



An empty shell? Relocation of central and eastern European startups, virtual headquarters and beyond

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ABSTRACT

Some of the best technology startups born in CEE moved their headquarters to a foreign jurisdiction before scaling. These ventures became 'foreign' companies but kept the principal business functions in the countries of origin. We theorize about this phenomenon, referred to as virtual relocation, and consider what it conveys for the asserted reduced relevance of location-bound advantages and constraints in the digital era. We take a process approach and investigate the cases of 34 technology startups from Poland, Hungary, and Romania. We find that CEE startups' choice of a 'virtual' type of relocation can be traced back to the tension between the retention factors and the push/pull factors influencing their locational decision. We show that the factors that push CEE startups away from their home countries, pull them to the destination country, and make them retain specific business functions in their home countries are equally location bound. If virtually relocated startups manage to seize the assumed opportunities in the destination country and scale, the virtualness of the HQ office will gradually fade: employment starts growing also at the HQ location.

1. Introduction

One of the hottest debates in the scholarship at the intersection of international business, entrepreneurship, and geography is about digitalisation-induced changes in the location boundness of resources underlying firm-specific advantage (Autio et al., 2021; Coviello et al., 2017; Stallkamp et al., 2023; Verbeke and Hutzschenreuter, 2021). Drawing on the constructs of location-bound, non-location-bound, and complementary resources, introduced by Rugman and Verbeke (2001), scholars argue that the affordances of digital technologies and infrastructure have significantly reduced the location-boundness of specific resources (Autio et al., 2018; Coviello et al., 2017). Likewise, location-bound constraints matter less among the determinants of performance (Drori et al., 2024). Startups with specialised technology and offerings that are digital in nature (Nambisan, 2017) may easily transfer and exploit their proprietary assets across borders and are thus not necessarily tied to geographical markets for success (Bharadwaj et al., 2013; Jiang et al., 2020; Monaghan et al., 2020).

However, recent academic research pointed out that many of the internationalising digital firms establish physical presence in foreign markets (Stallkamp et al., 2023). This indicates that several critical

resources that entrepreneurs need to possess or acquire – such as specialised entrepreneurial services, and markets for technology (Aroa et al., 2001; Cuervo-Cazurra et al., 2019; Li et al., 2023) – are to a greater or lesser extent location bound. Likewise, various complementary resources are also embedded locally – such as customer services skills and social capital (Verbeke and Hutzschenreuter, 2021). Literature has shown that digital technologies did not reduce the paramount importance of these location-bound complementarities, even for born-digital firms (Stallkamp et al., 2022).

In a context of continuing rapid technological progress, the debate on technology-induced changes in the location boundness of resources underlying firm-specific advantage is neither exhausted nor concluded. Consider, for example, the phenomenon whereby technology startups (hereafter tech startups) shift their headquarters (HQ) from their countries of origin to renowned startup hubs. If the affordances of digital technologies and infrastructure can indeed reduce the location boundness of resources and make geographic footprint in terms of FDI less relevant, tech startups' relocation is a puzzling phenomenon. Why would they change the legal domicile of their HQ if location-bound constraints indeed matter less?

This paper takes up this issue. Our empirical context is Central and

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Eastern Europe (CEE) with a special emphasis on Poland, Hungary, and Romania: countries exhibiting an impressive birth rate of technology startups but apparently failing to retain the best ones in their home countries. Startups do not *relocate* in the traditional sense of the word: shareholders insert a holding company above the original startup. They incorporate a new entity abroad (mostly in the USA or in the UK) and transfer the ownership of intellectual property to the new entity. The shareholders of the original startup do a share-for-share exchange with the new foreign entity and the original startup becomes a 100 percent-owned subsidiary of the foreign entity. In a legal jargon, this action is referred to as *flipping* the HQ to a foreign jurisdiction. At the same time, part of (often: most of) the core business functions, and auxiliary activities remain in the country of origin (Atomico, 2022).

Although there are no national-level statistical data on the incidence of this phenomenon, the surveys of Startup Hungary and Startup Poland document that a significant proportion of founders have already taken or consider taking this decision. In Hungary, 29 % moved their HQ abroad and 26 % are planning to take this step (Startup Hungary, 2023), whereas in Poland, 47 % of the surveyed startups are planning to move (Dziewit, 2022). Atomico's broader-based survey of CEE startups documented that more than 200 relatively successful startups (17 per cent of their sample – the ones that have raised at least €1 million) have moved abroad (Atomico, 2022).

We take a process approach (Langley, 1999; Langley et al., 2013) to understand not only why CEE entrepreneurs locate the corporate headquarters abroad, but also how – by overcoming which difficulties and leveraging which enablers – their expectations are fulfilled (or not). Our process perspective allows for uncovering the antecedents and progression of the relocation decision, specifically the push, pull, and retention factors that shape founders' motivations and the factors influencing post-relocation performance. We analyse what characterises these factors in terms of location boundness.

We find that the tension between the retention factors and the push/pull factors influencing CEE startups' locational decision engender a phenomenon that we refer to as virtual relocation. Rather than a single legal *action* by which the location of the corporate HQ is officially changed (flipping), virtual relocation is a *process* that unfolds over time. It starts with the above-described act of flipping, an important step in the scaling trajectory of growth-oriented CEE startups. With flipping, the CEE startup becomes associated with (as if originating from) an advanced economy startup hub. In this manner, it can overcome some of the country of origin-specific constraints to scaling and capitalize on the opportunities specific to the destination country but needn't relinquish the unique advantages inherent to the country of origin.

Over and beyond flipping, the *process* of virtual relocation also involves actions that embed entrepreneurs in the new location so that they can turn the assumed location-specific opportunities into reality. We find that over time, as this process unfolds, the virtual nature of the HQ gradually fades: employment starts growing also at the HQ location. Accordingly, virtual relocation is a process that evolves over time, culminating in the startup becoming a true multinational/global player with a strong unit in the home country.

Regarding location boundness, we show that the push factors, the pull factors, and the retention factors are equally location bound. We argue that virtual relocation enabled the founders to leverage the location-bound resources of both their home countries and the HQ location.

Given our context and focus, we make four important contributions. First, we respond to repeated calls for using qualitative research when studying entrepreneurship (reviewed in Javadian et al., 2020; see also: Van Burg et al., 2022). We draw on rich qualitative data obtained from interviews with technology entrepreneurs who at a specific stage of their development decided to move their HQ abroad and experts. Second, we extend established knowledge on startup relocation by shifting the analysis from outcomes to processes. Our approach thus contrasts with the usual static perspective of the received literature that focuses on the

performance outcomes of relocation (e.g., De Prijcker et al., 2019; Weik, 2023).

Our core contribution is that (1) we theorize about virtual relocation as brought about by the tension between the retention factors and the push/pull factors influencing CEE startups' locational decision and (2) show that the factors that push CEE startups away from their home countries, pull them to the destination country, and make them retain specific business functions in their home countries are equally location bound.

The fourth extension of prior literature concerns the empirical setting. While most papers, discussing issues related to startups moving outside their countries of origin, consider relocation from one advanced economy to another (e.g., Conti and Guzman, 2023; Lee, 2022; Weik, 2023) or within-country-relocations in advanced economies (De Prijcker et al., 2019; Guzman, 2019; Hellwig, 2023), we focus on central and eastern Europe. This case is particularly interesting since a statistically significant percentage of the best local startups¹ decided to move their HQs abroad. Consequently, and despite rapidly growing tech entrepreneurship (Skala, 2019), the number of scaleups and hence their impact on growth remains limited (Bartlett and Mroczkowski, 2019; Szalavetz, 2019).

Following this introduction, we briefly summarise the debate on digitalisation-induced changes in the location boundness of resources. We also review the prior literature on startups' locational behaviour and introduce three propositions. Next, we outline our research design and approach to data collection and analysis. This is followed by the presentation and discussion of the results. The concluding section provides summary, points to some limitations, and highlights future research avenues.

2. Digitalisation, internationalisation, and location boundness of resources

One of the influential tenets of the literature discussing digitalisation-enabled changes in entrepreneurship and international business is that by leveraging the affordances of digital technologies and digital infrastructures, the founders of digital technology startups can sidestep locational constraints (Bharadwaj et al., 2013; Monaghan et al., 2020). Put more cautiously, digital transformation has made entrepreneurship less spatially bounded. The intangible nature of digital artifacts, combined with the reduced transaction, communication, and coordination costs and better access to information enabled by digital technologies and infrastructure (Goldfarb and Tucker, 2019) make it possible for entrepreneurs – including the ones in economic peripheries – to reach out to geographically dispersed clients and customers without establishing physical presence in target markets (Cavusgil and Knight, 2015; Drori et al., 2024; Shaheer et al., 2020). They can coordinate geographically dispersed activities from central headquarters nodes, without co-locating (Autio et al., 2021), since access to and combination of globally dispersed location-bound resources has become much easier (Cano-Kollmann et al., 2016; Luo, 2021). Moreover, the “trust mechanisms of the internet substitute for relational trust, thus reducing the dependence of new ventures on spatial proximity” (Autio et al., 2018, p. 80). Founders can use digital technologies to build reputation and enhance their traction without investing in global salesforce and building traditional relations in physical places (Coviello et al., 2017; Fraccastoro et al., 2021; Luo, 2021). Taken together, digital

¹ Our definition of 'best startups' in a CEE context sets the bar lower than Atomico (2022) where 'relatively successful startups' are the ones that have raised at least €1 million. By 'best startups', we simply refer to the ones that managed to gain traction, scale, and increase their valuation. Both a Romanian and a Hungarian expert interviewed pointed out that [Romanian/Hungarian] “tech startups that showcase meaningful performance have already moved their HQs abroad.”

technologies reduce the location-specificity of resources (Autio and Zander, 2016), enable asset-light internationalisation (Bolwijn et al., 2018), and change the nature of the competitive advantage of places (Alcácer et al., 2016; Monaghan et al., 2020).

A related stream of literature questions or at least attempts to add nuance to the asserted reduced location-boundness of resources in the digital era. Autio et al. (2021), for example, warn that it is easy to overestimate the extent to which the firm-specific capabilities provided by digital technologies are non-location-bound. Yamin and Sinkovics (2006), call attention to the ‘virtuality trap’, that is, founders’ biased perception of the effectiveness of digital technologies in enabling the acquisition of global markets. If founders consider the internet as an alternative path to internationalisation and fail to learn about target markets through non-virtual means (neglect face-to-face interactions with stakeholders and location-bound and cultural specificities), they may easily fall into a virtuality trap and their performance remains lower than expected (Sinkovics et al., 2013). Relatedly, Stallkamp et al. (2023) highlighted that a non-negligible share of born-digital companies use FDI to supplement virtual access of culturally or physically distant markets. Verbeke and Hutzschenreuter (2021) question the generalizability of asset-light international expansion and point to the importance of localised complementary resources.

These latter authors also pointed out that access to and integration of localised contextual information is paramount – also for born-digital companies. A prominent example of localised contextual information is knowledge of a given market, deeply embedded in locations and staff (Song, 2022). Accordingly, as Song (ibid.) concluded, marketing capabilities accumulated in one location must be significantly adjusted for use in other sites. Relatedly, Chen et al. (2019) and Stallkamp et al. (2022) contended that market-specific idiosyncrasies may be significant barriers to the global scaling of digital ventures.

Another argument, questioning the preponderance of non-location-bound factors among the ones underlying competitive advantage is that technology ventures are extremely concentrated geographically² (e.g., Adler et al., 2019; Chattergoon and Kerr, 2022; Kenney and Zysman, 2020; Stuart and Sorenson, 2003), which indicates the continuing relevance of global centripetal forces (Autio et al., 2021).

This brief review suggests that there are empirically substantiated, strong arguments both for and against the digitalisation-induced reduced location boundness of resources. Therefore, further scrutiny is required to identify the forces at play in specific contexts.

3. Startups’ locational behaviour

In contrast to an extensive literature on factors influencing the relocation decisions of established firms (see, e.g., surveys by Brouwer et al., 2004; Kunisch et al., 2015), analyses of startups’ location often adopt a static approach, focusing on the geography of and regional variations in innovation and entrepreneurship (e.g., Feldman and Florida, 1994; Reynolds et al., 1994; Saxenian, 1994; Sternberg, 2022). This static perspective has its roots in seminal and convincing papers on entrepreneurs’ embeddedness (Dahl and Sorenson, 2009; Jack and Anderson, 2002; Wigren-Kristoferson et al., 2022). The built-up of location-specific social capital, considered an invaluable entrepreneurial resource together with ventures’ regional/local business networks, make it very costly to change the initial location (Sorenson, 2018).

Recently, however, it is increasingly acknowledged in the literature that startup migration is much more prevalent than what a static perspective of entrepreneurship suggests (Audretsch et al., 2016; Weik and Braun, 2022). New technology-oriented young firms often change

² For example, studying the migration patterns of unicorn founders, Kutsenko et al. (2022) showed that there are only a handful of host countries chosen by the foreign founders of future unicorns.

location (Guzman, 2019; Lee, 2022, Weik and Braun, 2022, see also Hellwig, 2023 for a critique). The intangible nature of tech startups’ key resources, together with other affordances of digital technologies (e.g., Autio et al., 2018), allowing, for example, to build a social network and accumulate social capital outside their home location, have reduced the costs of relocation. Developed and well-functioning entrepreneurial ecosystems act not only as ‘embedding forces’ creating sticky spatial and institutional contexts for entrepreneurs but also as ‘attraction forces’ that prompt rapidly growing ventures to relocate to the given ecosystem (Stuart and Sorenson, 2003; Lee, 2022). The flipside of the same coin is that entrepreneurs with global aspirations would choose to leave the countries with less developed national systems of entrepreneurship (Ács et al., 2014).

The motivations of migrating startups vary. A well-established stream of research distinguishes push and pull factors of relocation (Pellenberg et al., 2002; Stam, 2007; Sinkovics and Reuber, 2021). Most of the push factors are associated with the economic and institutional deficiencies of the original location. Over and beyond burdensome regulatory frameworks in the countries of origin, entrepreneurs feel ‘pushed away’ by a perceived limited supply of inputs (e.g., skilled workforce), the low sophistication of the local market (lack of demanding customers, high-quality universities, and entrepreneurial finance providers), and poorly functioning institutions. A less self-evident push factor is entrepreneurial ventures’ internal growth (Lee, 2022). As startups develop, gain traction, and gradually reduce their liability of smallness and newness, the advantages stemming from their initial embeddedness in their home location keep diminishing (Stam, 2007). The pull factors specific to alternative locations, such as a favourable regulatory environment, access to entrepreneurial support organisations and finance, presence of high-quality customers, that is, a developed market for technology, a large talent pool, and agglomeration of scientific research activities become to matter more than at the inception stage.

Obviously, push and pull factors are closely intertwined explanatory factors of startups’ relocation decision. They both prompt startups’ migration to locations with more abundant opportunities for developing their ventures. However, in addition to push and pull factors, some retention factors also affect startups’ eventual location decision and its timing. Retention factors can be broadly classified into two categories: constraints, acting as barriers to relocation and home country-specific advantages. Constraints can be internal or external. Examples of internal constraints include lack of international experience and foreign market knowledge, absence of foreign network capital, or founders’ status quo bias driven by the perceived risks of relocation (e.g., Cahen et al., 2016; Zhang and Cueto, 2017). External constraints are associated with the difficulties stemming from the liability of foreignness in destination countries and the costs of establishing a foothold in a foreign market (Cuervo-Cazurra et al., 2018).

Examples of home country-specific advantages acting as a retention factor include the size of the domestic market for technology (Murmans et al., 2015) and economic factors such as the lower costs of talent and of doing business. Obviously, only these latter apply to CEE tech startups: large domestic markets for technology may rather constrain the global aspirations of founders in advanced economies. However, the prevailing cost differences between the country of origin and the target country make founders’ location decision prone to tensions. While their growth aspirations would prompt a relocation decision, scarce resources and cost minimisation objectives call for retaining business activities in the home country.

These considerations lead us to propose:

P1 *CEE startups’ choice of a ‘virtual’ type of relocation can be traced back to the tension between the retention factors and the push/pull factors influencing their locational decision.*

Following virtual relocation, over time, when the entrepreneurs had already obtained funding, achieved product-market fit, gained traction, and scaled up, it becomes increasingly difficult to manage a growing

business from the home country, while maintaining a ‘nearly empty’ HQ in the destination country. The literature on new ventures’ growth (e.g., Gilbert et al., 2006; Kazanjian and Drazin, 1990; McKelvie and Wiklund, 2010) has shown that growing organisations undergo functional specialisation and organisational change. The scope of their activities increases, which requires a more formalised organisational configuration than the flat and informal structure that characterised their early-stage venture (Kazanjian, 1988; Piaskowska et al., 2021). More importantly, while startups are flexible to experiment with their products, business models, and organisational setup without committing major resources, scaling firms need to commit resources in a more irreversible manner (DeSantola and Gulati, 2017). These considerations lead to our second proposition:

P2 *If virtually relocated entrepreneurial ventures manage to seize the assumed opportunities and scale, the virtual nature of the HQ office will gradually change. Employment starts growing also at the HQ location.*

4. Research context, data collection and analysis

By the early 2020s, Central and eastern Europe has made its way onto the map of global startup ecosystems. Reports by Dealroom (e.g. Dealroom, 2024) indicate a rapid increase in (a) the valuation of startups born in CEE, (b) venture capital (VC) investments raised by CEE startups, and (c) number of VC funds active in CEE. Even though data indicates that the European tech ecosystem has become more evenly distributed than in the 2010s (e.g. Dealroom and Creandum, 2023), the performance gap between CEE and advanced economies remains stubbornly high. For example, the combined enterprise value of the CEE startup ecosystem is a mere 5.7 % of the European ecosystem. Average VC investment per capita was €12 in CEE, and €78 in Europe (Dealroom, 2024). Although at first sight, this latter data suggests a gradual catch-up of the CEE region, within-CEE performance differences caution against drawing hasty inferences. The size of within CEE differences is best illustrated by the fact that in 2023, VC investment per capita was €310 in Estonia, €16 in Romania, and €7 in Poland and Hungary respectively (Dealroom, 2024).

For the specific context of this study, we chose three CEE economies with relatively underdeveloped startup ecosystems.³ Like their peers in CEE, Hungary, Poland, and Romania have made considerable efforts to promote innovative entrepreneurship and strengthen their emerging startup hubs (Cruz et al., 2021; Kézai et al., 2020). However, irrespective of a couple of well-publicised success stories, the potential of these countries to produce a statistically meaningful number of high-quality startups is still far below both their advanced economy peers and the Baltic states.

Our approach to research design was guided by the assumption that the relocation of the focal companies in this paper needs to be considered as a *process* that unfolds over time rather than a single legal *action* by which the location of the corporate HQ is officially changed. Accordingly, to establish the location boundness of factors that push CEE startups away from their home countries, pull them to the destination country, and make them retain specific business functions in their home countries, we need to understand how their relocation unfolds over time. This requires a process perspective.

To delve into the focal themes of this paper, we adopted an exploratory, qualitative research design, deemed to be optimal to deal with the heterogeneity, context-specificity, and various other hard-to-measure aspects of entrepreneurship (Van Burg et al., 2022). Our core approach to data collection concerns interviews with founders of technology startups who at a specific stage of their development decided to move their HQ abroad. We developed an interview protocol with open-

ended questions (see Appendix) to elicit context-rich accounts of the antecedents of founders’ relocation decision and the process in which relocation was integrated with other aspects of the corporate strategy.

While our interview protocol was designed to address a temporally evolving phenomenon (Langley, 1999), we acknowledged that main drawback of making use of historical data obtained from founders’ retrospective accounts and evaluation is that we cannot exclude interviewees’ retrospective sensemaking (Huber and Power, 1985). We addressed the hindsight bias stemming from the process perspective of the interview design (together with the risk of obtaining ‘socially desirable’ responses) by systematically detaching facts from entrepreneurs’ perceptions and interpretations.

We adopted a theoretically driven sample design and selected a diverse range of startups to cover the HQ relocation phenomenon as comprehensively as possible. Accordingly, we included startups, the founders of which decided to flip or incorporate their ventures abroad right at inception. Although our sampling criteria did not include any target country specifications, the sample turned out to be highly skewed toward two destination countries: the USA (61.8 % of the sample) and the UK (35.3 %). This result is consistent with StartupBlink’s (2023) research about ‘top startup business friendly countries’: indeed, these two countries are at the top of worldwide destination targets. A related criterion for inclusion was that the startup should have value adding activities in founders’ country of origin. This is consistent with Atomico’s (2022, p. 18) conjecture, stating that although many successful CEE startups move their HQs abroad, they tend to keep a strong presence in the region in terms of the share of their workforce based in CEE.

Our core sample consists of 18 startups from Poland and Hungary. We conducted semi-structured interviews with the founders or CEOs of these startups in 2023 and early 2024. Interviews lasted 47 min on average. Appendix Table A summarizes the key characteristics of the core sample.

Data from the core interviews were triangulated by interviewing six experts: a Polish, two Hungarian, a Romanian, an American, and an Estonian expert, specialised in startup and entrepreneurship promotion, consultancy, legal services with respect to HQ relocation, and angel investment. Furthermore, as typical in qualitative research, we collected and analysed archival material about each company in our sample, such as media and Internet sources, e.g., business press articles, press releases, blogposts, and founders’ LinkedIn posts. To obtain a general overview of the local startup landscapes, we participated in six startup events in Hungary and Poland, including workshops and good practice sharing sessions.

Another approach to triangulating our empirical results was to collect data about and develop mini case studies of a sample of CEE startups that had moved their HQs abroad. This latter sample was selected purposefully, based on their relevance to the study (Patton, 1990). Since mini case studies allow for identifying typical patterns in areas that are relatively new for academic research (McBride, 2009), they are suitable for validating inferences drawn from a small sample of interview-based research. Our mini case studies involved the collection of a variety of secondary data about the strategy of 16 tech startups/scaleups⁴ with CEE founders (six from Hungary and ten from Romania) whose HQs are outside the home countries of their founders.

Although we were looking for maximum variation on dimensions such as sector, size, and funding status (Appendix Figures A, B, C depict the distribution of these variables in the broad sample), our sample proved to be skewed toward the business-to-business (B2B) type of transaction: with one exception, sample startups offer B2B solutions.

We collected information about these startups from media and Internet sources and accessed publicly available interviews with their founders. Note that nowadays a plethora of interviews with founders of

³ According to StartupBlink’s (2023) Global Startup Ecosystem Index, Poland ranks 33rd, Romania 42nd, and Hungary 50th out of 100 countries – much behind the highest-ranking CEE countries: Estonia (14th) and Lithuania (17th).

⁴ We selected these startups drawing on a self-collected database of relevant and insightful cases.

successful tech startups are available in YouTube, which represents a new, hitherto unexploited source for research. Altogether, we watched 23+ hours of video recordings with the founders/CEOs of the companies in the broad sample. They were asked about their personal background, technological solution, entrepreneurial trajectory, the major challenges they had overcome, and the mistakes they committed. Interviewees elaborated on their strategic management approach, pivots, and funding history. The insights of these founders helped validate and enhance the reliability of our findings.⁵

We supplemented qualitative data collection with quantitative data on the composition of employees' location and startups' funding status. For the former type of data, we checked the LinkedIn profiles of the startups in both the core sample and the mini-case-studies sample. Since LinkedIn provides data on the associated members of the given ventures, including the composition of members' location, we started with data cleaning to obtain the geographical composition of employees. (Besides employees, the list of associated members often includes representatives of investors, startup promotion agencies, contract workers, and advisors.) Table 1 summarizes the specifics of our data collection.

We began data analysis by identifying typical patterns, as suggested by Miles and Huberman (1994). This exercise was done in parallel by

Table 1
Data collection.

Data collection	Specifics	Outcome
Semi-structured interviews with startup founders	18 startups (nine from Poland and nine from Hungary)	Understanding the relocation history; identifying motivations, specifically, push, pull, and retention factors; learning about strategy and its execution.
Semi structured interviews with experts	six experts	Learning about the regulatory and institutional contexts; gaining a broad overview of the startup ecosystem; obtaining new perspectives that guided the further collection of empirical data.
Participation in startup events	six startup events in Hungary and Poland	Learning about good practice cases, gaining an overview of the local startup ecosystems.
Archival material	Articles in the business press, YouTube interviews with founders, blogposts, corporate websites, press announcements	Triangulation between different data sources to control for interviewees' subjective judgement.
Mini case studies	16 startups (six from Hungary and ten from Romania) based on publicly available information: podcasts and YouTube interviews with founders and other media and Internet sources	Increasing the pool of qualitative data used to validate the inferences drawn from interviews with the core sample. Mini case studies enabled to refine and streamline the focus of the analysis.
Quantitative data collection	Data collection on funding status (Crunchbase) and location of employees (LinkedIn) of both the core sample and the mini-case-studies sample	Use of LinkedIn as a new source of evidence for data triangulation. Collection of quantitative data to validate P2 about employment at the HQ location.

⁵ We sent e-mails to the founders of the startups in the mini case studies, listing our propositions and asking them to comment on them. We received two answers, they both confirmed our inferences and provided additional details about the given companies.

both authors, to obtain independent impression of the key elements of the given narratives. We performed reflective analysis and interpretation of our interviewees' stories, to capture their essential elements (Patton, 1990). Next, we used the identified patterns to guide a comparative analysis of the interview data (Eisenhardt and Graebner, 2007). Comparing patterns and recognising the importance of contextual differences helped us refine our initial inferences. For example, by the end of our analytical exercise we attributed greater importance to founders' personal and managerial capabilities than initially.

In the final stage of the data analysis, we compared our results to previous literature, which helped us interpret the findings and identify areas that need to be addressed by future research. Finally, we sent the first draft of the paper back to our informants and asked them to comment on the plausibility of our interpretation and inferences (Miles and Huberman, 1994).

5. Results

5.1. Push, pull, and retention factors shaping founders' eventual location decision

Regarding the motivations of relocating the HQ, interviewees' narratives were broadly consistent with the motivations described in the literature (e.g., Lee, 2022; Pellenberg et al., 2002). Table 2 provides representative quotes illustrating the push, pull, and retention factors at play.

Since founders perceived relocation as a springboard to accelerate their scaling up, unsurprisingly, the principal pull factor they mentioned is proximity to customers and investors. These and other pull factors, such as the wish for presence in a developed market for technology and a well-served startup ecosystem; the ease of setting up a business in the UK or US, and the stability and startup-friendliness of the regulatory system in the destination country mirror the related push factors: the absence of this environment in founders' home countries.

Startups' search for external legitimacy is also a non-negligible component of the complex bundle of their motivations. The benefits associated with the image of a 'UK', 'US', or 'Silicon-Valley' company' figured prominently in interviewees' narratives. As documented in previous literature (see survey by Parente-Laverde et al., 2022) a country's reputation, i.e., its institutional and political profile, has an impact on the reputation of its companies, which in turn impacts companies' performance. Accordingly, the reputation of Silicon Valley is expected to be 'transferred' to SV startups. From the perspective of their country of origin, startups' search for legitimacy is easy to interpret as a push factor, for example a credibility deficit associated with the country of origin.⁶ A quote by the founder of a Polish biotech startup adds additional nuance to this conjecture. Complaining about the lack of early-stage funding in the biotech sector, she posited: "It is particularly difficult to obtain funding in Poland or as a Polish company, because this country is not ranked among the advanced biotech hubs."⁷

Taken together, using relocation for corporate reputation building also exemplifies that push and pull factors are closely intertwined among the motivations that drive changes in startups' legal domicile.

Note that country reputation is not static. As elucidated by the Estonian expert interviewed: "For some years relocating Estonian startups thought that clients consider a UK/US company as being better and more reliable. This is no longer the case, since Estonia, as a startup nation has such

⁶ This latter perspective was conspicuous in an interview with a Hungarian startup. „Given that Hungary's perception is so negative in the international political arena, I find it crazy difficult as a Hungarian startup to convince international investors. This is why I label our startup as a European company with locations in London and in Budapest.” (Gólya, 2023).

⁷ Source: Mentioned during a panel discussion about the trends defining the startup landscape (Cracow, December 2023).

Table 2
Motivations of incorporating abroad or relocating the HQ*.

<p>Push factors (underdeveloped market in the home country; poor institutional framework; lack of funding opportunities)</p>	<p>“There is no meaningful market for our technology here.” (mentioned both by Polish and Hungarian interviewees) “In the mid-2010s, due diligence took six months for Polish VCs! That’s prohibitive for an early-stage startup.” “I had to realize that VC investors in the US would never trust an Eastern European entrepreneur. I got plenty of remarks about the weakness of rule of law in my home country.” “The stability of legal requirements leaves a lot to be desired. Operating in the UK is much safer also from the point of view of intellectual property rights.” “For CEE-based startups there is a kind of glass ceiling. Their valuation in both later-stage rounds and acquisition would never become as high as what we read in the business press about western startups.” “In the seed stage, even in Hungary you can find some investors. However, above a certain threshold ... of say, 20 employees and \$1m revenues, it is quite impossible to obtain funding. Beyond the seed stage there are no more mentors: no one helps you find out what the next steps in your growth trajectory should be.”</p>
<p>Pull factors (availability of factors in the destination countries that founders lack in their home countries, and reputation of the destination country)</p>	<p>“Obtaining entrepreneurial finance for early-stage ventures in the US is insanely simple, you just fill and sign your SAFE [Simple Agreement for Future Equity] notes and it is done!” “When talking with potential investors in the US, I received meaningful feedback and coaching – even if they decided not to invest. You wouldn’t receive such help in Poland.” “It’s not only the size of the investment ticket! Equally important is that you can easily get access to startup services even at a later stage of your lifecycle.” “We set up a US company, to make its future takeover easier. The size of the market for startup acquisitions is very small in Poland.” “As a company specialised in vehicle communication technology, our unique knowledge proved to be insufficient to convince even our existing collaboration partners, to increase their commitment. We had to settle in the US, get VC investment, build a strong organisation, and grow by an order of magnitude to achieve this objective.” “What mattered for us was the availability of ESOP¹ in the US. We could use it as a talent retention instrument.”</p>
<p>Retention factors</p>	<p>“We cannot afford having full-time employees in the US. Here in Poland, the competencies of human resources are as good or even better than in the US, and talent is much cheaper.” “It was shocking to realize how fast we burnt investors’ money in the US. We rented a small office, hired one employee, and a couple of months later, we were already out of funds.” “With hindsight I can safely say, Covid saved us from running out of funds. We</p>

Table 2 (continued)

<p>gave up our office in London and shifted to remote work to minimize the enormous costs of running the business in an advanced economy.”</p>
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* = The sources of the selected quotes include both our own interviews with founders and quotes from the publicly available interviews.

¹ ESOP refers to employee stock ownership plan, it is an earmarked part of the startup’s shares, allocated to early-stage employees to turn them into stakeholders of the startup’s success.

a good reputation.”

Our data highlighted the tension between the push/pull factors that prompted the relocation decision and the retention factors that made the surveyed startups retain the lion’s share of their activities in the country of origin. The key retention factors were the quality and affordability of human capital and the relatively low costs of running the business. The non-negligible cost differences between the home country and the destination country triggered tensions. Startups with global aspirations were well-aware of the fact that presence in the location(s) of global customers is imperative. However, relocation to a key market for technology that is at the same time an advanced entrepreneurial ecosystem involves hardly affordable costs for early-stage technology ventures.

To overcome this tension, founders opted for virtual relocation, an innovation in the organisational design that enables the given startups to be present in the target location and involves relatively low costs. Founders set up a company in the UK or US that became the full owner of the “subsidiary” in the country of origin. At the same time, the core activities (in case of technology startups: research and technology development), were kept being performed in the country of origin. Interestingly, in certain cases also some HQ functions (e.g., coordination) remained in the home country. The virtual nature of HQ relocation is illustrated by the following quotes:

“Although 90 % of our customers are in the US, we do not have a team there. Everything is handled remotely.”

“We never had to visit any governmental agency in person in the UK! We can in principle manage everything remotely.”

Accordingly, the incorporation of the HQ abroad was primarily a formal action: the lion’s share of corporate activities and resources remained in the home country. The CEE startups have become ‘UK’, ‘US’, or ‘Silicon-Valley-companies’ and these geographic labels were used in negotiations with potential investors and customers.

Fig. 1 summarizes the mechanism suggested by interviewees’ accounts of the factors that prompted founders’ relocation decision and forged its specific (virtual) nature.

5.2. Evolution of sample companies’ geographical footprint

When describing their relocation experience, ‘learning’ was a recurrent term in interviewees’ accounts. “I consider it as an expensive MBA.” – as it was worded by one informant. Founders were well-aware of the fact that being incorporated in a well-functioning startup hub does not automatically enable them to mobilise the necessary resources and position their ventures in the large market for technology. The explorers of the new world (“Poland and US are two different worlds in terms of the ecosystem”) had to get acquainted with numerous details specific to the new location of their HQs and become locally embedded. Accordingly, they collected practical information about (a) which investors are valued for connecting their portfolio companies with potential customers; (b) which organisations among the multiplicity of ecosystem services providers offer value-for-money legal, financial, and marketing services; (c) membership in which industry associations provides relevant network connections; (d) which conferences and other industry events they need to attend and leveraged these newly discovered details to create embeddedness in the new location (see Appendix Table B for

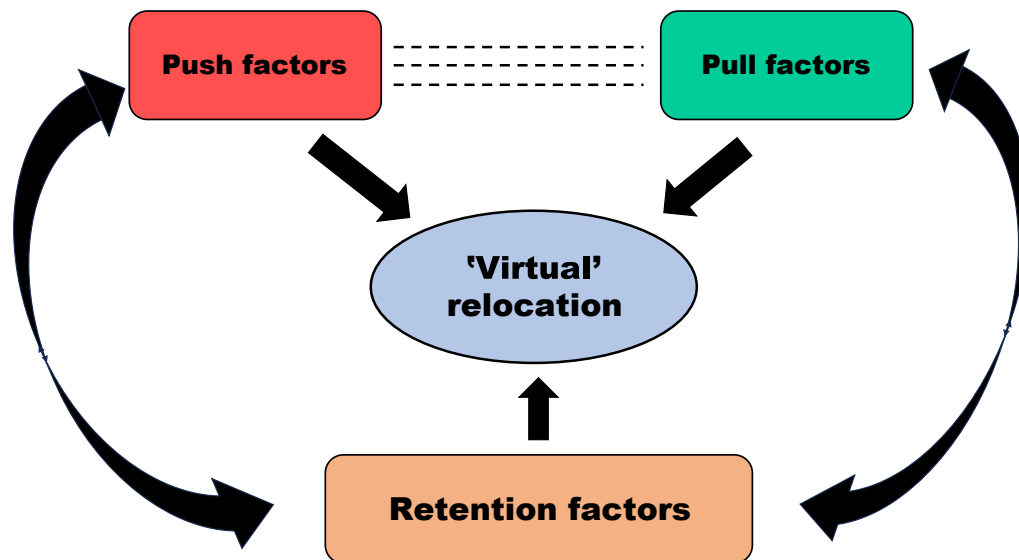


Fig. 1. The interplay of motivations prompting relocation and explaining its virtual nature. Source: Own illustration.

illustrative quotes). They participated in the key activities of the host ecosystem and built network relationships with local partners to access local knowledge, obtain local endorsement, and build reputation. Notice that these actions can be summarised as sensing and seizing destination country-specific *location-bound* opportunities and building destination country-specific complementary resources.

Regarding the evolution of their companies' geographical footprint, the insights obtained from founders broadly confirmed our proposition (P2). Over time, as virtually relocated ventures started to scale (measured by their funding status), they gradually increased the headcount also at the HQ location and elsewhere, internationally. Accordingly, it is safe to posit that above a certain threshold size, virtually relocated ventures would opt for establishing a real presence in the legal domicile of their companies and in other countries targeted by their international expansion. As it was bluntly expressed by a founder in the sample of mini case studies: *"If you want to be a global player, or at least, be present in key markets, you cannot source talent just from one country."*

Since LinkedIn provides detailed descriptions of employees' jobs, we could identify the main patterns that characterise the geographic distribution of business functions. R&D and software development were usually kept and expanded in founders' countries of origin, together with some strategic and auxiliary business functions, such as accounting and finance, product and project management, and human resources management. In contrast, scaling ventures would assign business development and sales tasks to their employees in the HQ location and in the newly opened offices worldwide. Typical job titles of employees at HQ locations include sales officer, customer success manager, marketing officer, enterprise account executive, VP of revenue operations, customer acquisition specialist, and community and outreach specialist. At later stages, senior management was also recruited in the HQ location: *"The majority of our VPs are in the UK. The talent pool of senior managers is just too small in our home country."*⁸ Part of the founders also moved; others opted to stay in the country of origin.⁹

Note, however, that consistently with the received literature,

⁸ E-mail exchange with the founder of a company in the sample of mini case studies.

⁹ LinkedIn data are not always reliable with respect to founders' location. Interviews revealed that many of the founders indicating the host country of their HQ as their primary location are in reality staying in their home countries. The reason is similar to that of flipping the HQ: they expect the reputation of the startup hub's location be transferred to their ventures.

emphasising the heterogeneity of startups (e.g., [Baron and Hannan, 2002](#)), the ventures in our sample showcase considerable diversity also with respect to the evolution of their geographical footprint. Some companies grew their headcount in the destination country up to 50 % of that in the home country. Besides sales and marketing executives some companies would also hire engineers and software developers in the HQ location. Others would stick to the home country and increase the number of employees in the HQ location slowly and cautiously even at series B stage. Nine companies added new employees to their global headcount in a handful of locations outside both the country of origin and the HQ location.¹⁰ We also identified five companies that closed their HQ offices but kept being incorporated in the destination country. Two of them downsized and their founders chose to manage the stagnating business from the home country, while the local employees of three others continued in a remote working arrangement. Taken together, we found that several moderating factors accounted for this diversity, such as technology and industry specifics, founders' personal background,¹¹ the venture's performance, and top management's openness to remote work. This heterogeneity indicates that *relocation is a dynamic process rather than simple and linear*. [Table 3](#) summarises the geographic composition of sample startups' employees.

6. Discussion

This paper explored why in an era marked by the radical ease of transacting from anywhere to anywhere else ([Coviello et al., 2017](#)) many CEE founders of tech startups choose to flip/incorporate their HQ entity abroad.

Our results challenge the asserted reduced location-boundness of resources in the digital era. We found that if tech startups, born outside globally renowned tech hubs, in countries marked by a relatively weak system of entrepreneurship ([Ács et al., 2014](#)) and underdeveloped

¹⁰ For example, in the case of one of the surveyed ventures, while 60% of employees were based outside the home country of the founders, the HQ location still had zero employees.

¹¹ More than half of the founders in the broad sample studied abroad, most of them in the future destination country of their ventures. Accordingly, founders can leverage the foreign market knowledge and social capital they had accumulated during their studies. From a theoretical perspective, it is safe to posit that today's transnational digital entrepreneurs are not necessarily embedded only in their home countries.

Table 3
Geographic composition of employees in 2022 (percentage shares).

	HQ location/country of origin	Country of origin/total	
Total sample (n = 34)	21.0	73.1	
Early-stage startups (before series A) (n = 15)	13.1	72.4	
Series A or B or C startups (n = 19)	21.85	73.2	
Number of employees	Country of origin	HQ location	Total
Early-stage startups (before series A) (n = 14)	160	21	221
Series A or B or C startups (n = 19)	1414	309	1932

Source: Authors' calculation based on interviews and LinkedIn data.

market for technology (Arora et al., 2001), have global aspirations, sooner or later they deem relocation to a global startup hub indispensable. Using the example of tech startups in CEE, we elaborated on the interplay of push and pull factors that together make relocation appear indispensable. Note that both the push factors (constraints to scaling, stemming from the fact that resources critical for scaling are not available in the home country) and the pull factors (market and resource access opportunities inherent in global startup hubs) are location bound.

We also showed that the founders in our sample tried to avoid trading off the retention factors specific to their home countries (e.g., relatively low-cost talent) for the pull factors of the destination country. The affordances of digital technologies and most importantly, the possibility to engage in virtual relocation enabled the founders to leverage the location-bound resources of both their home countries and the HQ location. Virtual relocation enabled founders to have their cake and eat it, picking the best combinations of the location-specific resources of both the home and the destination country.

One of our initial assumptions was that following sample startups' non-traditional relocation by which they internalised a legal and business system deemed optimal for global scaling, their geographic footprint will evolve in a similar way as in the case of traditional scale-ups. If sample startups manage to improve their performance and scale, the empty-shell HQ will gradually be 'filled with life' and the virtually relocated ventures will undergo real geographical diversification. While our results have broadly confirmed this proposition (P2), the observed developments were far from straightforward. Consistently with our expectations, over time new employees were recruited to work at the HQ location (also at other offices abroad) and performed business development and sales activities. Meanwhile R&D and software development were in most cases kept being performed in founders' countries of origin. We observed, however, large disparities in the speed and degree to which the empty HQ was filled with employees and the virtually relocated ventures underwent real geographical diversification. This result warrants further research about the factors moderating the evolution of the geographic footprint.

Woven together, the threads of our analysis contradict the claim that in an era marked by digitally enabled coordination, communication, and instant market access through digital channels, location-bound constraints and advantages matter less. In reality, the facts that startups (a) incorporate their ventures in jurisdictions deemed optimal from the point of view of the local regulatory regime and where their main clients reside¹²; (b) opt in a particular startup hub the reputation of which is expected to impinge on corporate reputation (Parente-Laverde et al., 2022); (c) take at the same time advantage of the location-specific resources of their countries of origin, and (d) develop location-specific complementary resources in the host countries to turn the assumed

¹² As a founder remarked: "Forget about the issue of national boundaries. The principal question is where the potential clients are and how to access them."

opportunities into reality, demonstrate that many of the resources underlying competitive advantage are and remain location-bound.¹³

7. Concluding remarks, limitations, and future research avenues

This paper analysed the antecedents and evolution of a specific form of innovation in the organisational design, referred to as virtual relocation, undertaken by CEE-born tech startups who transferred their registered head offices abroad to a renowned global startup hub, while keeping core R&D and some auxiliary business functions in their countries of origin. Our results were consistent with prior literature elaborating on technology startups' inclination to change location (Guzman, 2019; Lee, 2022, Weik and Braun, 2022); the push and pull factors shaping startups' location choices (Pellenberg et al., 2002; Stam, 2007; Sinkovics and Reuber, 2021), and the 'attraction force' of developed entrepreneurial ecosystems (Stuart and Sorenson, 2003; Lee, 2022).

On the other hand, we extended this literature, showing that virtual relocation is brought about by the tension between the intertwined push and pull factors that prompt relocation and the retention factors specific to founders' home countries. Our results indicate that if take-off happens as expected, the virtual character of the HQ may sooner or later start to fade: founders would increasingly engage in establishing real presence in the legal domicile of their companies and in other countries targeted by their international expansion. This latter result corroborates Stam's (2007, p. 46) inference that "the spatial organization of entrepreneurial firms co-evolves with the accumulation of the firms' capabilities".

Our results contribute to the debate on digitalisation-induced changes in the location boundness of resources (Autio et al., 2021; Coviello et al., 2017; Drori et al., 2024; Stallkamp et al., 2023; Verbeke and Hutzschenreuter, 2021). We argued and provided rich qualitative evidence that push, pull, and retention factors are equally location bound. Drawing on their non-location bound capabilities and complementary assets, founders harnessed the freedom of choice of corporate residence and easy corporate mobility, internalised the location-bound assets of the chosen host countries, and built location-bound complementary assets in the new location. At the same time, they kept leveraging the location-bound assets of their home countries.

As in most exploratory studies, we should note some limitations. The small size of the sample, a common limitation of qualitative exploratory studies, also applies to this study. Future research is needed to include tech startups from other CEE countries and investigate potential country-specific differences in the push factors shaping founders' locational behaviour. Relatedly, note that companies in this sample operate in B2B markets, where the location boundness of resources may differ from the one observed in a B2C context. An important limitation is associated with the dynamics of change in startups' employment. Table 3 provided a snapshot view of the geographic composition of sample companies' employment. However, several interviews revealed that compared to the previous year, employment declined or grew by more than 50 per cent, which needs to be considered as an important caveat in drawing inferences from our quantitative data. 'Work from anywhere' agreements may have also distorted the geographic composition of employees calling for caution in making inferences about sample startups' evolving geographic footprint. Altogether, it would be ideal to repeat our interviews with these companies one or two years later, to gain a longitudinal perspective of the evolution of their geographic footprint, strategy, and performance.

Another question to be addressed by future research is the impact of

¹³ Obviously, the capabilities to access to geographically dispersed location-bound resources and establish and leverage location-bound relational embeddedness are non-location bound, just like other internal functional capabilities, such as organisational, managerial, technological, and business model capabilities.

startups' virtual relocation on their countries of origin. On one hand, our results are broadly consistent with [Autio and Rannikko's \(2016\)](#) conjecture about the importance of *retaining winners* [in contrast to the common focus of entrepreneurship scholars on the advantages and drawbacks of *picking winners*]. On the other hand, however, the analysis of policy implications warrants further research to establish how harmful the phenomenon discussed in this paper is from the perspective of founders' home countries. Answer to this question is far from obvious: firm-level longitudinal research is needed to discover how employment, profits, and value added evolve in the home country units of the virtually relocated startups. The analysis should also consider the cases of successful entrepreneurs who return as angel investors to their countries/region of origin and the demonstration effect of success stories on technology entrepreneurship in the countries of origin of the given companies.

CRedit authorship contribution statement

Andrea Szalavetz: Writing – original draft, Methodology, Funding

Appendix A

Guiding themes of the interviews

- Basic data of the startup:
 - technology
 - year of foundation
 - location of the HQ
 - units in the home country (and elsewhere?)
 - age of the startup at the time of relocation
 - current employment in the destination country, in the country of origin, and in other countries (if applicable)
- What were the main motivations of moving the HQ? Mention both push factors and pull factors! (Examples of push factors include financing constraints or poor sophistication of the home market. Pull factors are the factors that made the location/country where you moved particularly attractive for you). Please provide illustrative stories!
- Is there anything that made you stick to your country of origin for some time before relocating? Please explain. (For example, social factors, aspects of your original ecosystem, prior public support, e.g., R&D grants, public VC funding).
- Have your expectations regarding the relocation of the HQ been fulfilled? For example, did you start to grow rapidly in the new location? Did you obtain funding after relocation? Was the local market for technology more developed? or the local environment more entrepreneurship-friendly? Please provide short stories specific to your company (with respect to each of your expectations) that illustrate how they have been fulfilled!
- What were the main difficulties accompanying the relocation (related, for example, to institutions, regulations, local business environment, cultural factors) and what helped you overcome these difficulties?
- Was relocation accompanied by any complementary measures to ensure that the change in the location works out as expected?
- Did you have to reorient your strategy/pivot? (If yes, please provide details)
- What were the unexpected benefits that you encountered abroad and had not calculated with (and were pleasantly surprised at)?
- Have you moved other business functions also abroad following the relocation of the HQ? Please describe the geographic patterns of the development of your company and your future plans.

Table A. Characteristics of the startups interviewed

No.	Foundation year	Country of origin	HQ	Relocated	Sector	Funding status	Interviewee
1	2009	PL	UK	2009	SaaS/HRM tech	A	founder
2	2011	PL	USA	2014	IoT, smart building tech	IPO (2018, Warsaw Stock Exchange)	founder
3	2013	PL	USA	2021	marketing technology	A	founder
4	2014	PL	USA	2015	IoT (smart consumer product)	seed	founder
5	2014	PL	UK	2014	medical technology	A	founder & CEO
6	2014	PL	USA	2016	marketing & sales tech	A	CEO
7	2016	PL	USA	2019	climate tech	A	founder
8	2019	PL	USA	2019	construction tech	A	founder
9	2020	PL	USA	2020	e-commerce technology	seed	CEO
10	2013	HU	UK	2019	biotech, computational biology	B	CEO
11	2015	HU	USA	2022	medical technology	seed	founder
12	2016	HU	UK	2016	SaaS	angel investment	founder
13	2019	HU	Switzerland	2023	energy tech	angel investment	founder
14	2019	HU	USA	2019	cybersecurity	A	CFO

(continued on next page)

Table A. Characteristics of the startups interviewed (continued)

No.	Foundation year	Country of origin	HQ	Relocated	Sector	Funding status	Interviewee
15	2021	HU	UK	2021	AI-powered text-to-video for corporate L&D	A	head of marketing
16	2022	HU	USA	2022	SaaS	pre-seed	founder
17	2022	HU	UK	2022	SaaS	seed	founder
18	2022	HU	USA	2022	cyber security	seed	founder

AI = artificial intelligence; CFO = chief financial officer; IoT = Internet of Things; HRM = human resources management; IPO = initial public offering; L&D = learning and development; SaaS = software-as-a-service; PL = Poland, HU = Hungary. The signs in the 'Funding status' column refer to the last equity funding round obtained by the given companies. Following the initial investment (referred to either as 'seed' or 'pre-seed', depending on the amount obtained, or angel investment if funding is provided by a private person) the subsequent consecutive fundraising events are referred to as series A, B, and C funding rounds respectively. Each funding round is accompanied by a new valuation of the company. Most startups never graduate, that is, they never obtain additional funding beyond seed or series A.

Source: Authors' compilation from interview data and secondary sources.

Table B. Sensing and seizing destination country-specific location-bound opportunities and developing destination-country-specific location-bound resources

– Illustrative interview excerpts*.

Sensing and seizing location-bound opportunities

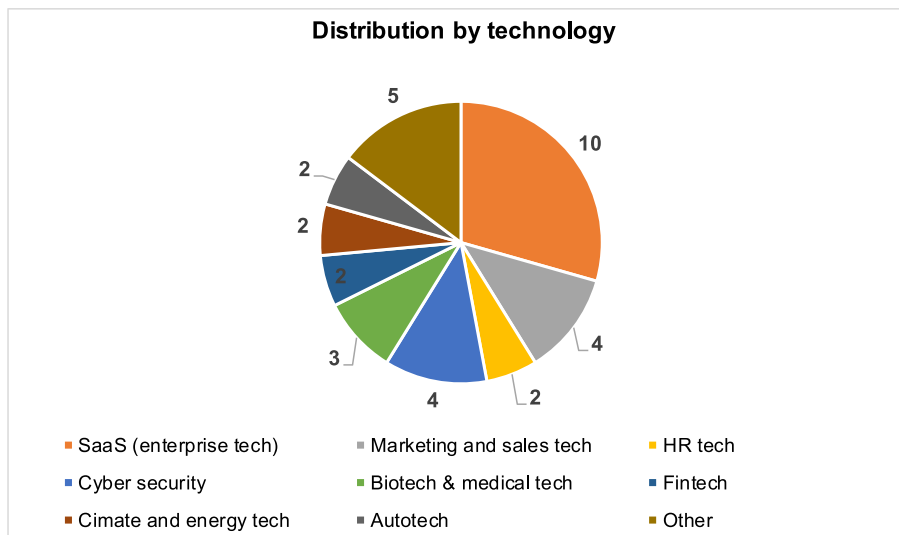
“I had to learn a lot about the oddities of financing. What is a convertible note, how much discount is acceptable, what is a preferred stock, what is vesting, why it is not wise to give a board seat at seed investment, and a huge number of such intricacies.”
 “Although we did some research before moving, mainly about the local tax regulations and aid schemes, I think, we should have talked more with experts about the actual legal and administrative requirements.”
 “For our initial expansion in the US we contracted a well-known local company to manage business development and sales.”
 “We could leverage our investor’s network. Their introduction to [anonymised] proved invaluable: this company became not only our first major customer, but our collaboration with them gave us visibility in the market.”

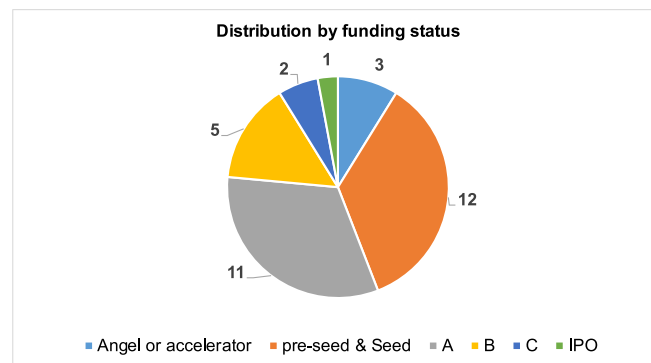
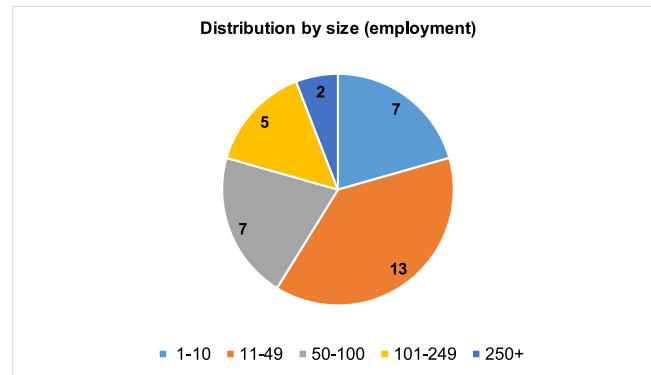
Developing location-specific complementary resources

“It took some time until I realized that storytelling is what really matters for investors, and that I need to develop my storytelling capability to convince them.”
 “It took me more than a year to fully understand what a go-to-market strategy is, and how I should respond to this question when asked by investors.”
 “To make ourselves visible, we made presentations at 100 + industry events (conferences, workshops, panel discussions). This converted well into working with customers.”
 “We applied for different innovation awards which gave us opportunity to get on the stage and introduce the company.”
 “We joined a relevant industry association and devoted much time to collaborating with the largest industry actors to build the necessary standards.”
 “We established a board of 13 advisors, consisting of renowned international experts. They all have impressive networks in the industries that matter for us.”

* = The sources of the selected quotes include both our own interviews with founders and quotes from the publicly available interviews.

Figures A, B, C – Distribution of the startups in the broad sample (Number of startups).





Source: Authors' compilation from interview data and secondary sources.

Appendix B. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.geoforum.2024.104074>.

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