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Measuring Business Performance in Young Firms

Katharina Buttenberg
(University of Latvia, Latvia)

Abstract: Start-up firms are facing specific challenges in their birth phase. These firms are still majorly dependent on their environment. Market information is still little, products or services are not fully developed and these young firms often only have little resources available for further development. Based on this uncertainty, it is not easy for young firms to develop measures to assess the performance of their business. Adopting a case study methodology through in-depth interviews with founders and CEOs, 14 young firms in Germany and the USA were analyzed. The findings in this paper are qualitative and need to be quantified in a next step. The study investigates the challenges in measuring business performance in young firms and focuses on financial as well as product-market-performance indicators that are specific to start-up firms in order to support their strategic decision-making. The proposed framework proposes measures to assess business performance relevant for founders and CEOs of young firms as well as potential business-investors.

Key words: young firm; start-up; management; entrepreneurship; founder; business performance
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1. Introduction

In the last ten years after the crisis in 2008, the interest in entrepreneurship has grown. Besides the growth in the founding of young firms (e.g., OECD Publishing, 2014, p. 16), the number of business acceleration programs and also academic research in the topic of entrepreneurship have increased during that period. However, a significant share of young firms dies during the first years after its birth. Supporting young firms in the early stages of their life and a better knowledge and development of capabilities could improve survival rates significantly. Therefore, research on the development and assessment of business performance in young firms is an important topic. In the definition of the Resource-Based Theory, firms are business organizations that sell goods or services to make a profit. They are aggregations of productive resources and capabilities, of which the use is determined over time by administrative decision of their managers. Firms are constantly challenged, to adapt their use of resources to stay ahead of their competition and ensure superior financial performance (Barney, 1986, p. 658). Especially firms which are still in their birth phase, they are facing strong challenges and the risk of failure is still high (Thornhill & Amit, 2003, p. 497). The market-based information for these firms will still be little (Amit & Schoemaker, 1993, p. 42). Environmental conditions are a great threat to the survival firms in this stage (Covin & Slevin, 1989, p. 75). The capabilities of these young firms might not be fully developed and they most likely do not have that many resources available as larger firms do (Hirvonen et al., 2013, p. 628). Moreover,

Katharina Buttenberg, Doctoral Student, Department of Global Economics, University of Latvia; research areas/interests: start-ups, brand, consumer-research, marketing. E-mail: buttenberg@gmail.com.

firms in their early stages are less structured and strategically planned (Gilmore et al., 1999, p. 29). Together with the constant change in requirements for the firm through their environment, perceptions of effectiveness also change with the development of the firm (Cameron & Whetten, 1981, p. 527). Both, random changes of elements in the environment as well as systematic mechanisms, that regularly calls for variation (Dosi & Nelson, 1994, p. 154). Even if firms have developed and established sustainable competitive advantages, their value can change over time and changes in the industry, in customer demand, resource supply etc. might make a sustained competitive advantage irrelevant over time (Barney, 2002, pp. 161-162). Firms therefore need to develop performance indicators, which capture these changes and might even provide an early indication of the need to develop resources and capabilities. Capabilities and resources have to provide value for the firm, to become sustained competitive advantage. In the Resource-Based Theory, firm value is often used synonymously with organizational performance and is translated into the multidimensional construct of organizational performance, which is assessed at the firm-level. Organizational performance again can be split into the concept of effectiveness and efficiency (Leiblein, 2011, p. 912). These two concepts have been elaborately discussed and various measuring tools have been provided in literature for these constructs.

The term of organizational effectiveness summarizes a broad set of indicators such as business performance, internal performance or external indicators related to economic valuation of the firm (Richard et al., 2009, p. 722). Managers need performance measurement systems to improve and better orchestrate capabilities and their impact on the business, which is also called business performance. These systems support the allocation of resources and capabilities and support strategic management decisions. A quite elaborate body of research has suggested that the application of performance measurement systems has a positive effect on the improvement of capabilities and consequentially the improvement of business performance. Without performance objectives and measurement systems indicating the progress towards this objective, the management of capabilities and directions for improvement are difficult to indicate (Koufteros et al., 2014, p. 314). Young firms are operating in a very unstable environment and especially in the early stages, where performance is not steady and classic indicators for organizational effectiveness such as business performance or economic valuation are not easily applied. Also, measures of internal and external indicators are not really structured, since very often the organization is still establishing the base of the product or service and is therefore subject to change. Looking at the indicator of organizational efficiency, an academic debate prevails whether organizational efficiency is always most beneficial for firms. Depending on the development stage of the firm, organizational efficiency might not be beneficial. Organizational efficiency for some capabilities first becomes apparent in a later stage of the organization, where the firm transforms the “big idea” into concrete planning for products or services, which are ready to launch at a bigger scale. Looking at the definition of capabilities and especially dynamic capabilities, their role of constantly improving the firms’ performance (Teece, 2007, p. 1319), the author has decided to follow this argumentation and therefore attribute capability efficiency to the capability itself and include the assessment of efficiency in the assessment of the regarding capability. In the following analysis, the focus will be set on the direct measures of effectiveness, especially business performance.

2. Business Performance in Young Firms

Especially young firms, where the products or services are still under development face the challenge of taking path breaking decisions on the acquisition, development and shedding of relevant resources and capabilities as sustained competitive advantages. As base for these decisions, they are looking for indicators for business performance. Also, (potential) business-investors are interested in measures of business performance as base for their investment-decisions in the firm. Business performance is defined in different ways, very often, a combination of financial performance and organizational performance is used. The author follows the approach of Venkatraman and Ramanujam, who include operational performance alongside financial performance in the definition and thereby enlarge the previously dominant models of management research (Venkatraman & Ramanujam, 1986, pp. 803-804). This inclusion of further indicators such as sales performance or market share allows for a more detailed view on the effect of capabilities on the organizational performance.

2.1 Financial Performance

Financial performance measures are assessing the performance of the firm based on the measurement of monetary outcomes of the firm, such as profit and growth rates of financial indicators. Especially Return on Investment (ROI) and Return on Assets (ROA) are widely common measures used and a significant body of research has proven that these accounting measures are reliable indicators for organizational effectiveness.

2.2 Product Market Performance

A widely used objective measure of organizational performance is product market performance, which is assessing the performance of the firms’ product or service in the market. These indicators also include measures referring to the market position and sales, giving an overview on the position of the firm in comparison to its competition. Market share, which stands for the share of sales earned by the firm in regards to the total sales of the market, and related measures such as market share growth are positively related to financial performance (Capon et al., 1990, p. 1148). Sales, standing for the revenue from goods sold by the firm and related indicators such as sales growth, revenue growth rate of sales to current customers can also be used as product-market indicator for organizational performance (Richard et al., 2009, p. 722).

A combination of both types of performance indicators, financial performance indicators as well as product-market indicators has been widely applied in empirical research as well as business practice (Morgan, Slotegraaf et al., 2009; Orr et al., 2011, p. 1080). When looking at the reporting of business performance in research, it is challenging to obtain actual business performance information from them (Rosenbusch et al., 2013, p. 336). Also, the value of the reported information is a constant subject to change and negative performance in business performance might not be attributable to the firm (Covin & Slevin, 1989, p. 75). This might also be a reason that based on the specific situation of young firms, there is only little research. Therefore, the author has decided to further investigate on this highly relevant topic for researchers as well as founders and managers of young firms and (potential) business-investors. As a first step to identify potential specifics for young firms in the assessment of business performance, a qualitative approach was chosen. The findings of this research set the foundation for later quantification in a second step.

3. Methodology

As previously described, there are several indicators for business performance. To assess the characteristics of business performance in young firms, the author decided to use semi-structured expert interviews to investigate the different approaches and measures used by founders and CEOs of young firms. The goal of this research is to gain insight from managers of these young firms on the business performance indicators they have developed to assess their business in these early stages of nascent development of the first years. The specific research questions asked are:

- *Which indicators are used by young firms to measure business performance and why are these indicators chosen?*
- *Do they differ from business performance measures of mature firms? If yes, how?*

After an extensive literature review, a qualitative research based on the findings in the form of key-informant interviews was deemed as appropriate research method to answer these questions and gain first insights and better understand the challenges and opportunities for young firms. The interview questions were structured to analyze how the performance was measured in young firms in this phase. The interviews had an interview schedule, but as common in semi-structured interviews, the questions were broad and provided flexibility to further probe some answers when significant replies were received (Bryman & Bell, 2011, p. 204). In these interviews, the principles of the key informant technique are adopted. This technique is very suitable to gather information from a wide range of people who have specific first-hand knowledge on the state of facts researched (Gläser & Laudel, 2006). Regarding the question of the age of the firm, life cycle literature was considered. There are no clear indications in literature on the duration of the single phases of the life cycle of a firm. Since every firm develops differently and at a different speed, depending on the challenges and opportunities it is facing, it is not possible to give a clear definition of the duration of the phases. However, Miller and Friesen give an estimation of the Birth Phase of the firm of up to ten years (Miller & Friesen, 1984, p. 1166). Even if this indication is only based on an arbitrary definition, the author has decided to follow it and therefore define young firms as firms of up to ten years of age. The research question is based on firm-level performance of firms in the birth phase. Therefore, only single firms were taken into consideration. The ideal informants should have a role in the community, in which he or she has access to the information sought and have transformed it into knowledge. He or she should also be willing to share this knowledge (Tremblay, 1957, p. 692). An overview of the firms analysed is given in Table 1 on the next page.

Table 1 Information of Firms/Founders Interviewed

Firm	Firm age	Description	Founders	Country
A	6 years	Subscription cancelling service	2	Germany
B	2 years	Individual car-wrapping	2	Germany
C	1 years	Video technology nurse service	5	USA
D	2 years	Online and offline art auctions	3	Germany
E	3 years	Sports performance tracker	2	USA
F	1 year	Baby shopping community	2	Germany
G	½ years	Restaurant coupon service	2	USA
H	1 year	Content software	3	USA
I	½ years	Language learning software	1	USA
J	1 year	Booking tool for fitness clubs	2	Germany
K	2 years	Online tracking optimization tool	2	Germany
L	1 year	Electricity management device	3	USA
M	4 years	Stand-up comedy theatre	3	USA
N	1 year	Consulting for usability design	1	Germany

Source: author

To ensure that the respondents are knowledgeable on the questions, the author ensured that all interview partners are founding members of the firms and hold CEO positions and/or are owners of the firm at the time of the interview. To avoid any bias in the firms selected due to the focus on a specific market, industry, product or country, a broad variation of firms was selected. The products and services produced by the firms vary from marketplaces and services to technical devices. Also the company size varies very much, but the majority of the companies have only a low number of employees at the time of the interviews. To avoid national differences, the companies are chosen form two countries, Germany and the USA, the two strongest economies for innovation following the small economies of Switzerland and Singapore (Weissenberger-Eibl et al., 2013, p. 21). This broad variety enables the author to recognize general opportunities and challenges to measure young firms' performance as well as derive learnings on which business performance indicators are widely used in firms at an age of up to ten years in various markets. In total, fourteen key-informant interviews were conducted.

4. Results

In general it is important to mention that especially in the early stages of the young firm, the founder(s) have a significant role in the development of the firm. Their values and perceptions are shaping the strategy of the firm and how performance and organizational development are perceived. Their decisions on the acquisition, development and shedding of resources and capabilities as well as the factors and indicators taken into consideration when measuring business performance are pathbreaking for the development of the firm. Therefore, it is important to mention that the strategic posture of the founders always has to be taken into consideration when assessing business performance measures in young firms. Every founder who has been interviewed holds a perception of their market, their customers and their needs. Not every founder however has a clear perception on how to measure their business performance and based on the stage of development of the firm and the background of the founders, there was a big variation in the indicators used and how they were assessed.

4.1 Indicators to Measure Business Performance

Depending of the development stage of the product or service and the readiness of their business strategy, the performance indicators were more or less developed. Firms that were still conceptualizing their products or services like firm C or firm E measured their performance in terms of the relationships they were establishing with opinion leaders. They did not focus on any financial performance or product-market performance indicators yet, as they had the challenge to generate funding for their business and therefore find business-investors who believed in them and trusted them with their money. Another performance indicator in this very early stage was market and customer knowledge. Founders who have been previously working in the industry had a clear advantage, not only knowing the various competitors and alternative products or services. Another indicator for (expected) business performance at this stage is customer feedback and the connection to (potential) customers. Even though customer feedback has been indicated as important factor for the founders, the generation of feedback is mainly qualitative and unstructured. Very often, sources for feedback are direct selling activities, contact with customers who bought or used the product or service or social media feedback from internet platforms such as Facebook. Only three firms (D, F and K) had systematic structures or regular cycles of generating user feedback for example through focus groups or customer surveys. To the contrary, two firms (G, J) even reported difficulty in generating quantitative direct feedback from customers for example through surveys. These sources are also suggested by literature for young firms. However, the use of sources like government agencies, trade associations, or similar associations as indicated by literature (Alvarez & Barney, 2010, p. 563), was not applied by the interview partners. Besides the maturity level of the product or service, its' usage and the indication of a business being successful in terms of performance varied also based on the complexity of the market environment and the novelty of the business model. If revenue streams were clear, financial performance indicators were much easier defined. Firms of which the founders had been previously working in the industry or had in-depth experience in the field the firm is operating in had a clear advantage in knowing their customers, market and different monetization models. Whenever possible, all firms tracked user behavior to generate knowledge to further develop their products and services. A popular measure, which was used by the majority of the founders interviewed, was the number of customers using the service and returning customers. Because the product and service is still very new, the adoption in the market is a crucial topic. To generate revenues, young firms need to first acquire customers who are interested in the product and test it. Since the product is still in the product or service prototyping phase or produced/provided in small quantities, the firms are still very flexible in adjusting their differentiation towards competitors, even re-defining the market they were operating in. Therefore, product or service testing is very valuable and firms decided to give away their product or service for free or at reduced rate. This ability to attract customers simply using or testing the product was also described as performance indicator — especially by firms where the product or service was digital and did not produce any additional costs. In these cases, the cost per user was a business performance indicator reported. Most firms reported to use revenue, profit and indicators for market adoption to measure business success. Regarding the specific measurement of the impact of specific resources and capabilities on the business, there were only two firms, who were tracking the performance of their marketing activities on a regular basis (net promoter score, firm D and marketing communication performance such as click rates, firm F). For the others, the effort for measuring the success was too high at this stage of the organization.

4.2 Difference of Business Performance Measures for Young Firms

Comparing business performance indicators of young firms to the ones of more mature firms, there are some findings that prompt some significant differences in these measures. As previously mentioned, especially firms in the early ideation phases were only able to provide highly qualitative and single case performance indicators. Very often, these were feedback of customers testing the product or In regards to financial performance indicators, young firms used similar measures to the mature firms, reporting revenues and returns. Since numbers are still small for most of the young firms, they often looked at growth rates more than actual numbers and are also focusing on returns. Due to the meagre numbers and the small size of the business, very often these numbers have to be carefully interpreted and assessed. Even firms with more evolved structures reported high variation in the development of these numbers and that prediction could not be made based on the review of the development of these indicators. This might be due to the fact that these young firms are still small and therefore very much dependent on the developments of the market. As described by Covin and Selvin, who have assessed business performance of small and medium enterprises, performance is influenced not only by strategic posture, business practices and competitive tactics, but also how they interplay with each other and how consistent the strategy is relating them (Covin & Slevin, 1989, pp. 83-84). Therefore, business performance needs to be assessed at the level of strategic business units. These units are an aggregate of product strategies and vary in managerial requirements covering a broad set of measures and hence can cover the various stages of developments of smaller firms (Sirmon et al., 2011, p. 1402). Especially with young firms, financial performance measures are complemented by other performance indicators to ensure that market effectiveness is fully captured. One of the popular measures for product market performance is the number of customers engaging with and buying the product or service. This measure for market effectiveness is widely used by firms of any age (Vorhies & Morgan, 2005, p. 92). However, for young firms, these measures are more relevant for their managers as in more mature firms. These additional measures for business performance include number of customers using the products without payment and the number of returning customers without payment. As previously mentioned, getting customers to test the product or service and use it is very important for young firms to generate first trial and confirm customers into paying customers. The number of buyers and sales are measures which attribute towards financial performance, but also product-market performance. On one hand, they prove that the products and services of the young firm are creating demand and at the same time, they are also creating returns.

5. Implications and Recommendations

The findings described above suggest that there is a high overlap in indicators used in young firms in comparison to indicators used in mature firms. Only firms who are still in the very beginning phases of product-development and still looking for investment are assessing their business performance completely different from firms in other stages. As soon as the young firm has developed their product or service, similar indicators are assessed as in other firms. Financial performance indicators as well as product-market indicators are similarly assessed. However, it is important to mention that young firms put a different emphasis on the single indicators, based on the perception of their managers. Moreover, they also face specific challenges due to the meagre numbers and unsteady returns in the early stages – similar to small firms in general, which are also facing hostile environments. Looking at the results of this research, the following recommendations can be derived:

5.1 Recommendations for Managers and Founders of Young Firms

Managers of young firms should aim to measure financial performance and product-market performance indicators from an early age on. Developing a good assessment of the current state of the firm and its' business performance can help the young firm to survive and could even be a sustained competitive advantages by itself. Since financial performance indicators might still be meagre, it is recommended to put an emphasis on product-market performance indicators such as the number of users of the product or service or other indicators for product- or service adoption. In addition, it is highly recommended to focus on a systematic assessment of customer feedback. Knowing that their values and perceptions are significantly shaping the business and its' development, they should focus on adopting a strategic posture which is attributed with high performance in their market (Covin & Slevin, 1989, p. 84). Also, consistency in behaviour and strategy as well as business performance indicators measured is another important factor for successful measurement of business performance.

5.2 Recommendations for Business-investors

The measurement of business performance is also a relevant factor for (potential) business-investors. It is recommended for these investors to first assess, which business performance indicators are seen as important to the firm. To fully assess the performance of the firm, founders should report financial performance indicators as well as market-performance indicators which are relevant for the business, its' level of maturity and the market situation. In a second step, the actual performance of the indicators themselves can be assessed. Depending on the form of reporting indicators, they might otherwise be misleading or disproportionate (e.g., measures of growth rates). In addition to looking at performance indicators, business-investors should pay close attention to the strategic posture of the founders. Their assessment of the market and their values are highly influencing not only business decisions but also how the performance is measured and how developments are seen. Trust in the management team and their decisions are important factors when deciding whether to invest in a young firm or not.

6. Conclusion

This paper makes a contribution to research by extending the existing literature on the assessment of business performance in young firms of up to ten years. However, it is only a start in investigating the questions posed and many aspects still need to be investigated further. Limitations of the study include the missing assessment of a longitudinal development of the success of the firms. The chosen method of qualitative analysis does not allow for generalization and therefore results need to be further quantified. It is recommended to further investigate in the topic of business performance indicators in the light of the life-cycle development of the firm. This study provides only a first step of analysis. The novelty of the research lies in having investigated business performance indicators specifically used in firms of an age of up to ten years. At the best of the knowledge, no other studies in Resource-Based Theory literature have investigated the assessment of business performance in firms based on their developmental stage in the life cycle, specifically the birth phase, nor the challenges encountered by the founders. The work adds to existing literature by questioning the assumption that the indicators for business performance are the same not considering the age of the firm. With this paper, the specific situation and challenges of young firms was highlighted and specified in terms of business performance. It can be concluded, that there is a great overlap between business performance indicators for young firms and mature firms. For financial performance, a broad set of measures is suggested to be assessed, including sales levels to the ability to fund business growth from profits. However, in the evaluation of the results, the meagre numbers, the rapid changes in the firm and environmental conditions should be carefully considered. In terms of product market performance for young firms, the number of customers engaging with and buying their product is a strong performance indicator. These measures include number of customers using the products without payment and the number of returning customers without payment. The author believes this topic to be important for founders, managers and business-investors to better assess and value young firms and base strategic decisions about the acquisition, development and shedding of resources and capabilities on an accurate and realistic judgement of the performance of the firm. It is suggested that in next research steps, these findings should be further investigated.

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