Table 4.
Share of SMEs that have used or considered using bank loans as a source of financing (excluding subsidized bank loans, overdrafts and credit lines)

	2021 (%)	2020 (%)	2019 (%)	2018 (%)	2017 (%)	Average (2017–2021) (%)
France	65	62	63	64	62	63
Finland	62	59	56	61	59	59
Spain	57	54	55	57	56	56
Italy	46	54	50	52	49	50
EU average	46	48	46	47	48	47
Germany	42	44	42	44	48	44
United Kingdom	38	47	37	36	35	39
Sweden	33	31	38	34	32	34
Denmark	28	25	26	34	27	28

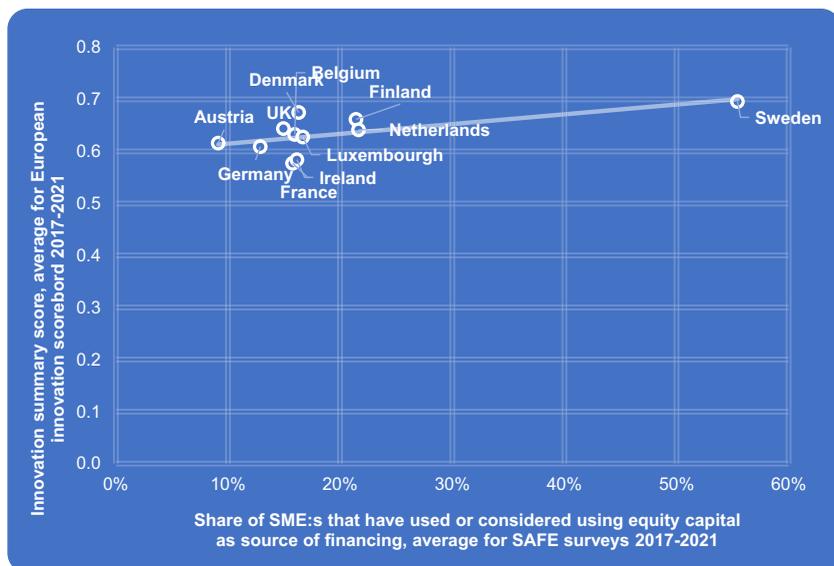
Sources: Authors' own work; data from SAFE

Equity capital financing



Source: Authors' own work

Figure 1.
Share of SMEs that rely on equity capital for financing and innovation summary score



Source: Authors' own work

Figure 2.
Share of SMEs that rely on equity capital for financing and innovation summary score, Western and Northern Europe

more innovative. The data supports *H1*, that European countries with a higher share of SMEs relying on equity financing have a higher innovation summary score, according to the EIS.

4.2 Equity financing among SMEs and share of SMEs with product and business process innovations

Figure 3 illustrates the relationship between the share of SMEs that rely on equity financing and the share of SMEs that introduce product innovations. The nation with the lowest share of SMEs introducing product innovations is Romania (4%), while Finland has the highest share (37%). Sweden also ranks relatively high with 32%. Based on a linear regression analysis, each percentage point higher share relying on equity capital is linked to a 0.34 percentage point increase in the share of SMEs introducing product innovations ($R^2 = 0.20$). To further investigate the link between equity financing and SME innovation, the study also examines the relationship between equity financing and SMEs' business process innovations.

Figure 4 shows the link between the share of SMEs relying on equity financing and the share of SMEs introducing business process innovations. Romania has the lowest share of SMEs introducing business process innovations (9%), while Austria has the highest (49%). Sweden ranks relatively average among European countries with 37%. Across Europe, there is still a positive link between the two factors, with countries with a high share of SMEs relying on equity capital having a higher share of SMEs introducing business process innovations. A linear model shows that each percentage point higher share of SMEs relying on equity capital is linked to 0.33 percentage points higher share of SMEs introducing business process innovations ($R^2 = 0.12$). The relationship between these two factors is similar in magnitude to that observed between SMEs with private equity reliance and SMEs with product innovations. However, the R^2 value for business process innovations is lower,

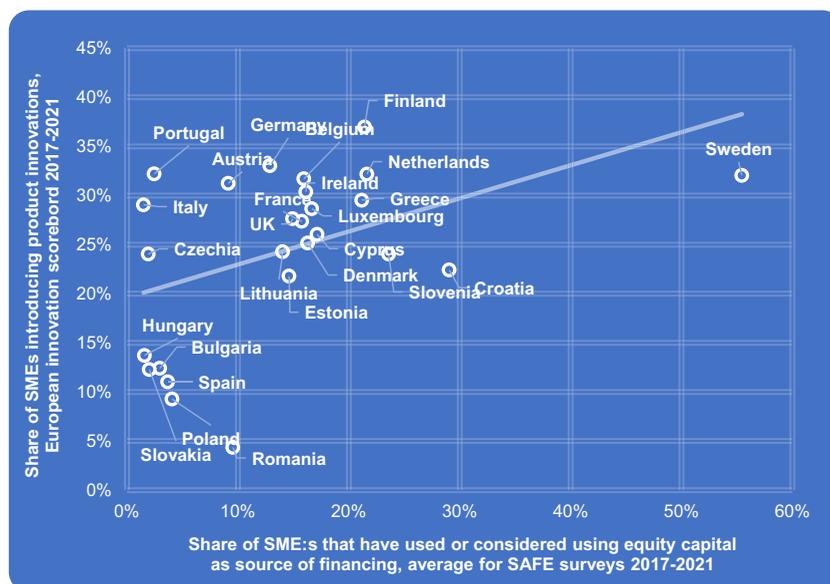
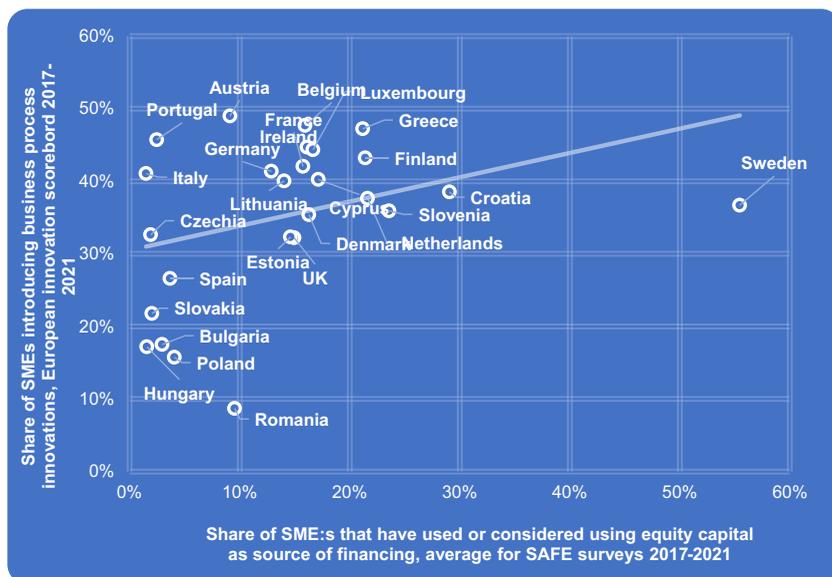


Figure 3. Share of SMEs that rely on equity capital for financing and share of SMEs introducing product innovations

Source: Authors' own work



Equity capital financing

Figure 4. Share of SMEs that rely on equity capital for financing and share of SMEs introducing business process innovations

Source: Authors' own work

indicating a weaker fit to the data than the model for product innovations. Thus, the data give partial support for *H2*, which states that the correlation between a nation's share of SMEs relying on equity financing and SMEs' level of innovation activities is stronger for product innovations than for business process innovations.

4.3 Trust levels and equity financing among small and medium-sized enterprises

Figure 5 compares the share of respondents who agree with the statement "Most people can be trusted" from the 2017–2022 World Value Survey with the percentage of SMEs relying on equity capital for financing. The results show that every one percentage point increase in the proportion of respondents who agree with the statement corresponds to a 0.22 percentage point increase in SMEs' reliance on private equity ($R^2 = 0.12$). Because market size is important for the private equity sector, the same analysis was also conducted for European countries with a population of 10 million or more, as shown in Figure 6. Among these larger European economies, for every one percentage point increase in the proportion of respondents who agree with the statement, there was a 0.49 percentage point increase in SMEs' reliance on private equity ($R^2 = 0.32$). These findings thus suggest that trust plays a role in explaining private equity reliance in the economy, supporting *H3* that European countries with higher levels of trust tend to have a higher share of SMEs using or considered using equity capital as a source of financing.

5. Discussion

Sweden stands out among European economies for having the far greatest share of SMEs relying on equity financing, the highest overall score in the EIS and the highest share of SMEs with product innovations. A higher share of SMEs relying on equity capital is associated with a higher overall score in the EIS and a greater percentage of SMEs engaging

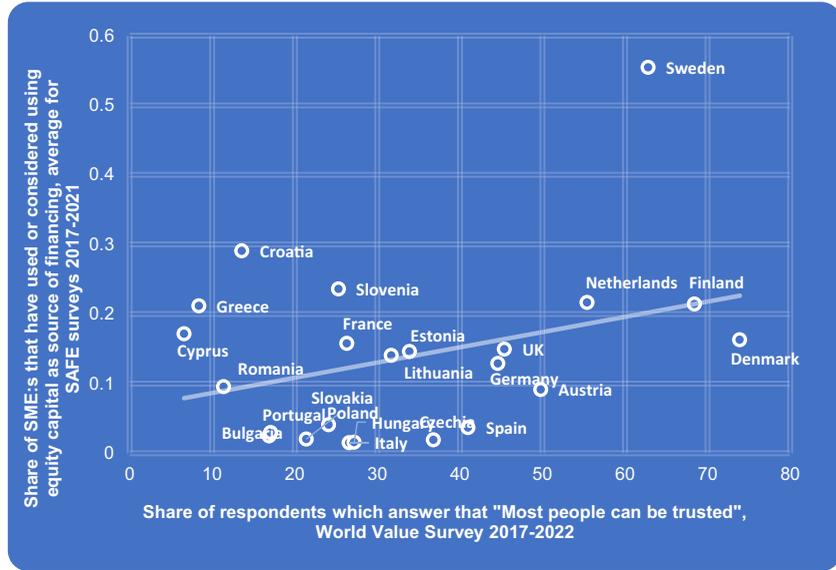


Figure 5.
Trust levels and share of SMEs that rely on equity capital for financing

Source: Authors' own work

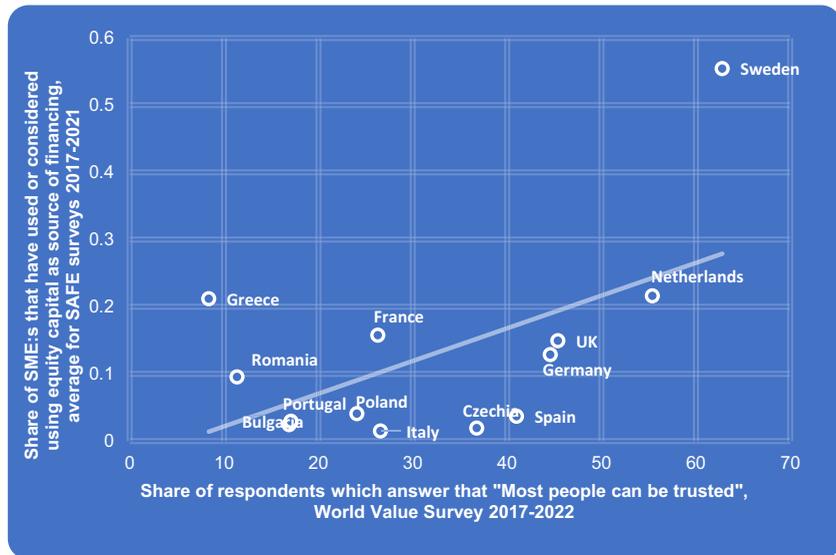


Figure 6.
Trust levels and share of SMEs that rely on equity capital for financing, countries with more than 10 million population

Source: Authors' own work

in innovation activities, in product and process innovations. Product innovations, which typically require substantial capital investment, are particularly strongly related to private equity financing of SMEs. However, Swedish SMEs do not have the same leading position in business process innovations compared to their European counterparts, as they do in product innovations. Moreover, there is a relationship between trust levels in society and the share of SMEs that have used or considered using private equity as a source of financing, particularly in comparison to larger European economies. Previous studies support the notion that Sweden overall has a strong equity capital sector, with Swedish SMEs using equity financing at a rate well above the EU average (Torfs, 2020). A study on the capital structure dynamics in Sweden also found that “start-up SMEs, on average, rely on equity capital, and that the level of equity capital increases as firms age” (Yazdanfar and Öhman, 2016, p. 245). In addition, research by Copenhagen Economics and the Swedish Venture Capital Association found that buyout private equity investments in SMEs during the period 2009–2019 amounted to 0.21% of Swedish GDP, which is double the rate of comparable countries (Copenhagen Economics and SVCA, 2020).

While Sweden’s equity capital sector is well-established, the reasons behind this phenomenon have not been extensively explored. Our study proposes that Sweden’s high levels of trust play a significant role in fostering investments and enabling decentralized management strategies. These strategies, in turn, help resolve conflicts of interest between private equity investors and SME entrepreneurs. Previous research has shown that attitudes toward private equity financing among SMEs involve a drive toward perceived value addition and a concern over perceived loss of control for owner-managers. Waściński *et al.* (2019) concluded that a disadvantage of introducing private equity to SMEs may also limit the freedom of action for the business owners and founders. Cressy and Olofsson (1997) further illustrated that this dilemma is relevant in Sweden, where Swedish SMEs have viewed the transfer of capital and management skills from equity investors positively but also consider loss of control as a reason not to seek equity financing. Overall, our study puts forward the proposition that the high levels of trust in Sweden may facilitate the adoption of decentralized management strategies, thereby potentially resolving conflicts of interest between private equity investors and SME entrepreneurs and contributing to the strong equity capital sector in the country.

There is a lack of research on decentralized management of SMEs with equity capital in Sweden; however, administrative autonomy and decentralized management have overall been shown to be a cornerstone of management practices in Sweden. The nation has a long history of administrative autonomy in the public sector, as Patrick Hall writes in the *Oxford Handbook of Swedish Politics* (Hall, 2016). Sweden also has a historical tradition of decentralized management of R&D activities within the scope of large corporations, as noted already in the late 1980s (Håkanson and Zander, 1988).

As a society, Sweden is characterized by high levels of trust. In the 2017–2022 wave of the World Value Survey, 63% of the average population in Sweden agreed with the statement “Most people can be trusted,” in contrast to 27% of the average population in other countries (World Values Survey, 2022). In a report published by the Nordic Council of Ministers, it was concluded that:

High levels of social trust distinguish the Nordic region. This does not mean that other countries lack social trust, but few come close to the same levels as those found in the Nordic countries (Nordic council of ministers, analysis report, 2017, p. 13).

Bergh and Bjørnskov (2014) studied the historical origins of high levels of trust in Sweden and other Nordic countries, finding that US citizens’ levels of trust are linked to the levels of

trust in the countries from which their ancestors immigrated. Moreover, no group in the USA has as high levels of trust as those originating from Nordic countries, which is consistent with the current high levels of trust found in Nordic countries. These findings suggest that high levels of trust have been a cultural characteristic of Nordic societies for centuries, even during the large-scale migration to the USA that occurred in the past.

Zak and Knack (2001) demonstrated in a general equilibrium growth model that high levels of trust promote investments. This is because trust can be seen as an absence of the need to verify other people's actions. Societies characterized by high levels of trust require fewer formalities and are better equipped to avoid conflicts and legal processes. Sweden and other Nordic countries have a long tradition of high trust levels. According to a study by the Swedish innovation agency Vinnova, the Swedish way of management is characterized by an "emphasis on decentralized decision-making in a non-confrontational atmosphere," as well as an "emphasis on trust, teams, action, empowerment, and alignment, produces non-bureaucratic and flexible organizations" (Vinnova, 2008, p. 13, p. 3). This elevated level of trust allows for more decentralized management practices, as trust is a fundamental component in decentralized decision-making. Existing literature supports the notion that Sweden possesses an unusually high level of trust, with deep historical roots. Moreover, it has been shown that high levels of trust facilitate investments. Our argument is that trust plays a vital role in the relationship between entrepreneurs and equity investors. In high-trust environments, entrepreneurs can maintain autonomy even after receiving equity capital investments, thereby enabling decentralized management practices. Conversely, in low-trust environments, entrepreneurs have diminished autonomy, leading to less mutually beneficial interaction with equity investors. Further research is necessary to gain a better understanding of the connection between high levels of trust, decentralized decision-making, equity capital investments in SMEs and innovation capacity.

6. Conclusion

This article examined the potential link between Sweden being a European outlier in having unusually high equity capital financing reliance among SMEs and its status as Europe's most innovative economy, as ranked by the EIS. In addition, it explored the notion that the substantial levels of trust within Swedish society may have accounted for why private equity financing was more prevalent among Swedish SMEs. Three hypotheses were proposed. First, European nations with a higher share of SMEs relying on equity financing tend to have higher levels of innovation activities among SMEs. Second, the correlation between a nation's share of SMEs relying on equity financing and their level of innovation activities is marginally stronger for product innovations than for business process innovations. Finally, nations with higher trust levels tend to have higher equity capital reliance among SMEs. The data presented in the article supported *H1* and *H3* while providing partial support for *H2*. Consequently, these findings suggest that Sweden's high reliance on equity capital financing among SMEs was not coincidental, but rather a contributing factor to its strong innovation capacity and high trust levels. SMEs in European nations with higher private equity reliance demonstrated increased engagement in product and process innovations. The link was particularly strong for product innovations, a form of innovation that is particularly dependent on capital investments. These findings are also relevant to other European nations. Countries with higher levels of trust tended to have higher private equity reliance among SMEs, which was in turn associated with higher levels of innovation capacity as measured by the EIS. SMEs in European nations with higher private equity reliance were also more actively engaged in product and process innovations.

Theoretical studies, such as that by [Zak and Knack \(2001\)](#) and [Dowling *et al.* \(2019\)](#), have provided support for the notion that trust partly explains why Sweden distinguishes itself by having a considerably higher share of SMEs that have either used or considered using equity capital. While it is widely acknowledged that knowledge production in economies is affected by several factors, such as ownership, labor mobility, entry barriers and financial markets ([Braunerhjelm, 2011](#)), the research literature presented in this paper suggests that trust is generally conducive to investments. The presence of decentralized management, enabled by high levels of trust, could partly explain why Swedish SMEs rely more heavily on equity financing than in other parts of the world. In the case of Sweden, the implementation of decentralized management strategies, made possible by the prevailing high levels of trust, may incentivize greater equity capital investments, as this management model allows SME entrepreneurs to retain greater control even after the infusion of equity capital.

7. Implications

This paper's analysis is relevant for better understanding how equity capital financing can affect SME innovation activity in Europe and the role that a high-trusting culture plays in SME reliance on equity capital. Previous research literature, cited in this paper, sheds light on how high trust levels can lead to a higher pull and push for equity capital. This paper is unique in presenting data analysis that shows European countries with higher trust levels have higher private equity reliance among SMEs, which in turn is linked to higher innovation ability. These findings have theoretical implications for better understanding the influence of cultural differences among European countries on economic activity, particularly how trust levels affect the pull and push of equity capital into SMEs. Given that equity capital is particularly relevant for funding firm innovations, higher trust levels are associated with increased innovation capacity. Despite the pivotal role of culture in human behavior and economic activity, there is limited research on how cultural differences among European countries impact their economic activities.

In addition, the practical implications of this paper's findings extend to European businesses and investors, considering the growing trend of cross-border private equity investments. Cultural differences, particularly trust, can influence the behavior of investors and SMEs. Thus, this paper contributes to a better understanding of how trust, as a cultural attribute, shapes SME financing and, in turn, their innovation ability. The study focuses on Sweden as an outlier but provides general findings applicable to all of Europe, aiming to enhance the understanding of how cultural differences within Europe affect economic activity. These findings can be valuable for private equity investors and SME entrepreneurs in gaining insights into the prevalence of this form of growth financing in specific regions of Europe. Future research can explore the relationship between other measurable cultural traits of European countries and economic performance.

Note

1. In line with [Wooldridge's \(2012\)](#) outlier observation logic, Latvia was identified as an outlier and excluded from the analysis. In 2017, 22% of Latvian SMEs relied on equity capital, increasing to 43% by 2021. In comparison, Estonia's proportion of SMEs relying on equity capital rose from 6% to 21% during the same period, while Lithuania saw an increase from 10% to 12%. Despite

these changes, Latvia's innovation summary score, reported by the EIS, only rose marginally from 0.240 in 2017 to 0.261 in 2021. In contrast, Estonia experienced substantial progress in innovation, with the score climbing from 0.392 to 0.600. Even Lithuania outperformed Latvia, with the innovation summary score increasing from 0.359 to 0.430. Latvia lags behind its Baltic neighbors not only in the proportion of SMEs introducing product innovations but also in the proportion of introducing business process innovations. Latvia's limited innovation activity among SMEs justifies its exclusion as an outlier, despite a notable reliance on private equity.

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