SCENTIA INTERNATIONAL ECONOMIC REVIEW
Volume 1 - Issue 1 - 2021

Why context matters for start-ups' critical success factors – the definition of context-based CSF

Fabian Broszat, Comenius University, Faculty of Management, Bratislava, Slovakia

Milan Fekete, Comenius University, Faculty of Management, Bratislava, Slovakia

Abstract

Current research in the field of critical success factors of start-ups refers to general factors with which important information about the start-up is lost. Start-ups are too individual for a generalistic assessment, so a novel approach is presented in this paper that allows the context of start-ups to be included in the assessment of critical success factors. This results in the context-based critical success factor, which is defined for the first time in this paper.

Keywords: context-based success, critical success factors, re-define context, start-ups

JEL Codes: D01, D02, M13

1. Introduction

Successful companies are characterised by various characteristics / factors that are different for each company (start-ups are examined in particular; see [1] for an example definition). Current research takes a generalistic view of start-ups and identifies success factors on the basis of general, aggregated data. In this context, generalist means that generally valid factors are used (see the section "Current research"). However, every start-up is individual and, like people as market actors, highly variable in its specific characteristics. It inevitably follows that each start-up must also be different in its success factors. The following article takes an in-depth look at this topic and uses current literature and theoretical derivations to show why start-ups need to be considered contextually with regard to their critical success factors.

2. Research questions

Based on the problems mentioned above, the following research questions arise, which will be answered in this paper:

1. How are context-based critical success factors defined?
2. What is the advantage of this method?
3. Does current research address critical success factors in start-ups in their respective contexts?

3. Methodology

For research questions 1 and 2, an inductive approach is taken based on logically derived theories / definitions. The theoretical considerations are based on existing knowledge and are supplemented by own logical derivations. The focus is set on theories on the terms *"success"*, *"context"* and *"critical success factors"*. In combination, a novel theory is derived afterwards that involves the previous considerations.

In addition, a literature review based on the current literature from 2015-2021 (the selection from 514 papers was made by checking whether the paper contains a list of critical success factors and whether the paper is "open access") on critical success factors and start-ups is carried out (for more information on the methodology, see section 5) and two theses are established that are to be falsified by the literature review in order to be able to answer research question 3, for which a deductive approach (falsification) is chosen.

In the practical part, a survey is conducted to support the theories and the findings of the literature review with real examples. The survey includes the following parameters:

- Five start-ups were surveyed within one week, each active in different areas:
  - Retail
  - Game Hosting
  - Automotive Marketing
  - Technology for Solar energy

  - Retail Technology
- The start-ups have between 4 and 90 employees.
- The locations are spread across Europe.

The methodology is hereby based on the theoretical part (derived theories, literature review of current research based on established theses) and the practical part (survey and substantiation of the theses) in order to be able to answer research questions 1-3.

4. Definitions and theoretical considerations

In the following, some definitions are first used to create the basic framework for the further procedure. The terms *"success"*, *"context"* and *"critical success factors" are* defined, which are necessary in the following considerations.

4.1 Definition of success

This term is defined differently in the literature – in addition, the term "success" has the added difficulty that "success" has a subjective character [2,3] and must be considered in the respective context.

Due to this circumstance, it is only possible to work with factors in order to make success more tangible and measurable in the further course. For example, according to [3], "success" in the field of start-ups is broken down into financial and non-financial factors, which are thus measurable and define success. According to [2], "success" (also from the financial perspective) means a return on investment (ROI). From the founder's perspective, however, "success" can mean different things and is again subjective at this point (see [4,5]). For these reasons, no general definition of "success" can be found, but must be redefined for each case (Fig. 1):

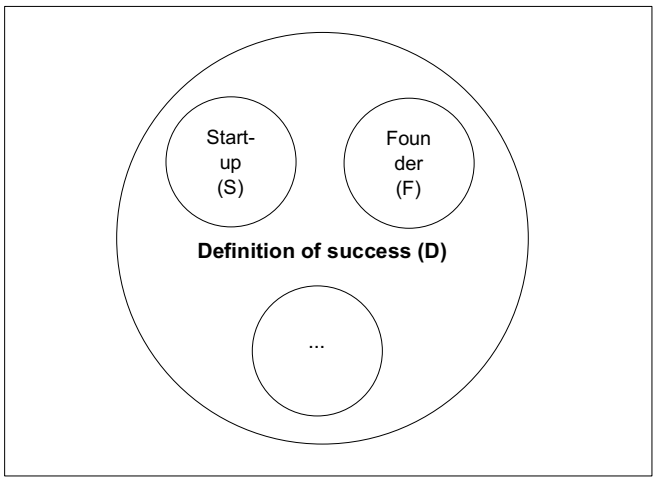

Fig. 1. Terms shape the definition of success (own representation)

This illustration shows that the terms used ("start-up" (S); "founder" (F)) shape the definition of success (D). In order to avoid the subjectivity of this term as far as possible, measurable criteria for success must then be defined (see above). After criteria have been defined, success can also become measurable on the time axis (Fig. 2):

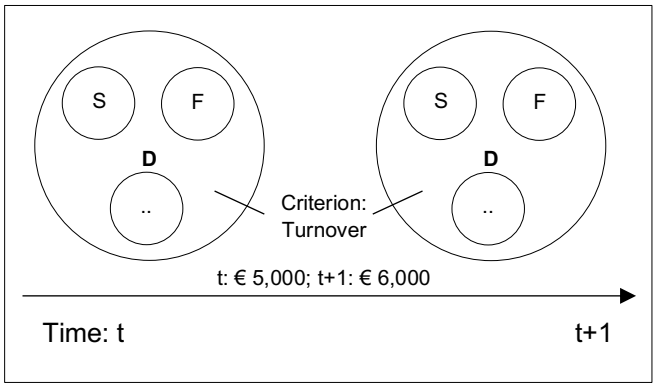

Fig. 2. Success viewed on the time axis (own representation)

For example, success in relation to a start-up in t can be expressed as the difference to t+1 (ROI consideration).

Example: Difference between turnover from t to t+1

Turnover in t = € 5,000; Turnover in t+1 = € 6,000

⇨ *Increase by 20%*

Based on this example, the definition of success by the terms used and on the basis of the timeline is another possible variant for measuring success.

Interim result on the term "success":

- Success is a subjective term and therefore there is no clear definition.
- Due to the subjectivity, the concept of success must be shaped individually and thus ultimately also becomes measurable.

4.2 Theoretical consideration of the context and its definition

After defining "success", the term "context" is defined below.

The first definition of context is the following:

"Context is any information that can be used to characterize the situation of an entity. An entity is a person, place, or object that is considered relevant to the interaction between a user and an application, including the user and applications themselves." [6]

This definition essentially means that a context describes a situation of an entity (a [data] entity is initially generic here) and thus forms marginal information about this entity. The entity can be, for example, a person, a place or any object.

A second definition in the context of context-sensitive systems [6] is the following:

"Three important aspects of context are: where you are, who you are with, and what resources are nearby [...]. Context encompasses more than just the user's location, because other things of interest

are also mobile and changing. Context includes lighting, noise level, network connectivity, communication costs, communication bandwidth, and even the social situation; e.g., whether you are with your manager or with a co-worker" [7]

This definition describes that important information in the context (for example the location and identity) are boundary objects / information related to an entity.

The above definitions of context are possible definitions. The definitions of context have changed continuously since 1994 until today. These changes are not covered in this paper, but can be found here [8].

The diversity and change of definitions also clearly show that the "context" is difficult to describe generically, since a "context" in pure theory only describes the parameters of an entity. The entity is also generic, so it always depends on the particular context how the "context" is described. To make it more vivid and understandable, the context is explained below using the entity "user" (Fig. 3):

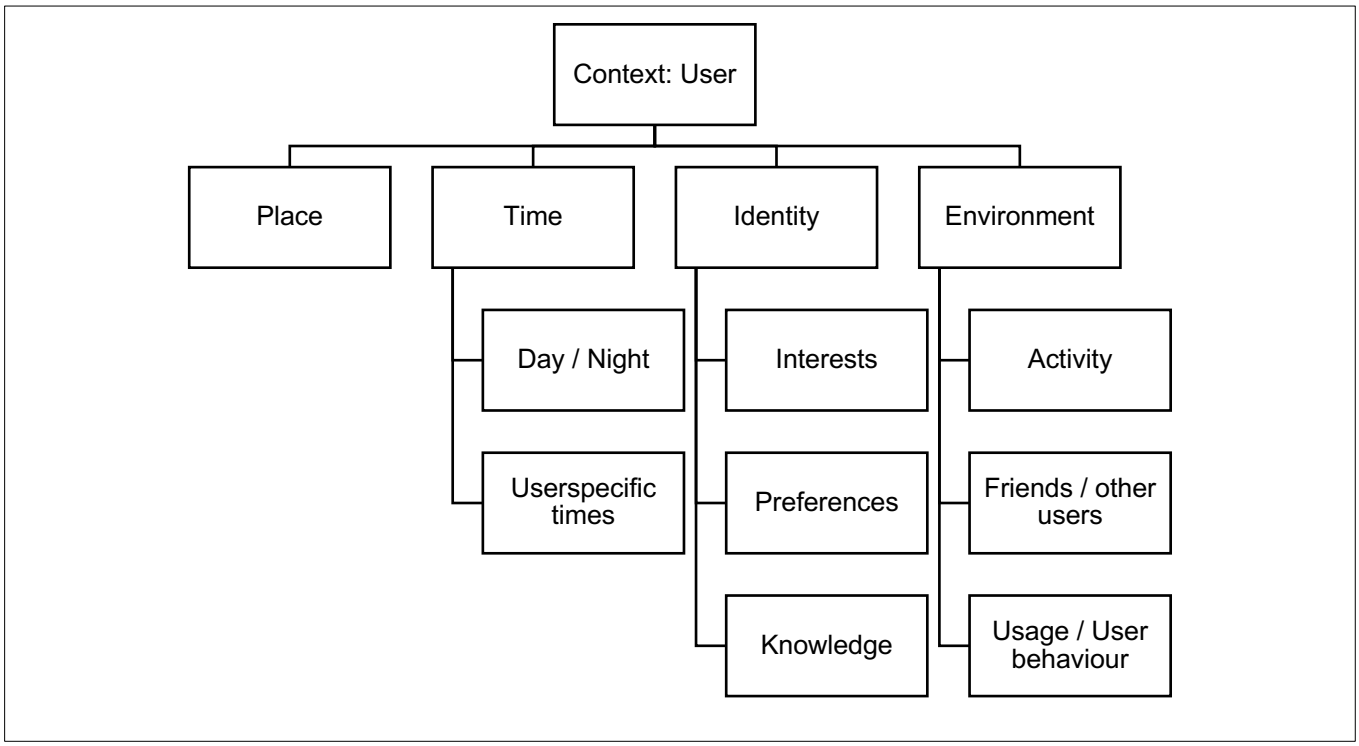

Fig. 3. User context (own representation)

From this diagram it can be seen that the user's "context" is specified with the basic parameters "place", "time", "identity" and "environment". However, these parameters can be described even more granularly, for example by dividing the basic parameter "identity" into "interests", "preferences" and "knowledge". These parameters could be subdivided again.

This model shows that the hierarchy of parameters can theoretically be *n* layers deep, so that it must always be decided on a situational basis which parameters and which depth are necessary to describe the "context" of an entity (here: user).

To go one step further, it is also possible to provide contexts with "sub-contexts". This means that the "context" itself is described by contexts (for example, the context history of a user). Here it is necessary to know the reference point (R) in order to extract and use the appropriate data and resulting information for the respective situation (Fig. 4):

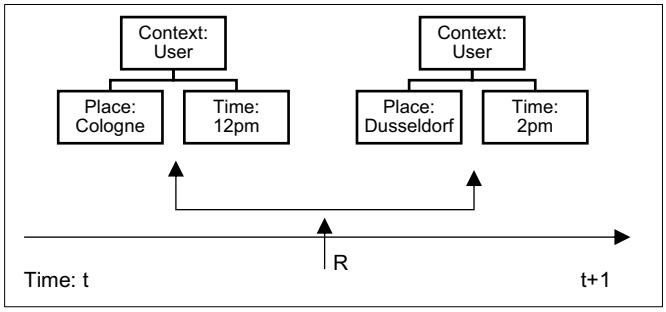

Fig. 4. Context history (own representation)

In summary, the context is an abstract model of the parameters that describe an entity. In the example of a "user", this is the situation in which the user is or has been.

4.3 Critical success factors (CSF)

Now that "success" and "context" have been defined, the generic term "success" can be explained in conjunction with the generic term "context" using an example. It was noted that "success" must be considered in the respective context and the "context" forms a framework about the parameters for the respective entity. The assumption in the following is that the entity of the context is the "success" and is defined on the basis of this (Fig. 5):

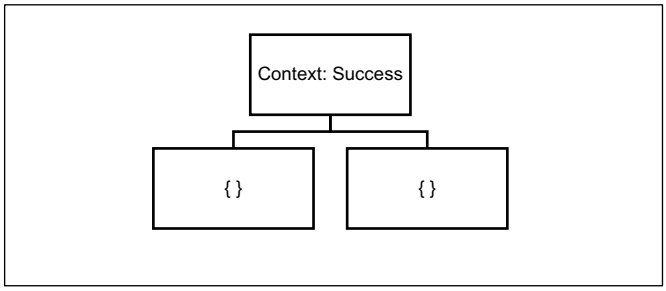

Fig. 5. Generic insertion of the term "success" into the context (own representation)

However, the difficulty arises that both are generic terms, which therefore also only provide generic output (Fig. 5; parameter = empty set ({ })). For this reason, critical success factors are needed as parameters, which are quoted from the primary source on the basis of two initial definitions:

- The first definition of critical success factors goes back to Rockhart [9]:

  "Critical Success Factors (CSFs) - CSFs are the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department or organization. CSFs are the few key areas where "things must go right" for the business to flourish and for the manager's goals to be attained."

- The second definition goes back to Bruno and Leidecker [10]:

> CSFs are *"[...] those characteristics, conditions or variables that, when properly sustained, maintained, or managed, can have a significant impact on the success of a firm competing in particular industry".*

Critical success factors can thus be described as factors that contribute to the success of a start-up if they are properly "managed". According to the first definition, CSFs additionally set priorities that are highly relevant for the overall success of the start-up.

However, there is already a basic problem in these definitions: *Where do CSFs have to be managed properly and what success is meant?*

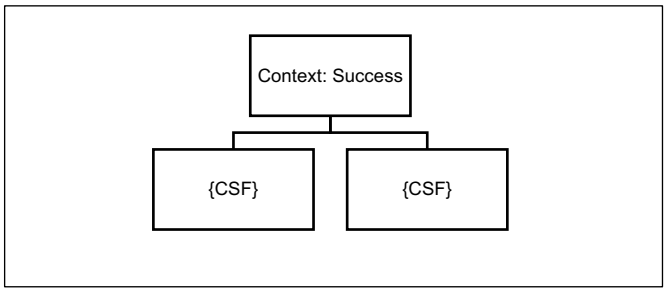

Fig. 6. CSFs are also generic and therefore not context-based (own representation)

For this reason, critical success factors need to be considered in context (as well as success). For this reason, the following section introduces the context-based critical success factor (CCSF) (Fig. 6).

4.4 Context-based critical success factors

Based on these definitions, it is defined for the purpose of further discussion how context-based critical success factors (CCSFs) are to be understood in this context - these are defined as follows (initial definition in this paper):

- Critical success factors that individually reflect the start-up in context and are not universally valid.
- Critical success factors that are only valid in exactly one precisely defined context (1:1 relationship).
- Critical success factors, which are not set up in aggregate and thus do not involve any loss of data (this point is explained in more detail in the section "Current research").

CCSFs are determined by the context and context variables. This solves the problem of the generic approach, which always involves the problem that factors are generally valid or are considered generically (such as the terms "context" and "success"). The following figure shows that the CCSF (blue) is surrounded by exemplary context variables (anthracite) that describe the context of the CSF (Fig. 7):

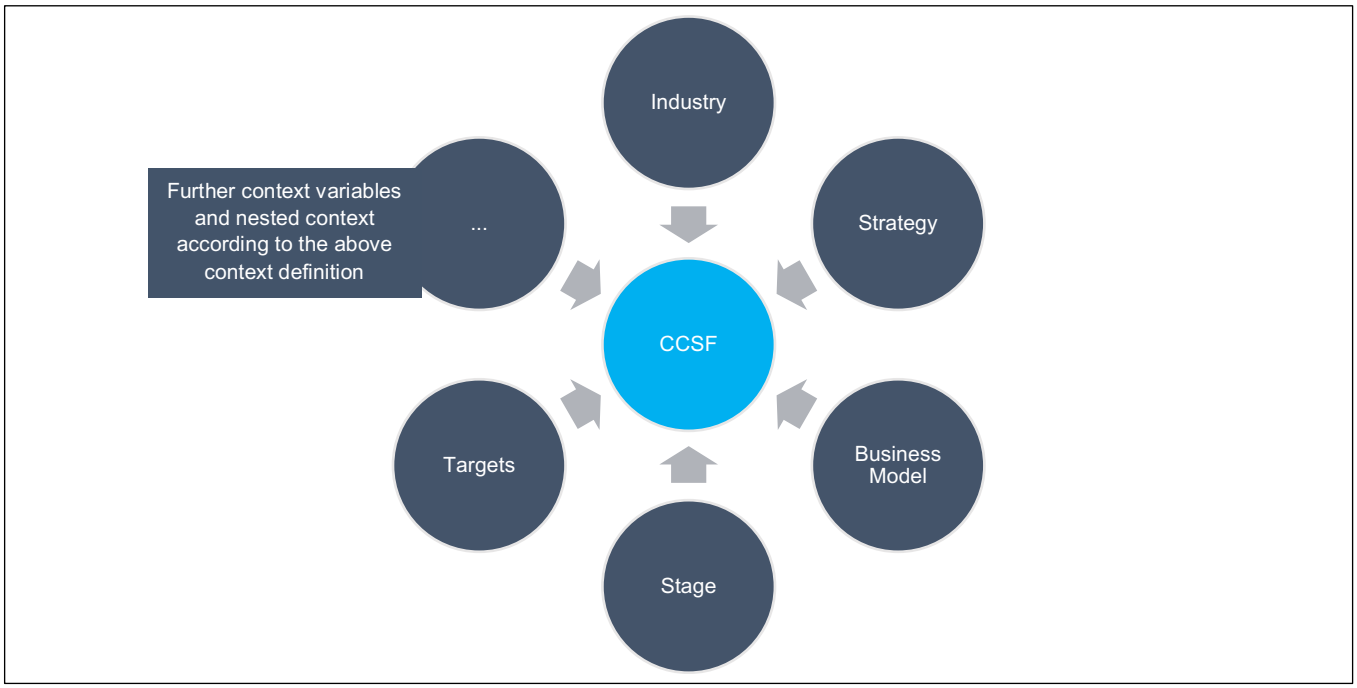

Fig. 7. CCSF (own representation)

The design of the model (Fig. 7) does not claim to be complete, but is used as an example for the following evaluations. The derivation of this model is not part of the paper and serves only as an illustration.

The CCSF can now finally also be placed in the context of the entity "success" and thus complete the model (Fig. 8). By inserting it, the term "success" is defined on the basis of the CCSFs and at the same time specifically pronounced for this context.

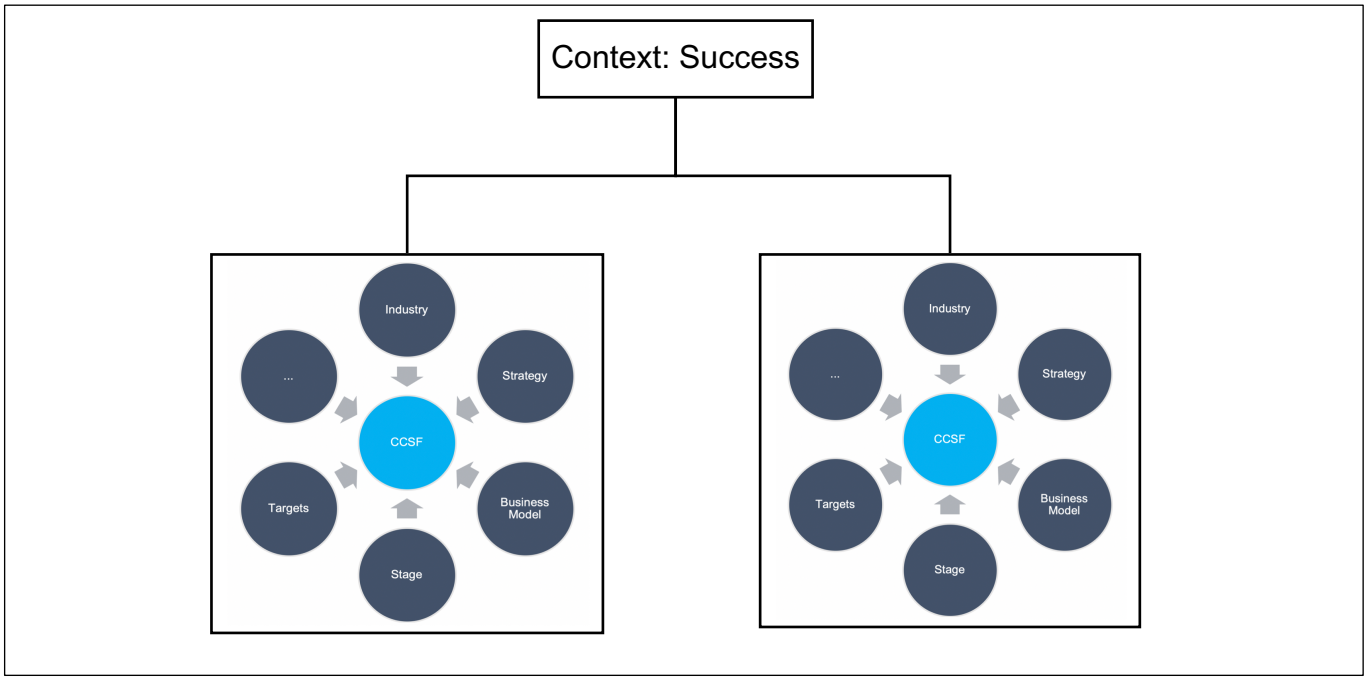

Fig. 8. Re-inserting the term "success" in the context with specific CCSF for the respective context (own representation)

A CCSF can therefore be defined as follows:

A CCSF is determined by context variables that make it work only exactly in its context. The CCSF is only valid there.

4.5 Interim result

- *In summary, the context is an abstract model of the parameters that describe an entity. In the example of a "user", this is the situation in which the user is or has been (historically).*
- *Critical success factors can be described as factors that contribute to the success of the start-up if they are properly "managed". According to the first definition, CSFs additionally set priorities that are highly relevant for the overall success of the start-up.*
- *There is a basic problem in the definitions of CSF: Where do CSFs need to be properly "managed" and what success is meant? For this reason, critical success factors must be considered in the respective context (start-ups are individual → context is individual → CSFs are individual → CCSFs).*

5. Current research

After the relevant terms have been defined, the current research on critical success factors is examined in more detail. For this purpose, the critical success factors mentioned are compiled and analysed from 17 relevant papers (the selection from 514 papers was made by checking whether the paper contains a list of CSFs and the paper is "Open Access") from 2015-2021.

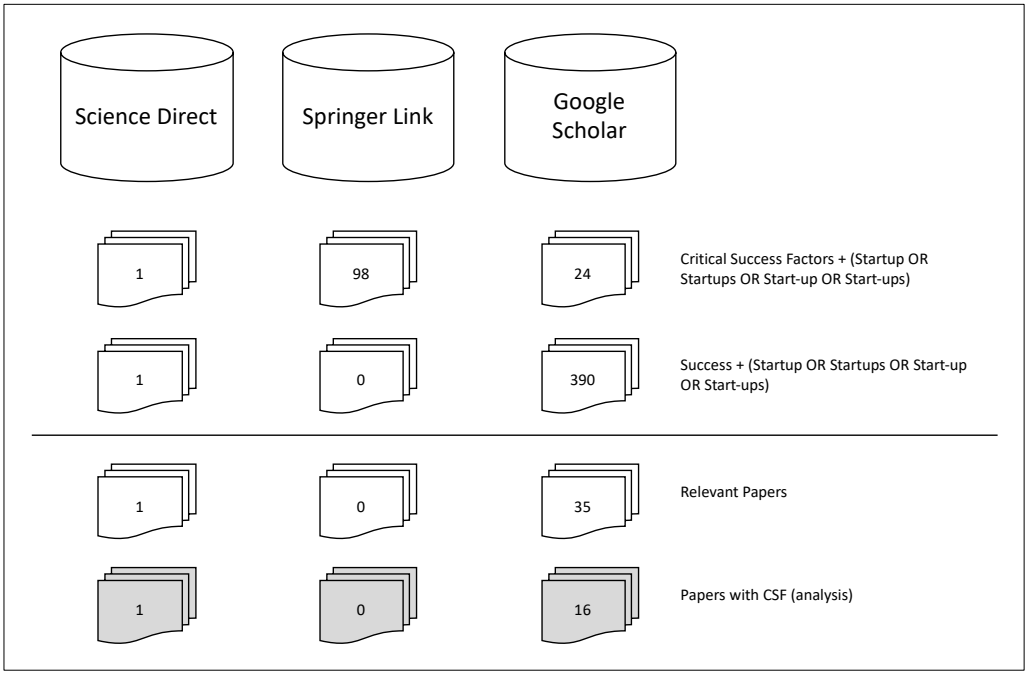

Fig. 9. Systematic selection process of relevant papers for the analysis of current research regarding critical success factors of start-ups (own presentation; as of 2020/10/26)

In the analysis of the papers on current research, two theses are put forward to answer the overarching research question 3 and falsified on the basis of the literature review:

1. CCSFs are used in the papers and thus the context of the start-up is considered.
2. Only the context is put in the foreground of the analysed CSFs.

The following is defined as the measurement criterion (M1): *The CSF under investigation is used in the paper for exactly one start-up.*

Based on the 17 relevant papers collected, the following analysis can be made:

1. These papers [11-22] all use a literature review across diverse sources.
2. These papers [11-13,16,18,19,21-26] use general CSFs and thus not context-based ones.
3. These papers indirectly use a context without either identifying it precisely or explicitly stating / foregrounding it [14,15,18].
4. These papers use more precise methods, respectively, the CSFs are substantiated with more individual, non-context-based indicators [19,27].

In order to answer the theses with regard to the literature, the papers from list items 3 and 4 will be examined in more detail, as these indicate the context.

Re 3:

a) Regarding paper [14]: In this paper, the CSFs are aggregated on the basis of interviews and the context is indirectly established via the country "Indonesia". Thus, the context is only indirectly clear.

b) Regarding paper [15]: In this paper, the CSFs are collected on the basis of a literature review. The context is indirectly justified via "design start-ups".

c) On paper [18]: In this paper, the CSFs are collected on the basis of a literature review and a justifying data collection. The research is conducted in the context of the "airline industry" ("*This literature review provides an overview of the relevant work performed in the context of success factors for startups in the airline industry"* [18]). This paper mentions the context and considers CSFs in it as well, but does not explicitly focus on the context.

Re 4:

a) On paper [20]: In this paper, the CSFs are collected on the basis of a literature review and interviews. The CSFs are backed up with measurable indicators, which thus lead to a more precise analysis. Nevertheless, the context is only created indirectly via the country "Netherlands" and is not explicitly used / mentioned.

b) Regarding paper [27]: In this paper, the CSFs are collected on the basis of interviews. The CSFs are backed up with more individual indicators, which thus lead to a more precise analysis.

Nevertheless, the context is only created indirectly via the "IT" sector and the "Early" stage and is not used explicitly.

Thus, thesis 1 and 2 can be falsified (measurement criterion (M1) equals zero). This means that the papers use contexts, but only indirectly and not explicitly mention them / integrate them into the analysis. The following points can be noted:

- In the papers, a general cross-section of start-ups is often considered and the factors are either a) fixed in advance or b) generalised / highly aggregated (list items 1 and 2). This results in a loss of data due to the aggregation, which is, however, necessary for a more in-depth evaluation.
- Thus, only general factors follow from the papers and not specific ones for each start-up. This can be explained by the fact that the papers try to establish a general factor(s) for the success of start-ups / to classify them into general factors.
- The problem here is that the factors only apply to the start-up to a certain extent and tend to remain generally valid.

Intermediate result:

Current research assumes a generalist model for determining critical success factors, especially in relation to start-ups. This automatically disregards (or only indirectly uses) the context and the point of reference. However, it is precisely this that is of great importance for determining the relevant success factors in order to understand and evaluate the respective start-up at its core. In addition, the aggregation of data creates a loss of data that is necessary for the determination/evaluation of the start-up in its respective context.

6. Examination

As has been pointed out, start-ups are usually considered in a generalist approach. In this article, therefore, a specific approach is taken and explained on the basis of a survey of five start-ups. The assumption/thesis here is that contextual information must be found in the answers (in order to outline the above-mentioned definition of CCSFs with an example). The survey is basically structured as follows:

1. Define Business Context
    a. Define success (open question; subjective)
    b. Define business model (open question; or using the Business Model Canvas)
    c. Define industry in detail (open question, but answer as detailed as possible)
    d. Define goals to match success (open question; must be related to 1a)
    e. Define business strategy (open question)
    f. Define Stage (selection)
2. Defining CSFs
    a. Define CSFs to match objectives (open question; must be related to 1d)
3. Fill in company details
    a. Master and contact data

The entire survey data is not part of this paper, as the focus here is only on the CSFs (point 2) and therefore only this part of the survey is used. Five start-ups were surveyed within one week, each of which is active in different areas. For data protection reasons, only the sectors can be mentioned here:

- Retail
- Game Hosting
- Automotive Marketing
- Technology for Solar energy
- Retail Technology

TABLE 1: ANSWERS TO CSFS OF FIVE START-UPS (OWN REPRESENTATION BASED ON THE SURVEY CONDUCTED (DATE: 2020/09/20 - 2020/09/27)

Survey						
Company	***CSF1***	***CSF2***	***CSF3***	***CSF4***	***CSF5***	***CSF6***
Company 1	Team: Our employees are AI experts	Recruiting: Strong links to universities	Competition: Our product is unique	Demand: Lots of latent dead	Research: Can iterate on the product frequently	
Company 2	Relevance for consumers	Relevance for car dealer	Significant difficulties in use	Function of the technology	Stifling competition	
Company 3	Professional Customer first approach	Combination of services and tools to ease the life of our customers	Scalability of our products	Efficient sourcing of core components (hardware) and build a sustainable business model on top of it	Knock at the right doors and gain more and more word of mouth	
Company 4	We understand the needs of people in SSA	We understand how to manage complexity of doing business in Africa	We understand different technologies in the solar industry as well as cooling systems, and water treatment	We know how to get funding, especially Crowd Funding	We know how governments in Africa	We know how to build startups und transform them into a scale-up
Company 5	Empathy: Particularly strong understanding of users existing and future needs and thus better product design	Focus: Ability to prioritize between "nice to have" and "must have" features	Purpose and tenacity: Founder team that is highly driven by purpose/vision yet able to adapt to quickly changing environment	Self-understanding: Knowing what our teams core competencies are and knowing when to partner / ask for help	Willingness to take calculated risk / learn fast : Launch MVP and get customers to test it asap versus waiting for the "100%" solution	

Using this table, the raw data of this survey makes it clear how much contextual information is present (in some responses) in the CSFs-only query. The following three extracts show this:

1. *"We understand different technologies in the solar industry as well as cooling systems, and water treatment"* (Table 1, Company 4, CSF3)
    a. Contextual information:
        i. Solar industry
        ii. Cooling systems
        iii. Water treatment

2. *"Our employees are AI experts"* (Table 1, Company 1, CSF1)
    a. Contextual information:
        i. Artificial Intelligence Experts
3. *"Efficient sourcing of core components (hardware) and build a sustainable business model on top of it"* (Table 1, Company 3, CSF4)
    a. Contextual information:
        i. Hardware-based
        ii. Achieve a sustainable business model

Example (Fig. 10) based on Fig. 7:

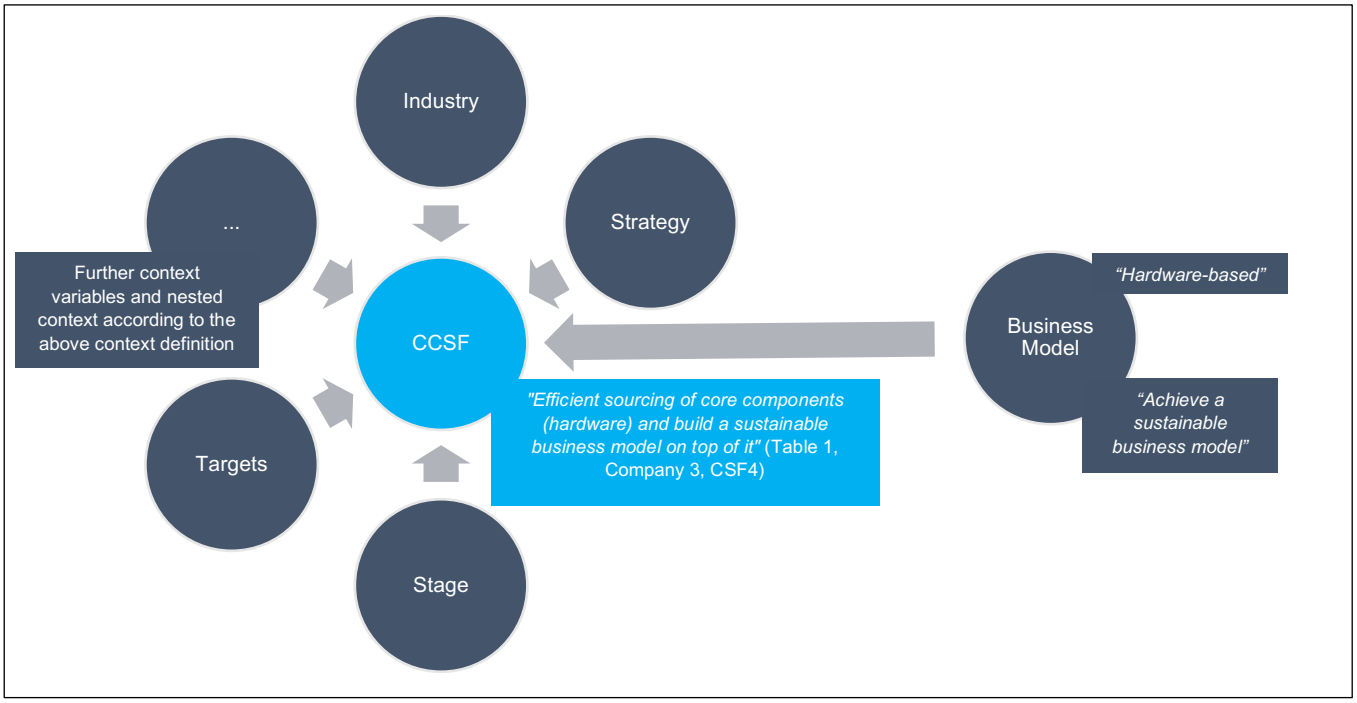

Fig. 10. Example of a CCSF based on Company 3 from Table 1 (own representation)

These three small examples show what information is available in the raw data of a simple query of CSFs alone. This contextual information is valuable because it allows for a more specific evaluation of the start-up (indicative).

Result of the survey:

- Start-ups automatically give more specific, detailed CSFs and use technical terms.
- Start-ups from different contexts / industries cite very different factors.
- Start-ups are very focused on their context and are therefore very specific. Therefore, they also answer specifically.

Having shown that CSFs can also contain contextual information due to the raw data, there is clearly a loss of data when aggregating into general CSFs.

Therefore, the following examples in the comparison

CCSF (survey) ↔ *CSF* (from examined papers)

to illustrate the difference more clearly. For this purpose, a CCSF is compared with a similar CSF.

Examples:

1. CCSF: *"We understand different technologies in the solar industry as well as cooling systems, and water treatment"* (Table 1, Company 4, CSF3)
   ↔
   CSF: *"Product Technology"* [13]

2. CCSF: *"Relevance for car dealer"* (Table 1, Company 2, CSF2)
   ↔
   CSF: *"Technology is the main factor"* [14]

3. CCSF: *"Efficient sourcing of core components (hardware) and build a sustainable business model on top of it"* (Table 1, Company 3, CSF4)
   ↔
   CSF: *"Supply Chain Integration"* [18]

It is also noticeable here in the categorisation / classification / aggregation in CSF compared to CCSF that important information is missing in CSF. Therefore, data loss automatically accompanies the formation of CSFs, as the contextual information is removed.

7. Conclusion

7.1 Answers to the research questions

1. How are context-based critical success factors defined?

   Answer: *"A CCSF is determined by context variables that make it work only exactly in its context. The CCSF is only valid there."*

2. What is the advantage of this method?

   Answer: The *CCSF method offers the advantage that data is not aggregated to a generally valid CSF and thus data loss occurs, which, however, is highly relevant for the evaluation of the start-up. Thus, critical success factors can be mapped more accurately and are valid exactly for this start-up.*

3. Does current research address critical success factors in start-ups in their respective contexts?

   Answer: A *systematic literature review has shown that current research does not address critical success factors in a context-based manner. Thus, this research question can be answered with "no" (theses 1 and 2 from the section "Current research" falsified with measurement criterion M1).*

7.2 Critical view

In contrast to the CSF, the CCSF can contain contextual information that makes it more specific in the assessment and thus more accurately in fitting the start-up. Critically, the contextual parameters that describe the CCSF and how they are selected need to be questioned. In this paper, it was only shown that CSFs generate a loss of data due to the missing marginal information or aggregation. An analysis regarding the more exact forecast or the more exact "match" of CSF ↔ CCSF regarding the success / forecast of the start-up still has to be conducted. However, this paper has laid the foundation for a context-based analysis of CSFs, which can be further developed into an empirical comparison / measurement.

7.3 Discussion

The CCSF is of great interest from different perspectives.

For the first time, contextual information is included in the analysis of company's success factors and data loss is prevented. In addition, the CCSF is dynamic enough to include different types of contextual information and thus present a framework that can be applied to different companies.

When a different view is taken into concern, it can be discussed to what extent the CCSF is superior to the CSF in terms of forecasting ability or meaningfulness. This statement can only be made if further analysis of the CCSF are carried out and thus a data basis with different company contexts is assessed (see also section "Outlook").

7.4 Limitations

The present paper has been dealt with in great detail in terms of the literature review and it could be shown that CCSFs are not dealt with in current research. Theories on the topic were also not found and therefore developed and demonstrated for the first time in this paper. The limitation of the paper, however, is the small number of survey participants, although the survey nevertheless shows a clear tendency for start-ups to respond in their respective contexts and thus a loss of data may occur when aggregating the data (usual proceedings). In order to gain further insights, the present survey should be extended.

7.5 Outlook

Further research in this area can be supported by data models that help to cluster start-ups, thus predicting more accurate outcomes and forecasts for the specific success of start-ups.

References

[1] B. Reisdorfer-Leite, M. Marcos de Oliveira, M. Rudek, A.L. Szejka, O. Canciglieri Junior, Startup Definition Proposal Using Product Lifecycle Management, in: F. Nyffenegger, J. Ríos, L. Rivest, A. Bouras (Eds.), Product Lifecycle Management Enabling Smart X, Springer International Publishing, Cham, 2020: pp. 426-435. https://doi.org/10.1007/978-3-030-62807-9_34.

[2] Y.Q. Ang, A. Chia, S. Saghafian, Using Machine Learning to Demystify Startups Funding, Post-Money Valuation, and Success, ... -Money Valuation, and Success .... (2020). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3681682.

[3] D.M.H. Kee, N.A. Rahman, How to Measure Start-Up Success? A Systematic Review from a Multidimensional Perspective, A Systematic Review from a .... (2020). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3638863.

[4] O. Spiegel, P. Abbassi, M.P. Zylka, D. Schlagwein, K. Fischbach, D. Schoder, Business model development, founders' social capital and the success of early stage internet start-ups: a mixed-method study: Social capital and internet start-ups, Info Systems J. 26 (2016) 421-449. https://doi.org/10.1111/isj.12073.

[5] A. Prohorovs, J. Bistrova, D. Ten, Startup Success Factors in the Capital Attraction Stage: Founders' Perspective, Journal of East-West Business. (2019). https://www.tandfonline.com/doi/abs/10.1080/10669868.2018.1503211.

[6] A.K. Dey, Understanding and Using Context, Personal and Ubiquitous Computing. 5 (2001) 4-7. https://doi.org/10.1007/s007790170019.

[7] B. Schilit, N. Adams, R. Want, Context-Aware Computing Applications, in: 1994 First Workshop on Mobile Computing Systems and Applications, IEEE, Santa Cruz, California, USA, 1994: pp. 85-90. https://doi.org/10.1109/WMCSA.1994.16.

[8] K. Wan, A Brief History of Context, ArXiv:0912.1838 [Cs]. (2009). http://arxiv.org/abs/0912.1838 (accessed September 28, 2020).

[9] C.V. Bullen, J.F. Rockart, A PRIMER ON CRITICAL SUCCESS FACTORS, (n.d.) 75.

[10] J.K. Leidecker, A.V. Bruno, Identifying and using critical success factors, Long Range Planning. 17 (1984) 23-32. https://doi.org/10.1016/0024-6301(84)90163-8.

[11] J. Santisteban, D. Mauricio, Systematic literature review of critical success factors of information technology startups, Academy of Entrepreneurship .... (2017). http://search.proquest.com/openview/98a6e3daafe35edd5cad397b46b02c1b/1?pq-origsite=gscholar&cbl=29726.

[12] S. Nalintippayawong, ..., Examining the Critical Success Factors of Startup in Thailand Using Structural Equation Model, 2018 10th .... (2018). https://ieeexplore.ieee.org/abstract/document/8534854/.

[13] T.V. TRANG, N. VINH, Q. DO, Application of Fuzzy Analytic Hierarchy Process in Prioritizing and Ranking Critical Success Factors of Innovation Startups, (n.d.).

[14] A. Hermawan, B. Septiawan, ..., Critical Success Factors for Financial Technology Startup Company, Proceeding .... (2019). http://proceedings.conference.unpas.ac.id/index.php/ifsac/article/view/197.

[15] B. Kim, H. Kim, Y. Jeon, Critical Success Factors of a Design Startup Business, Sustainability. 10 (2018) 2981. https://doi.org/10.3390/su10092981.

[16] D. Tischlinger, B.V. Wordragen, What are the Critical Success Factors of Start-Ups in the Digital Transformation?: A multiple case-study, diva-portal.org, 2019. https://www.diva-portal.org/smash/record.jsf?pid=diva2:1319856.

[17] M. Pham, ANALYSIS THE SUCCESS OF DIGITAL START-UP IN VIETNAM USING A SUCCESS/FAILURE MODEL, Researchgate.Net. [n.d.]. https://www.researchgate.net/profile/Minh_Pham61/publication/327593926_ANALYSIS_THE_SUCCESS_OF_DIGITAL_START-UP_IN_VIETNAM_USING_A_SUCCESSFAILURE_MODEL/links/5b98d3bb45851531057e62a2/ANALYSIS-THE-SUCCESS-OF-DIGITAL-START-UP-IN-VIETNAM-USING-A-SUCCESS-FAILURE-MODEL.pdf.

[18] R. Michaux, Key Success Factors for Startups in the Airline Industry, (2020). https://repository.tudelft.nl/islandora/object/uuid:d2845777-b753-4de5-8ef9-7d4c7ef90a69.

[19] P. Rajkumar, Multi Criteria Decision Modeling of Startups' Success Factors, International Journal of Management and Research. (n.d.). https://www.researchgate.net/profile/Rajkumar_Paulrajan2/publication/316248671_Multi_Criteria_Decision_Modeling_of_Startups'_Success_Factors/links/5b5a9888458515c4b24a0f8e/Multi-Criteria-Decision-Modeling-of-Startups-Success-Factors.pdf.

[20] D.C. Martines, Startup Success Prediction in the Dutch Startup Ecosystem, repository.tudelft.nl, 2019. https://repository.tudelft.nl/islandora/object/uuid:1adc2972-db09-4583-b2da-05fd4e462941.

[21] S. Cavalieri, The role of 3Ts factors in the birth, developement and success of a startup, (2016). http://tesi.luiss.it/16413/1/177831.pdf.

[22] H. Janáková, The success prediction of the technological start-up projects in Slovak conditions, Procedia Economics and Finance. (2015). https://www.sciencedirect.com/science/article/pii/S2212567115016032.

[23] K.G. Shankar, A. Pundir, L. Ganapathy, Critical Success Factors for the "Start-up Projects" in India, Indira Management Review. (2018). http://isbsimr.com/index.php/imr/article/view/132316.

[24] S.H. He, C.E. Yu, Analysis of the Crucial Success Factors for Tech-Based Startups, Siim.Org.Tw. (n.d.). https://siim.org.tw/IJIiM/DW/V8N1/IJIiM-20-017.pdf.

[25] J.C. Liaw, Critical Success Factor of a Small Medium Enterprise (SME) Startup Project in Malaysia, (2019). http://eprints.utar.edu.my/3350/1/LIAW_JIA_CHIEN_-_FULL_PROJECT_REPORT.pdf.

[26] B. Sharchilev, M. Roizner, A. Rumyantsev, ..., Web-based startup success prediction, Proceedings of the 27th .... (2018). https://dl.acm.org/doi/abs/10.1145/3269206.3272011.

[27] B. Ruiter, The quantification of start-up performance: An empirical study about the determinants of early stage IT start-up success, essay.utwente.nl, 2015. http://essay.utwente.nl/68152/.