SURVIVAL AND GROWTH OF HUNGARIAN START-UPS*

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Abstract. Most start-ups die and most survivors fail to grow dynamically. The aim of the paper is to summarize the factors found in the international literature, supported by empirical research, that influence the survival and growth of start-ups, and evaluates the results of expert interviews conducted with renowned players in the Hungarian start-up ecosystem. During the research process fourteen expert interviews were conducted and analysed with combined logic, integrating deductive and inductive approaches. Based on the results, there is little overlap among factors identified in the international literature and those highlighted by Hungarian experts as influencing the survival and growth of start-ups. However, international and Hungarian results unanimously emphasize that entrepreneurial education, internationalization, acquisitions and heterogeneity of the start-up team’s knowledge and skills play a significant role in the success of start-up businesses. Despite the limitations of the research, results may prove to be beneficial to both start-up ecosystem players and policymakers.

Keywords: start-up; survival; growth; expert interview; Hungary

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1. Introduction

Start-ups, which are often referred to as high growth companies, scaleups, gazelles, new technology-oriented companies, etc. (Eurostat-OECD, 2007; OECD, 2018; Szerb, Vörös, Páger, Ács & Komlósi, 2018; Vecsenyi & Petheő, 2017), are of increasing importance from the research and economic policy point of view, due to their prominent role in economic growth and promoting technological change (Szerb et al., 2018).

In the Central and Eastern European region, despite their relatively young and underdeveloped start-up ecosystems, we can experience evolving scientific interest in start-up companies. Benesova, Kubickova, Michalkova & Kroslakova (2018) analysed Slovak gazelles accelerating impact on the economy. They emphasize their positive effect on entrepreneurial thinking, culture and sustainable growth. Hrivnák, Melichova, Fazikova & Rohacikova (2019) examined the effect of universities in formation of knowledge intensive ventures. Their results show that university spill-overs affects development of knowledge intensive ventures, but only in case of services. Kállay and Jáki (2019) examined the impact of state intervention on the Hungarian venture capital market. Based on their results public funding in the Hungarian market did not function as an additional source of finance rather it causes a crowding out effect, gives rise to softer project selection standards and the portfolio financed by public funding is likely to end up below the value of the investment of venture capital funds.

The purpose of this study is to enrich our knowledge within two critical challenge of start-up companies, the factors influencing their survival and growth. The paper presents some relevant results of international literature review of the topics and the main findings of expert interviews. In our work we aim to uncover and compare with earlier international empirical research findings the factors influencing the survival and growth of Hungarian start-ups.

Start-ups are very fragile and hard-to-find in terms of data acquisition. As a result, qualitative research methodologies in some cases support their understanding more effectively than quantitative surveys. This is particularly true in a post-socialistic Central and Eastern European country like Hungary characterized by a young start-up ecosystem, where, unlike in the Western European and Anglo-Saxon ecosystems (Löfsten, 2016a; Löfsten, 2016b; Ejermo & Xiao, 2014; Xiao, 2015; Davila, Foster & Gupta, 2002), long term time series are not available for studying start-up businesses. Considering the above-mentioned challenges of Hungarian start-up companies’ research, we chose expert interview method to enlarge our knowledge about the survival and growth of start-ups.

2. Review of the International Literature

As part of mapping the factors influencing the survival and growth of Hungarian start-ups, we reviewed relevant findings of the international literature. The research included the Web of Science Core Collection and ScienceDirect databases so that only articles reviewed at least twice and meeting the needs of advanced scientific research were included. As a further filtering criterion, we have focused on the processing of publications based on empirical research results.

2.1. Factors Influencing Start-up Survival

A study by Löfsten (2016a), examined the organizational capabilities that contribute to the survival of firms. Based on his findings, it can be stated that new technology-oriented businesses with higher levels of business experience have a better chance of survival. However, there was no detectable link between the higher levels of financing of new technology companies and increased chances of survival, nor between the increased presence of new technology companies in international markets and higher survival rates (Löfsten, 2016a). In case of non-
exporting technology-based firms and non-exporting firms in the service sector with a small team accelerator programs have a positive effect on survival (Del Sarto, Isebelle & Di Minin, 2020).

Another study by Löfsten (2016b) examined the effect of business planning, localization and patent development in the early years of the business on survival. His research proved that the importance of business planning and the choice of localization (proximity to important customers, suppliers, research centres, business organizations) have a positive effect on business survival. Patent development in the early years of the companies is also critical for survival (Löfsten, 2016b). Hornuf, Schmitt and Stenzhorn (2018) results confirm that number of filed patents decreases the probability of firm failure.

Ejermo and Xiao (2014) studied the survival of newly established technology companies. Their analysis covered all companies entering the market between 1991 and 2002 and followed their paths until 2007. They have shown that technology-based businesses have a lower risk of dissolution than other types of firms, and interpreted it as an indicator of higher "quality". In their analysis, a distinction was made between self-employed and non-self-employed new technology-based enterprises. Those who were self-employed proved to be more sensitive to changes in business cycles and the improved survival rates for new technology-based firms referred to those defined as non-self-employed. Their research concluded that new technology-based firms have a better survival rate than other types of firms, but only if they got past the phase of self-employment in their life cycle (Ejermo & Xiao, 2014).

There are two views on the impact of innovation on the survival of start-ups. One is that innovation improves firms' chances of survival through market power, cost efficiency, development of organizational capabilities (Schumpeter, 1934; Porter, 2006; Teece, Pisano & Shuen, 1997; Zahra & George, 2002). The opposite approach emphasizes that innovative start-ups need to deal with difficulties arising from inexperience and small size, and the level of these difficulties surpasses those found in non-innovative businesses. In the latter perspective, new, innovative firms have a lower chance of survival than non-innovative firms. Survival is influenced by a mixture of innovation uncertainty and successful and unsuccessful innovation efforts (Amason, Shrader & Tompson, 2006, Samuelsson & Davidsson, 2009). Opinions that emphasize the positive impact of innovation on the survival of start-ups are predominant in the literature. Nevertheless, Hyytinen, Pajarinen and Rouvinen (2014) found a negative correlation between innovation orientation and survival. Based on their analysis, they concluded that the survival rate of innovative start-ups is 6-7 percentage points lower than that of non-innovative start-ups (Hyytinen et al., 2014).

Criaco, Minola, Migliorini and Serarols-Tarrés (2014) studied the extent to which the survival chances of start-ups from universities are influenced by the human capital of founders, which has been divided into three dimensions: entrepreneurial, industrial, and academic knowledge. Based on their results, entrepreneurship education has a positive impact on survival, while previous entrepreneurial experience has no effect. Industry experience has a negative impact on the survival of start-ups due to the increased opportunity cost arising from attractive job offers to the founders. University background and attachment have a positive impact on business survival (Criaco et al., 2014).

Coeurderoy, Cowling, Licht and Murray (2011) examined the impact of internationalization on the survival of new technology-based firms in the UK and Germany. Their research showed that the survival chances of the companies they studied were enhanced by high absorption capacity, specific customer-supplier relationships, and internationalization (Coeurderoy et al., 2011).

In identifying the factors that play a role in the survival of start-ups, international research focuses primarily on elements that have a positive impact on, or do not influence the survival of the company, but does not extend to the causes of failure.
2.2. Factors Influencing Start-up Growth

Xiao (2015) studied the impact of acquisitions on business growth for new technology-based companies established between 1997 and 2002 in Sweden. The life cycle of the sampled companies was followed until 2009 and a subsequent quantitative analysis concluded that acquisition by Swedish multinationals had led to a significant increase in the number of employees. Acquisitions in other categories (non-Swedish multinationals, or Swedish non-multinationals) did not affect the growth in employment or sales. This digression is due to the different motivations and opportunities behind the acquisitions (Xiao, 2015).

Visintin and Pittino (2014) in their research on Italian spin-offs demonstrated that firms having founding members with both academic and non-academic experience were more likely to grow than firms started by less heterogeneous teams (Visintin & Pittino, 2014).

Ganotakis (2010) examining the performance of new technology firms in the UK concluded that firms founded by highly skilled entrepreneurs were better able to perform. Heterogeneous but complementary professional knowledge, such as technical education and related trade experience, or a combination of technical managerial and commercial experience proved to be most beneficial. The author draws attention to the need for both technical and business knowledge to develop and market innovative products and services (Ganotakis, 2020). Pearce and Pearce (2020) also highlights the use of advanced technology as distinguishing attribute of high-growth ventures.

Brinckmann, Salomo and Gemuenden (2009) examining the growth of German new technology companies, concluded that the involvement of external sources of financing has a positive effect on the growth of employment, but does not show a significant correlation with the increase in sales. This can be explained by the fact that the involvement of external resources allows the recruitment of staff potentially providing future growth, but the added value originating from this is delayed over time. An interesting finding of the research is that internal, operational financing also shows a positive correlation with the increase in the number of employees and sales volume. Although the literature generally emphasizes the importance of obtaining external funding, one of the driving forces behind the growth of start-ups is the ability to finance internally. The researchers point out that a significant proportion of the companies in the sample did not use any external financing at all (Brinckmann et al., 2009).

Ahmed and Cozzarin (2009) studied the impact of the financing structure on growth in Canadian biotechnology firms. Based on their results, business angels, venture capital and traditional (bank) financing all have a positive effect on the growth of firms. Government subsidies and stock market introduction did not correlate with the growth rate. With regards to the results, it is not clear whether the experienced growth was due to the sophisticated selection criteria on the part of the financiers, who are likely to finance companies with significant growth potential, or the extra management support and environment that benefit the companies receiving the funding (Ahmed & Cozzarin, 2009).

Davila, Foster and Gupta (2003) studied Silicon Valley start-ups based on data collected between 1994 and 2000. The focus of their study was on how venture capital financing affects the employment growth of start-ups. Although their analysis was carried out under a number of restrictive conditions, the results show that the employment rate of start-ups involving venture capital had increased even before their capital raising, and the increase continued in the months following the capital raising. According to their findings, venture capital involvement is a measure of start-up quality, and post-transaction expansion indicates that growth was hampered by the scarcity of financial resources (Davila et al., 2002). In case of digital start-ups Cavallo, Ghezzi, Dell’Era and Pellizzoni (2019) found that venture capital funds affect their growth positively. Caciolatti, Rosli, Ruiz-Alba and Chang (2020) examining UK high-tech start-ups came to the conclusion that start-ups with a social mission to obtain suitable funding and attain sustainable growth may de-emphasize short term profitability.
Colombo and Grilli (2005a) examining Italian start-ups, concluded that there is no significant difference between the size of companies financed by debt financing or the personal savings of the founders, while external equity financing is associated with larger firms (Colombo & Grilli, 2005a).

Colombo and Grilli (2005b) studied Italian high-tech industry start-ups, examining how the human capital of the founders influenced the performance of the firm. The educational background and previous work experience of the founders also play a role in the growth of the enterprise. Economic and management studies and to a lesser extent technical knowledge have the greatest positive impact on growth, while the analysis did not show a significant relationship with other types of education. Rapid growth was mainly supported by previous entrepreneurial experience, work experience in the technical field, and to a lesser extent by trade skills (Colombo & Grilli, 2005b). Chatterji, Delecourt, Hasan and Koning (2019) found the peer advice positive effect on growth and survival of start-up companies. At the same time formal management training proved to be a substitute for informal peer counsel.

According to the reviewed international literature, the growth of start-ups is measured by revenue, sales volume, and staff increase. However, in the case of start-ups, investors often measure growth in the change in goodwill, and the criteria for becoming a unicorn start-up (worth more than $1 billion) are not dependent on sales or number of employees but the value of the company. This discrepancy between science-based research and the valuation criteria adopted within the start-up ecosystem is also an indicator of the complexities characterizing the study of the narrow and very specific start-up business.

Summarising the international literature results, founders’ industry experience, entrepreneurship education, internationalization, acquisition, heterogeneity of knowledge and skills of the founding team, the ability to finance internally from operations and involving external sources of finance positively affect the growth of start-ups.

3. Methodology

While uncovering the factors influencing the survival and growth of Hungarian start-ups, the characteristics of the Hungarian start-up ecosystem, the lack of a reliable, full-scale database on start-ups (Csákné, Radácsi & Szennay, 2019), and time-series data looking back on several years that would make it possible to conduct studies similar to the quantitative analyses found in international literature (see: Löfsten, 2016a; Löfsten, 2016b; Ejermo & Xiao, 2014; Xiao, 2015; Davila et al., 2002) justifies the application of qualitative research methodology tools.

The strength of qualitative field research is its validity, as such depths and aspects of the phenomena under study that would be unattainable through questionnaire surveys become graspable (Babbie, 2003).

The data in our research were collected in the framework of expert interviews. Pfadenhauer (2009) emphasizes that expert interviews can be interpreted as independent procedures within the realm of qualitative interviews. In their application, the interviewer is very important, and their knowledge and skills in the subject are essential for deep professional interaction (Pfadenhauer 2009, in Bogner, Litting & Menz (Eds.), 2009). Expert interviews were conducted exclusively by research professionals on the basis of an interview outline.

Sample selection was crucial to the success of the research. Babbie (2003) distinguishes four types of non-probability selection: reliance on readily available persons, expert sampling, the snowball method and quota sampling. To achieve the maximal richness of potential data we used expert selection. An important consideration was to ensure the heterogeneity of the sample so that all segments of the ecosystem were included in the survey: public and private financiers, incubator houses, transfer offices, start-up program managers, opinion leaders, mentors, academics, researchers. Only renowned start-up professionals were asked to participate in the research. The fourteen interviews were conducted by the members of the research team between November 2018 and
February 2019. Interviews were recorded in audio form. The audio materials were typed, the total length of the interview transcripts is 232 pages, their average length is 15 pages. The researcher team ensured full anonymity to interviewed experts. Direct quotes from expert interviewees are in quotation marks in italics. Based on the interview transcripts, we used the variable-oriented analysis in interpreting the expert interviews in order to explore correlations (Babbie, 2003). The expert interviews covered several other issues besides the survival, and growth of start-ups. In the first phase of the analysis, we extracted from the available texts the ideas related to the survival and growth of start-up companies.

The qualitative content analysis of the available text was carried out with combined logic, integrating deductive and inductive approaches. Based on the international literature of the topic, a code list was prepared deductively, using a priori coding. In the next step codes in the code list and related text segments were connected. To describe the specific, unique factors influencing the survival and growth of Hungarian start-ups, additional codes were determined inductively from the text, complementing the code list defined on the basis of the literature (Mayring, 2000; Sántha, 2013).

One of the functions of triangulation is to ensure the validity of qualitative research. According of Sántha’s (2017) triangulation typology synthesis we can differentiate triangulation of theories, methodologies, persons and data. In our research we applied triangulation of persons. „When examining a phenomenon, situation, object, person, group, different people are involved in data collection and analysis.” (Sántha, 2017, p. 36).

Researchers have different professional background and they have different experiences in business research and start-up operation. The data analysis was organized in two stages. The researchers independently identified the parts of the text which connected to the codes defined by deductive logic based on the international literature. During thematic workshops they cross-checked the results of their independent coding and determined the final position of differently coded elements. These thematic workshops also made possible to inductively identify codes which specifically describe the survival chances and growth potential of Hungarian start-ups. The weakness of the followed data analysing method is that the coding was conducted manually, followed by verbal consultation without systematic evaluation of the reliability. In spite of this shortcoming, the results can be considered reliable as a comprehensive code list has been developed by processing relevant international literature. The research is addressing a topic that is widely examined internationally and touchingly in Hungary. The most valuable research results are not the identification of survival and growth factors, but the comparison of international research findings and the experiences of Hungarian experts. The weakness of the used methodology may be partly offset by the prior individual and collective knowledge and experience of the researchers. Table 1 summarizes the factors influencing the survival and growth of start-up companies according to international literature and the codes inductively identified during thematic workshops. Factors that have been identified also in international literature and during expert interviews are shown in bold in the table. In the Survival / Growth columns (e) indicates if the factor was mentioned in the expert interviews.
Table 1. Factors influencing start-up survival and growth in international literature and codes identified through open coding

| Factors influencing survival, growth / Codes used in the analysis | Reference | Survival | Growth |
|---------------------------------------------------------------|-----------|----------|--------|
| **Codes based on literature**                                 |           |          |        |
| Higher-level business experience, specific business relationships | Löfsten, (2016a), Ejermo & Xiao (2014), Coeurderoy et al. (2011), Del Sarto et al. (2020) | +        |        |
| Importance of business planning                              | Löfsten, (2016b) | +        |        |
| Localization                                                  | Löfsten, (2016b) | +        |        |
| Patent development during the initial period                  | Löfsten, (2016b), Hornuf et al. (2018) | +        |        |
| Innovation orientation                                        | Hyytinen et al. (2014), Pearce & Pearce (2020) | -        | +      |
| Founders’ industry experience                                 | Criaco et al. (2014), Colombo & Grilli (2005b) | -        | +      |
| **Entrepreneurship education**                                |           | +        | + (e)  |
| University experience and attachment, absorption capacity     | Criaco et al. (2014), Coeurderoy et al. (2011) | +        |        |
| **Internationalization**                                     |           | +        | +      |
| Acquisition                                                   | Xiao (2015), expert interviews | +        | (e)    |
| Heterogeneity of knowledge and skills of the founding team    | Visintin & Pittino (2014), Ganotakis (2010), expert interviews | +        |        |
| Ability of internal financing                                 | Brinckmann et al. (2009) | +        |        |
| Attracting external sources of finance (equity and debt)      | Brinckmann et al. (2009); Ahmed & Cozzarin (2009), Colombo & Grilli (2005a), Davila et al. (2002); Cavallo et al. (2019) | +        |        |
| **Open codes**                                                |           |          |        |
| Professional and management knowledge                         |           | +        |        |
| Conflicts                                                     |           | -        |        |
| Financial problems                                            |           | -        |        |
| Early encounter with the market, emergence of market-based thinking |           | +        |        |
| Proper timing                                                 |           | +        |        |
| Lack of effective incubation and mentor support               |           | -        |        |
| Socio-cultural past                                           |           | -        |        |
| Conflict of short-, medium- and long-term financial goals and opportunities |           | -        |        |
| Annuity hunter attitude                                       |           | -        |        |
| Low motivation level of founders                              |           | -        |        |
| Lack of entrepreneurial, financial and management skills       |           | -        |        |
| Luck                                                          |           | +        |        |
| Distrust                                                      |           | -        |        |

Source: Own compilation

From among the factors influencing the survival and growth of start-up companies indicated in international literature we were able to identify four through the analysis of expert interviews: entrepreneurial education, internationalization, acquisition, and the heterogeneity of the start-up team's knowledge and skills.
4. Results of the Research

4.1. Survival

Survival is the first step in starting a successful start-up business. In the creative terms of one of the experts, start-up companies need not only to have strong growth potential, but to be able to survive under all circumstances, and to adapt to changed circumstances very quickly and efficiently:
"Investors are no longer looking for unicorns, but cockroaches."

The factors influencing the survival of start-ups identified in the interviews can be divided into three large groups. First are internal factors such as professional and managerial knowledge, team weakness, conflicts, funding problems, and timing can be identified. Then as external factors, experts noted the importance of timing and the lack of effective incubation and mentoring support. While the third major group, under the heading of sociocultural factors, includes values rooted in the past, the conflict of short-, medium- and long-term financial goals and opportunities, and the annuity hunter attitude.

Among the factors influencing the survival of start-ups the most numerous are the internal factors. Many experts emphasized the importance of having professional and managerial knowledge. This partly includes knowledge of the product or service, the level of which is generally considered appropriate by the experts among start-ups. However, they see serious flaws in business and management knowledge:
"Business knowledge, business attitude, project management, financial literacy, market knowledge, market research methodology, marketing, even product development methodology are completely missing in people ..."

Much depends on a good team for survival, the existence of which can drive a business through many difficulties. Experts (in line with international literature) emphasize the importance of the heterogeneity of the founding team: the more extensive the knowledge and experience of the start-up team, the more it assures its survival.
"The most important factor for survival is the team. Having expertise, sales, marketing, coordinator or managerial competencies available or at least financially secured within the team, can provide a very significant sense of security in the early stages because it can be built on."

Conflict within the founding team has a negative impact on start-up survival and can lead to the early death of the company. Experts have found that it is common for owners to have disagreements already at the outset, without becoming a real team, and thus not being able to keep their company alive until they reach market success.
"The two owners are already quarrelling at the beginning, and cannot survive the period when market successes aren't coming yet ..."

Another feature of the conflicts is the tension arising between the founders and investors, the aggravation of which leaves its mark on their working together, thus endangering the survival of the fragile start-ups.
"It is probably the worst-case scenario if there is tension between the founders and the investors. It is very difficult to treat as if nothing had happened and keep everyone just going on."

Although at the time of the expert interviews, Hungarian ecosystem was not at all considered to be lacking in resources, potential funding problems, such as poor financing schedules or investor expectations that disrupt the business, negatively impact start-ups' chances of survival.
"The funding environment in Hungary today can definitely help the team get started and keep it alive ... Which is very good, on the one hand, because it seems that the teams will not fail because of an initial lack of funding."

Despite the abundance of resources, the start-up may not schedule capital raising adequately. They do not begin to prepare for the next round in time, leading to unfunded periods that many businesses cannot survive.
"If a start-up can't raise capital at the right time, or when they run out of resources, they'll probably die."

Many teams find it difficult to cope with the performance burden brought on by the involvement of external investors: "From there on, there is pressure on them to generate measurable performance. Not all teams can handle this." This could even lead to the end of the start-up.
Beyond the expected performance and its psychological burden, the conditions dictated by the venture capitalist can also have a destructive effect: “What kills the start-up is that they get stuck in a set of conditions (dictated by venture capitalists) that prevents them from fully developing in their original direction.”

Of course, the situation for venture capitalists is not easy either, as they have to account for the money invested in start-ups and the realized or missing profits. Rigid application of the rules and policies that bind them, or their inexperience, could easily mean the end of otherwise promising start-ups.

“There was a venture capitalist who killed a lot of good ideas because he believed that if the first business plan wasn't fulfilled, decision-makers had to go to jail because they bet on the wrong horse.”

The termination of a start-up is often preceded by a lengthy vegetation period, which can be avoided or shortened by meeting the market as soon as possible and the founders developing market-based thinking as soon as possible.

Experts mentioned the phenomenon that some start-ups have appeared at various start-up competitions for years, but failing to produce any results. They often do not even meet the market where they could validate their ideas. This would be important because although the product and service of many start-ups "make life just a little bit easier, better, more practical, but only serve an already served need better."

And this in no way guarantees that customers would be willing to replace their used product or service with a new one.

Meeting the market as early as possible allows the business to succeed in a new area by modifying its product, service, or profile and exploiting the competencies and resources available to the team, or sooner or later we will encounter the start-up unable to develop in the cessation statistics. Letting go or modifying the original idea does not mean the failure of the start-up, since working on it, testing it was a very serious learning process for the team, the conclusions of which could be used to implement a new idea. One expert highlighted the 'grow fast - fail fast' approach:

"Either 'Grow fast or fail fast', rather than wanting to keep it alive at all costs. If it doesn't happen, there is no market feedback, leave it and try something else!"

While the experts interviewed mentioned several factors inherent in start-up businesses that threaten their survival, two external factors were brought up: the importance of timing and the role of incubators and mentors providing effective support.

**Timing** is very important so that the market is ready for the product and service provided by the start-up.

"Timing is of incredible importance, having a particular idea at that point in time, that year, that decade, that particular point on the consumer fashion curve, is of great significance, is a rather random thing."

One way of remedying the lack of professional skills that threaten the survival of start-ups within the company is through mentoring and coaching.

**Mentor support** would be very important in the life of start-ups, as an experienced mentor can provide guidance to the founding team at several critical points. However, the culture of mentoring in the Hungarian ecosystem is poorly developed (Zsigmond, 2019).

“The startupper in my head is rather young, but there is a mentor around him or her. In the big American, Western European, Israeli start-up stories, there is always a phrase that appears sooner or later, saying 'I had this mentor, or right at the beginning, when we went to the stock market, I asked three of my role models on my board of directors who are still helping me’, so he/she’s a young person, but with the support of the wise ones.”

According to another expert, mentoring would be important not only at the very beginning but also later, at the market expansion phase. This shortcoming, in the expert’s opinion, leads to the failure of many teams because they don't get help when they actually need it the most.

In some respects, the Hungarian **socio-cultural environment** also affects the survival of start-ups. The high level of mistrust and individualism characterizing Hungary results in a mistrustful and fragmented society. Sharing new ideas and thoughts with the public is not typical (Hofstede-Hofstede, 2008; Murakőzy (Eds.), 2012).

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"We do not start spreading our stuff in a network-like, flu virus-like mode, but we immediately conceal, cover, hide, wrap, encrypt it."

Lack of trust means giving up the possibility of early validation. A hidden idea does not receive advice that can be key to it becoming successful, and this can even lead to its slow death.

The lack of a “failure culture” in Hungary also affects the survival and success of start-ups. Fear of failure and mark of failure are barriers to both development and a fresh start:

“Perhaps one of the weakest points in Hungary is the fear of failure or starting anew. If you once had an idea but failed, you are done ... In America, if you have to say something, you say, 'Okay, now, this failed, let’s see what’s next?'

Hungarian start-ups differ not only in their attitude but also in their financial opportunities, compared to their western counterparts:

"There must be a lot of people, let's say in Hungary, who have only one chance."

In an uncertain livelihood environment, the likelihood of trying out a start-up entrepreneurial lifestyle is lower on the one hand, and on the other, the failure tolerance of start-up entrepreneurs is also lower. Delayed financial results can lead to giving up your company building dreams sooner.

Founders sometimes sacrifice their start-up on the altar of better financial results attainable on a short- to medium term through other activities:

"On a medium-term scale, it was much better for them to stay in their profession or start their individual businesses separately."

The family background and the lack of previous savings of Hungarian startuppers do not allow for bridging long periods without revenues. The majority of Hungarian start-up founders cannot afford to work persistently in the hope of future gains. Investors must ensure not only the development of the business but also the financing of the founders' everyday lives.

In Hungary, start-up financing can be considered favourable. This is positive on the one hand because the initial lack of funding does not lead to the failure of promising teams, however, on the other hand, a negative practice, a sort of annuity hunt can develop, which distorts the ecosystem. This is how we can find start-ups in the ecosystem that have been going to competitions, and have also been successful in attracting various capital investments and grants for many years. Although their ideas may be excellent, they have not even met the market, perhaps because of their engagement in a start-up competitions. The presence of these types of start-up companies in the ecosystem is considered damaging by many experts, as an artificially surviving business will never produce results and the start-up team will not develop either. They do not learn, do not begin to implement a modified or even a completely new idea. The focus of their opportunistic behaviour is to maximize the annuities and benefits of the support system they have become familiar with, the closure of which will result in the termination of these types of start-ups.

4.2. Growth

Growth and growth potential as criterion requirements are of paramount importance already in the definition of start-ups. However, what we mean by growth is far from clear. An increase in sales, profit growth, an increase in the number of users, an increase in the number of employees or a positive change in the estimated goodwill can all be considered as growth.

What’s more, the expectation is not just growth, but dynamic growth in the case of a start-up. However, as one of our interviewees has pointed out, dynamic growth is most typical for companies with a low base value, i.e. companies in the initial phase starting from a low level. Companies that are already mature and have high revenues struggle to grow dynamically.
When defining growth from a financial perspective, start-up companies need to delineate the ability to generate revenue and profit, and liquidity balance, which factors are often not clearly separated.

“They can't say that they’re profitable, just that they’re cash-flow positive. So, cash flow positive means that they have enough money so as not to use the investors’ money up and be in trouble, but it does not mean that they are profitable.”

“The goal of an entrepreneur is not to benefit the venture capitalist one hundred percent. The entrepreneur wants to make his or her dream come true. They are both interested in the growth of the company, but their motivation behind it is different. Growth does not necessarily mean the same thing for them. There is a rather strong source of conflict here in certain cases.”

Motivation is key to achieving continued growth, as it urges the team to get their company to the highest possible level. However, according to several experts, in our domestic environment this type of motivation does not last till maximum growth can be achieved. One of our interviewees believes that growth only reaches the level with which the owners are happy.

“They are satisfied with the level of income, the profits they have made. They have no ambition to grow, expand, spread.”

The growth path appearing in international literature, i.e. the acquisition of start-ups, has also been mentioned by our experts (Xiao, 2015).

“Successful Hungarian start-ups have all been successful because they have been bought up at a relatively developed stage of theirs… but the real big leap has already been taken by the foreign owner. These are all businesses that were made operational by the Hungarian team and then sold off for a lot of money.”

A globally accepted change is that “big companies have made a move on start-up businesses.” They no longer buy up small businesses in their initial phase, but they „grow them for themselves”, and only larger, successful companies can expect to be bought up. Acquisition as a typical end for start-ups, however, is becoming more common, which is a likely path for Hungarian start-ups as well.

“It's not likely for you to become the next Facebook, but you can get 100 million EUR for your business, which is not bad.”

Just like professional knowledge and management skills play a key role in the survival of start-ups, the experts pointed out that lack of knowledge, and unpreparedness in the areas of entrepreneurship, finance and management are also often barriers to the growth of start-ups.

Growth requires start-uppers who are able to lead an idea and later a business through turbulent times, who are flexible enough to move along with the changing market and the ever-changing entrepreneurial organization.

„Talent management is lacking greatly. This is a very important thing. How do we find that 35-45-year-old woman or man who will make this firm successful?”

„Entrepreneurship attitude is fundamentally different in Hungary and Europe – parents dream of their kids becoming the prime minister and not Steve Jobs.”

Some Hungarian start-ups look at capital raising as the aim and not the tool that helps in future success.

“A lot of start-ups celebrate securing an investment, though there's nothing to celebrate in selling part of your business to an ex-banker.”

Some domestic start-ups do not understand how venture capital works - experts emphasize. There is no point in having money if companies do not understand what it is for. Some of them feel that there is no financing because they do not understand that the investor would finance scaling and not development projects. Beginners and young people, in particular, are not prepared for capital raising, and many are shaken by the fact that they need to give the investor a share.

"It needs business intelligence and knowledge to understand that you do not look at the shares, but the total of the cake you have a share in."

According to experts, the main obstacles to the next big start-up success in Hungary are the lack of marketable products and the lack of management and sales capabilities.
“The barrier to growth is not money, but a lack of management and business thinking. There is no real marketable product, and most are not based on real needs. They think about what they want to change in the world, not what the world wants.”

“In many cases it is also obvious that the founder is a very good professional with a very credible ability to represent the product, even in sales, but lacks management abilities, and that can be a serious handicap. Besides, if the person with the greatest stake or decision-making power does not realize this, it can block start-up development for quite some time, or it completely blocks the possibility of moving forward.”

There might be historical reasons behind the above. Many present-day startppers graduated in the late eighties and early nineties without receiving any training of this type. Although management can be learned, most of them do not see a real need for it.

Most of the interviewed experts pointed out that those Hungarian start-ups can grow really well that enter the international market very soon. In addition to supporting new ideas and the birth of more start-up companies, one of the biggest tasks of the domestic ecosystem is to support their entry into the international market:

“The big challenge is what will happen after the product is completed at home, and it entered the local market, how to ensure growth, how to enter the international market.”

Several experts emphasized that dynamic growth cannot be achieved in the Hungarian market alone. Achieving truly outstanding results is unthinkable without an international market presence.

“The Hungarian market is limited with its ten million people for any product or service. The number of users can only be significantly smaller than this, making dynamic growth very difficult. Dynamic growth can be achieved in Hungary for a certain period of time, but this period is very short, and from then on it cannot be sustained or developed.”

“Only an infinitely tight segment can grow in a market of ten million people to meet the proceeds expectations of a normal or average venture capitalist. We need not plan for bigger but for international growth because it obviously goes hand in hand with a bigger one.”

In some incubators, it is a basic requirement that the European Union should be the minimum target market for supported start-ups, as in a project with a smaller focus there will be problems with later investor involvement. Although experts agree on the importance of an international presence, it is difficult to successfully enter the global arena from the domestic market (which is too small in some respects and too large in others).

“I think part of the problem is that everyone understands that these ten million people are very few. But on the other hand, it is still quite a lot. The great advantage of Estonia is that they are one-tenth as many as we are. This means there is no local market, so everyone goes to the international market right away and immediately faces the problem that they don't speak the language, they don't shop the same way in the stores, they don't talk about the weather the same way ... So, all the minor cultural, customary issues and other problems are handled differently and they have to adapt immediately.”

Experts have identified many difficulties in entering the international market. The unknown market, the lack of language skills and the lack of contacts are challenging. Proficiency and self-confidence in sales are essential for international success. Most Hungarian start-ups are in a way bound, lacking the courage and will to move their company into a sparkling ecosystem that can more effectively support their goals. In the domestic ecosystem, we can also see the 'sandpit effect'. Teams think they first try out their idea in the domestic market and, if successful, they'll move on to the international level. In the end, however, many are unable to leave the comfort of the domestic market.

Not all start-ups that are successful in their entry into the international market or who are looking for international opportunities right from the start will succeed either. Beyond the huge amount of work and perseverance, you need some luck as well.

“There's a little bit of ..., though I don't really like it, there's a little bit of a fluke factor in this. Who do you find and who is willing to deal with you? Obviously, you need to be a bit pushy, one who can't be shamelessly bold in good faith, will not play ball here.”
Those who are not brave, persistent, fortunate enough will go down the road to becoming SMEs, and although they may still define themselves as start-ups, they will, in fact, cease to be that.

“Some remain in the Hungarian market. They say that entering the international market would be too expensive, or use up too many resources, too much time, or would really use up factors that the founder or team members consider to be too much. However, they realize that in Hungary they have or are going to achieve a sufficiently high level of income, which helps and supports their life or other aims, and the firm effectively transforms into a properly prosperous SME. There is no problem with this, from this point on they are not so much a start-up anymore, but they remain a useful contributor to the Hungarian economy.”

Start-up companies are also hampered by the lack of confidence characteristic of Hungarian society. Many Hungarian start-ups put their product on the shelf because they are not willing to test it on live users due to mistrust.

"It's an idiotic mindset, but that's what we have at home. 'I am not going to show it to anyone because they'll steal it.'"

In many cases, entrepreneurs are also unhealthily distrustful of the investor. Sometimes because they come from the old business world and they do not understand or believe in the functioning of this ecosystem. The consulted experts cited an example where a contract was not sealed even with the third investor because the founders were frightened of having a competitor in their portfolio.

“The start-uppers feel, they want to invest to ruin them. Of course, this can happen, but there are much easier ways to ruin someone than having to put 200 million HUF in their company first.”

The surveyed experts agreed that unfortunately, the growth rate of Hungarian start-ups is far below expectations. Several reasons have been identified for this. The most important ones are the lack of knowledge and the weakness in entering the international market, which in some respects can be attributed to the lack of the necessary knowledge, skills and competencies.

5. Conclusions and recommendations

As part of our research, we have collected the factors found in the international literature which have been proven by empirical research results to influence the survival and growth of start-up companies. In order to understand the Hungarian situation, we conducted fourteen expert interviews on the topic, and through their analysis, we have identified the factors that influence the survival and growth of domestic start-up companies. Aggregated results are depicted on a concept map, which aids the exploration and interpretation of data relationships by graphical representation (Babbie, 2003).
We found little overlap between the international results and the factors identified by the Hungarian experts. The reasons for this can be rooted in both methodological differences and different historical backgrounds. The international results are mainly based on longitudinal quantitative research aimed at start-up companies in Western Europe and the United States, while in Hungary since the start-up ecosystem has not been around for long, the implementation of such research poses major challenges. The application of the qualitative methodology in our research involved a different viewpoint in the analysis, with several factors related to the peculiar Hungarian historical development, which may fundamentally determine the fate of Hungarian start-up companies. In addition to the differences, some factors have appeared in both international research and the expert interviews. Both in the international literature and the interviews with domestic expert’s entrepreneurial knowledge gained through education and entry into the international market were mentioned as factors affecting survival and growth. These factors are not only interesting because they can be found in the international literature as well as in the opinion of Hungarian experts, but because both factors are identified in international literature as enhancing the survival of start-ups, while domestic experts believe they have a role in their growth.

The heterogeneity of the knowledge and skills of the founding team is also a factor mentioned both at the international and national levels. However, while international research highlights its significance in the growth process, domestic experts believe that diversity plays a more important role in survival.
The international results concerning the founders' industry experience are interesting because, although opportunity cost due to alternative employment harms survival, they can boost the company a lot during the growth phase.

The only identified factor that was depicted as having the same influence in both the international literature and the Hungarian expert interviews is the growth-generating effect of acquisitions.

Looking at the concept map, it is evident that while the factors collected from international literature are more positive, they highlight the factors contributing to the survival and growth of start-ups (we could not identify growth inhibitors in the processed international literature), domestic experts expressed criticism and shed light on the reasons for the high failure rate of start-ups and their low propensity to grow. The reason behind this may be the general dissatisfaction with the performance of Hungarian start-up companies, but the negative attitude may also be due to the influence exerted by the personal opinion and belief of the interviewers.

Despite our efforts to perform our research with the highest degree of accuracy and precision, our results are limited by several factors. There are significant differences in the methodology used in the processed international literature and our research. The strength of the qualitative approach used in our research is its validity, however, in terms of reliability, primarily due to the distorting effect of our own assumptions, it may be below that of quantitative studies.

The expert interviews revealed a number of factors specifically affecting the survival and growth of the domestic start-up ecosystem, the international extension of which could be justified only to the countries of the Central and Eastern European region. We consider the comparative study of the survival and growth factors of start-ups in countries with similar historical backgrounds to that of Hungary as a prospective future research direction. We are confident that, despite the limitations presented, our results will prove beneficial to both start-up ecosystem players and policymakers.

References

Ahmed, S. & Cozzarin, B. P. (2009). Start-up funding sources and biotechnology firm growth. *Applied Economics Letters, 16*(13), 1341-1345, [https://doi.org/10.1080/13504850701367338](https://doi.org/10.1080/13504850701367338)

Amason, A.C., Shrader, R.C. & Tompson, G.H. (2006). Newness and novelty: relating top management team composition to new venture performance. *Journal of Business Venturing, 21*(1), 125–148, [https://doi.org/10.1016/j.jbusvent.2005.04.008](https://doi.org/10.1016/j.jbusvent.2005.04.008)

Babbie, E. (2003). *A társadalomtudományi kutatás gyakorlata.* Budapest, Magyarország: Balassi Kiadó

Benešová, D., Kubičková, V., Michálková, A., & Krošláková, M. (2018). Innovation activities of gazelles in business services as a factor of sustainable growth in the Slovak Republic. *Entrepreneurship and Sustainability Issues, 5*(3), 452–466. [https://doi.org/10.9770/jesi.2018.5.3(3)](https://doi.org/10.9770/jesi.2018.5.3(3))

Bogner, A., Littig, B. & Menz, W. (Eds.) (2009). *Interviewing Experts, Research Methods Series.* London, England: Palgrave Macmillan, ISBN: 978–0–230–22019–5

Brinckmann J., Salomo, S., Gemuenden, H.G. (2009). Financial Management Competence of Founding Teams and Growth of New Technology-Based Firms. *Entrepreneurship Theory and Practice, 35*(2), 217-243, [https://doi.org/10.1111/j.1540-6520.2009.00362.x](https://doi.org/10.1111/j.1540-6520.2009.00362.x)

Cacciolatti, L., Rosli, A., Ruiz-Alba, J. L., & Chang, J. (2020). Strategic alliances and firm performance in startups with a social mission. *Journal of Business Research, 106*, 106–117. [https://doi.org/10.1016/j.jbusres.2019.08.047](https://doi.org/10.1016/j.jbusres.2019.08.047)
Cavallo, A., Ghezzi, A., Dell’Era, C., & Pellizzoni, E. (2019). Fostering digital entrepreneurship from startup to scaleup: The role of venture capital funds and angel groups. Technological Forecasting and Social Change, 145, 24–35. https://doi.org/10.1016/j.techfore.2019.04.022

Chatterji, A., Delecourt, S., Hasan, S., & Koning, R. (2018). When Does Advice Impact Startup Performance? Strategic Management Journal 40(3), 331-356, https://doi.org/10.1002/smj.324789

Coeudroy, R., Cowling, M., Licht, G. & Murray, G (2011). Young firm internationalization and survival: Empirical tests on a panel of ‘adolescent’ new technology-based firms in Germany and the UK. International Small Business Journal, 30(5), 472–492. https://doi.org/10.1177/0266242610388542

Colombo, M. G. & Grilli, L. (2005a). Start-up size: The role of external financing. Economics Letters, 8(2), 243-250, https://doi.org/10.1016/j.econlet.2005.02.018

Colombo, M. G. & Grilli, L. (2005b). Founders’ human capital and the growth of new technology-based firms: A competence based view. Research Policy, 34, 795–816, https://doi.org/10.1016/j.respol.2005.03.010

Criaco, G., Minola, T., Migliorini, P. & Serrals-Tarrés, C. (2014). “To have and have not”: founders’ human capital and university start-up survival. The Journal of Technology Transfer, 39(4), 567–593, https://doi.org/10.1007/s10961-013-9312-0

Csákné Filep, J., Radácsi, L. & Szennay, Á. (2019, 27 March 2019). The impact of state intervention on the Hungarian venture capital market: A study of the effect of socialistic country. Entrepreneurship and Sustainability Issues, 30(2), 332, https://doi.org/10.1108/MD-04-2015-0139

Criaco, G., Minola, T., Migliorini, P. & Serarols-Tabernero, A. (2014). To have and have not: founders’ human capital and university start-up survival. The Journal of Technology Transfer, 39(4), 567–593. https://doi.org/10.1007/s10961-013-9312-0

Europost-ECD (2007, 6 February 2019). Eurostat-OECD Manual on Business Demography Statistics. OECD Publishing. ISBN 978-92-64-04187-9. Retrieved from http://www.oecd.org/sdd/39974460.pdf

Ganotakis, P. (2010). Founders’ human capital and the performance of UK venture capital funds and angel groups. Small Business Economics, 39(2), 495-515, https://doi.org/10.1007/s11187-010-9309-0

Hoffstedt, G. & Hoffstede, G. J. (2008): Kultúrák és szervezetek - Az elme szoftvere. Pécs, Magyarország: VHE Kft.

Hornuf, L., Schmitt, M., & Stenzhorn, E. (2018). Equity crowdfunding in Germany and the United Kingdom: Follow-up funding and firm failure. Corporate Governance: An International Review, 26(5), 331–354, https://doi.org/10.1111/corg.12260

Hrivnak, M., Melichova, K., Fazikova, M. & Rohacikova, O. (2019). University graduates, knowledge spill-overs and localization of knowledge intensive ventures - case of post-socialist country. Entrepreneurship and Sustainability Issues, 7(1), 146-165. https://doi.org/10.9770/jesi.2019.7.1(12)

Hyytinen, A., Pajarinen, M. & Rouvinen, P. (2014). Does innovativeness reduce startup survival rates? Journal of Business Venturing, 30(4), 564-581, https://doi.org/10.1016/j.jbusvent.2014.10.001

Kállay, L. & Jáki, E. (2019). The impact of state intervention on the Hungarian venture capital market. Economic Research-Ekonomska istraživanja, 1130-1145. https://doi.org/10.1080/1331677X.2019.1629979

Löfsten, H. (2016a). Organisational capabilities and the long-term survival of new technology-based firms, European Business Review, 28(3), 312-332, https://doi.org/10.1108/EBR-04-2015-0041

Löfsten, H. (2016b). Business and innovation resources: Determinants for the survival of new technology-based firms, Management Decision, 54(1), 88-106. https://doi.org/10.1108/MD-04-2015-0139

Mayring, P. (2000). Qualitative Content Analysis. Forum: Qualitative Content Analysis, 1(2), 1-10
Muraközy, L. (Eds.) (2012): *A bizalmatlanság hálójában – A Magyar beteg (In the web of distrust - The Hungarian patient)*. Budapest, Magyarország: Corvina Kiadó

OECD (2018, 8. February 2019). *Entrepreneurship at a Glance 2017*. Retrieved from https://www.oecd-ilibrary.org/docserver/entrepreneur_aag-2017-en.pdf?expires=1549610673&id=id&accname=guest&checksum=A6E9D71A931B7F29396C6546F72E151F

Pearce, D. D., & Pearce, J. A. (2020). Distinguishing attributes of high-growth ventures. *Business Horizons, 63*(1), 23–36. https://doi:10.1016/j.bushor.2019.10.003

Pfadenhauer, M. (2009). At Eye Level: The Talk Between Expert and Quasy Expert. In Bogner, A., Littig, B. & Menz, W. (Ed.) (2009): Interviewing Experts, Research Methods Series, London, England: Palgrave Macmillan, ISBN: 978–0–230–22019–5

Porter, M. E. (2006). *Versenystratégia (Competition strategy)*. Budapest, Magyarország: Akadémiai Kiadó.

Sántha, K. (2013). *Multikódolt adatok kvalitatív elemzése (Qualitative analysis of multicoded data)*. Budapest, Magyarország: Eötvös József Könyvkiadó, ISBN 978 963 9955 40 0

Sántha, K. (2017). A trianguláció-tipológiák és a Maxqda kapcsolata a kvalitatív vizsgálatban (The relationship between triangulation typologies and Maxqda in qualitative study). *Vezetéstudomány, 48*(12), 33–40. https://doi.org/10.14267/VEZTUD.2017.12.04

Samuelsson, M. & Davidsson, P. (2009). Does venture opportunity variation matter? Investigating systematic process differences between innovative and imitative new ventures. *Small Business Economics, 33*(32), 229–255, https://doi.org/10.1007/s11187-007-9093-7

Schumpeter, J. A. (1934, 1980). *A gazdasági fejlődés elmélete (Theory of economic development)*. Budapest, Magyarország: Közgazdasági és Jogi Könyvkiadó

Szerb, L., Vörös, Zs., Páger, B., J. Acs, Z. J. & Komlósi, É. (2018, 3 April 2018). *Case Study on the Hungarian new tech entrepreneurial ecosystem*. FIRES research report, D5.8 (2018), Retrieved from http://www.projectfires.eu/wp-content/uploads/2018/01/D5-8-Case-Study-Complete.pdf

Teece, D. J., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal (18)*, 509–533, https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Vecsenyi, J & Petheő, A. (2017). *Vállalkoz okosan!* Budapest, Magyarország: HVG Kiadó, ISBN: 9789633045022

Visintin, F. & Pittino, D. (2014). Founding team composition and early performance of university Based spin-off companies. *Technovation, 34*(1), 31–43, https://doi.org/10.1016/j.technovation.2013.09.004

Xiao, J. (2015). The Effects of Acquisition on the Growth of New Technology-Based Firms: Do Different Types of Acquirers Matter? *Small Business Economics, 45*(3), 487–504. https://doi.org/https://link.springer.com/journal/volumesAndIssues/11187

Zahra, S.A. & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review, 27*(2), 185–203, https://doi.org/10.2307/4134351

Zsigmond, Sz. (2019, 22 May 2019). A vállalkozásfejlesztési mentorálási folyamat Rubik-kockája, avagy: a sikeres folyamat sajátosságai és összetevői (The Rubik's Cube of the business development mentoring process, or: the peculiarities and components of a successful process). Disszertáció, Miskolci Egyetem, Retrieved from http://midra.uni-miskolc.hu/document/31220

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