

## Early Business Growth – Case Technology Intensive SMEs in Southern California

Matti Muhos<sup>1</sup>, Pekka Kess<sup>2</sup>

<sup>1</sup>(Oulu Southern Institute, University of Oulu, Finland)

<sup>2</sup>(Department of Industrial Engineering and Management, University of Oulu, Finland)

**Abstract:-** Stages of growth models have attempted to clarify management priorities during the early stages of companies. However more focused models are needed. This study seeks to clarify the early stages of technology-intensive companies in Southern California. In this retrospective multiple case study, we devise the first stage a four-stage framework describing the early stages of technology-intensive companies and reflects the first stage, conception and development, through four case studies. The sequential incident technique (SIT) and semi-structured interviews are used for data collection. This study preliminarily tests the applicability of the stage framework and analyse context-specific viewpoints. The research focus of this study is limited to the context studied, four preliminary cases and to the first phase of the framework. This limits the applicability of the results to other contexts. The results of the study may be effectively used in intermediary organisations as a framework for predicting the early stages of technology-intensive companies. The context-specific viewpoints and their effect on the early stages of companies have not been broadly studied. This study takes the context into account and provides new insights into the growth and management of technology-intensive companies in the studied context.

**Keywords:-** stages of growth; growth process; Southern California; sequential incident technique; technology-intensive companies.

### I. INTRODUCTION

Firm growth and development have been studied extensively in the last few decades, and the literature in this area includes many perspectives, such as the static equilibrium theories (see e.g. [1]), stochastic models (see e.g. [2]), transaction cost theories (see e.g. [3]), economics of growth theories (see e.g. [4]), resource-based theories (see e.g.[4]), evolutionary theories (see e.g.[5]), organisational ecology theories (see e.g.[6]), strategic adaptation theories (see e.g.[7]), motivational theories (see e.g.[8]) and configuration theories (see e.g.[9]). Most of these perspectives are concerned with the factors leading to growth. However, configuration (or company lifecycle or stages of growth) (see e.g.[10, 11]) perspectives have instead attempted to clarify managerial challenges and priorities in the early stages of companies (see e.g.[9, 12]). This perspective relates to what growth brings to a company and how to manage a growing company (see[13, 14]). The growth configuration literature reveals diverse managerial problem configurations specific to the different growth stages.

The main findings of the 14 most recent empirically-based stage models focusing on technology-intensive companies have been synthesised into a self-evaluation framework [11]. To test the findings, empirical cases in different cultural business contexts must be studied. This will allow an analysis of the gaps between reality and the stage models and will highlight potential paths for further development of these models. The aim in this study is to describe the earliest development stage of technology-intensive companies in the Southern Californian business context.

The research problem is condensed into the following research questions: What do early-stage technology-intensive companies face based on recent empirical literature? How do the experiences of managers in early-stage technology-intensive companies relate to the assumptions of stage frameworks? What viewpoints should be considered when using stage frameworks in the Southern Californian context?

This is a retrospective multiple case study with a holistic research strategy. We use the sequential incident technique (SIT), a specific form of the critical incident technique (CIT) [15-17].The following definitions figure prominently in this analysis. We define an early-stage technology-intensive firm as follows. First, a technology-intensive firm is an independently owned research- and product development-intensive company whose continuous aspiration to gain valuable, rare and inimitable technological knowledge leads to new or enhanced products and services (see [18, 19]). Second, the term ‘early’ refers to the newness of the firm;

according to [20], a new firm is not more than 25 years old. Third, the term ‘stage’ corresponds to a unique configuration of variables, for example strategies, problems and priorities that growing firms will likely face (see e.g. [21-23])The term ‘configuration’ applies to the clusters or frameworks of common variables used for the analysis of stages.

This study addresses scholars interested in the process perspective on company growth and development. The study may also function as a useful guide for those responsible for company growth and development policies, those considering investing in a defined group of companies and the owners and managers of growing companies. In the theoretical part of this study, the current state of configuration literature is discussed. In the empirical part of the study, the four case companies in Southern California are described and their experiences of growth are reflected using the stage framework to identify parallel and context-specific viewpoints. Finally, this study analyses the applicability of the framework to the Southern California case companies and describes the context-specific issues.

## **II. EARLY STAGES OF GROWTH – THE SELF-EVALUATION FRAMEWORK**

The framework related to the early stages of growth is presented in the following Table 1:

Table 1. Early stages of technology-intensive companies: assumptions of the self-evaluation framework

Stage	Stage description/assumption codes
1. Conception and development	The newly established firm is owner-dependent (1-A1). The objective is product and/or technology development (1-A2) and the establishment of an early customer base (1-A3). The main activities relate to the business idea (1-A4), identification of a market (1-A5) and resource mobilisation (1-A6). The development of a working prototype is started (1-A7). The management is informal, flexible and creative (1-A8); communication is face-to-face (1-A9), and the owner makes the decisions (1-A10). The organisation functions as a product development team (1-A11). The cash flow falls into the red due to a lack of product at this point (1-A12).
2. Commercialisation	This stage begins with the early reference customers (2-A1). The objective is the creation of a business and the commercialisation of the product (2-A2). The stage is characterised by early manufacturing (2-A3), marketing (2-A4) and initial technical challenges (2-A5). The company learns to make the product and to produce it (2-A6). The management style is participative (2-A7) and coordinative (2-A8). The owner and/or a small number of partners dominate the nucleus of the administrative system (2-A9). Resource generation and survival are key issues (2-A10). The amount of negative cash flow decreases (2-A11).
3. Expansion	At this stage, manufacturing and technical feasibility and market acceptance lead to high growth (3-A1) and constant change (3-A2). The main objective is to manage the company toward growth and increase market share by marketing and manufacturing the product efficiently and in high volume (3-A3). The company needs to produce, sell and distribute product at an increasing volume (3-A4) while taking care of efficiency and effectiveness through structures and processes (3-A5). New customers and new market channels require constant attention (3-A6). Personnel problems result from high growth (3-A7). The owner and/or entrepreneurial team are central, though a sense of hierarchy increases (3-A8). Budgets are moderately used for communication (3-A9). More specialised functions are considered and added (3-A10). Positive cash flow increases rapidly (3-A11).
4. Stability/renewal	The company faces a slowing growth rate (4-A1) and intense competition in the maturing product market (4-A2). An effort to launch a second generation of the product is needed, and effectiveness and efficiency issues must be addressed (4-A3). The identification of new markets is essential for

company renewal (4-A4). However, cost control and productivity become main concerns (4-A5). Resulting product generation and profitability improvements help to maintain growth and reasonable market share (4-A6). The owner is usually supported by or replaced by a professional manager or a management team, and professional management systems are added (4-A7). Strategies, rules, regulations and procedures are standardised and formalised (4-A8). Employees become specialised, non-risk takers (4-A9). Specialised functions are added (4-A10). The stage is characterised by decreasing cash flow (4-A11).

The framework described above functions as a reference framework for this study. The authors use this framework to reflect and analyse the experiences of managers during the stages of early growth.

### III. THE METHOD

The present research takes the form of a retrospective multiple case study. According to Yin (1989, p.23), ‘a case study is an empirical inquiry that: investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used’.

In this study, we analysed four case companies in Southern California using the SIT and semi-structured interviews conducted during the autumn of 2012. Three managerial viewpoints were examined for each case company for triangulation purposes, one from company management, one from operations management and one from marketing management. The case study follows guidelines of Yin [24]. In an overview of CIT methods, Gremler [25] recognises several variants of CIT, including SIT, created to take the sequential character of the process studied into account (see [26]). Case studies using SIT clarify the main sequences of the process under analysis prior to the collection of data. This is advantageous if the process has already been defined empirically. In this study, the critical incidents are reflected in the sequential framework presented in the theoretical part. The case reports are based on four separate case studies.

### IV. THE CASE STUDIES

The cases are summarised in Table 2 below.

Table 2: The case companies

Case	Established	Technology	No. of employees	Sales (M\$)	Assets (M\$)
A	2009	E-commerce platform	11	1.3	2.9
B	2010	Health care technology	16	2.0	20.0
C	2009	E-commerce solutions	18	2.0	6.0
D	2003	Intelligence software	15	0.5	0.4

The growth history of Case A is presented in Figure 1 below.

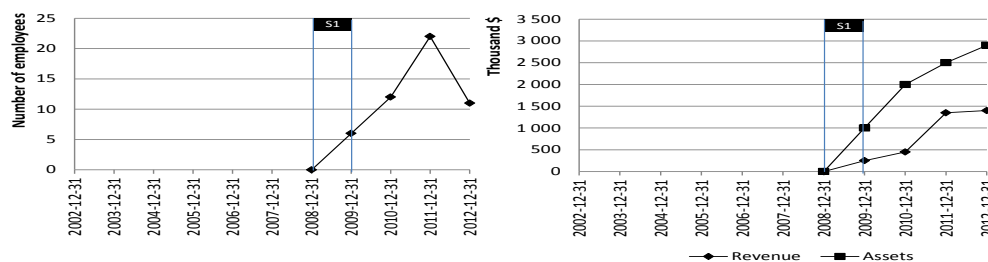


Figure 1: Growth history of Case A (S1= Stage1)

Some snapshots of the free short description of Case A are presented in the following paragraph by the CEO of the company:

Yeah, so, here's kind of our background. We started off, we're on our third business model, and the company Company A today, was really started 2009. ...we came across the idea of selling [e-commerce] software to media companies, because [world leader of the broader market] was really new at the time. People had no idea who they were, from a business standpoint, it was just getting mainstream and they were still small. 30 million dollars or less, relative to a billion dollars there now. ... [The crowdsourcing] was one of the models before. But that went through a couple of iterations, and then 2009 we just came up with Company A, and built as the first [specific e-commerce] software platform for local media companies. As far as the growth, affecting my area of responsibility, I do most of our product and business model development, so I, conceived this idea with local media publishers, developed a pricing model around the structure, so the first, 2009 we convinced everyone that we were gonna completely switch and do this, everything else, ignore it, in the past. So, started, on Company A, wrote the first product, developed the first product over three or four months, managed sales and product for the first few months. Really, after the first, once we got the product up and running, my business partner and the rest took over the sales process. And we, I moved mainly into operations and sales. Or, operations and product development, which I've pretty much done since. So, market research, feature management, the whole product development life cycle, and, that hasn't really changed (and that's) still today, I deal with all the operations, I deal with the product development, (which are) the main two things (I) manage. That's about it.

The majority of the incidents recalled by the managers of Case A were in line with the framework. The fresh viewpoints related to the assumptions at stage 1 are presented in Table 3 below.

**Table 3: The parallel and contradictory aspects related to the assumptions of the framework**

Assumptions	Fresh viewpoints related to assumptions
1-A1:	<i>no contradictions</i>
1-A2:	<i>no contradictions</i>
1-A3:	<i>no contradictions</i>
1-A4:	The company was started to run the third business idea of the management team. The business idea did not need much adjustment or focus. The active pivoting happened before the establishment of the firm.
1-A5:	The company was established to build a new type of software platform for one customer. The size of the market was identified before the company was established.
1-A6:	There was no need to mobilise people. The team was already well established before the company was founded because of the earlier pivots and projects based on earlier ideas.
1-A7:	<i>no contradictions</i>
1-A8:	<i>no contradictions</i>
1-A9:	<i>no contradictions</i>
1-A10:	<i>no contradictions</i>
1-A11:	Part of the team was not ready to function as a product development team 'again'. Change resistance occurred in the beginning because the team had already gone through multiple changes prior to the company's establishment.
1-A12:	<i>no contradictions</i>
Other perspectives:	Well-established teams, customers and ideas speeded up the idea-to-market cycle. The fresh idea and market got a lot of attention and led to a free public relations boost. The company already faced fierce competition at this stage; competitors with strong resources literally stole the idea. The company was in the middle of the 'fastest moving market ever created', which meant overwhelming external change.

The growth history of Case B is presented in Figure 2 below.

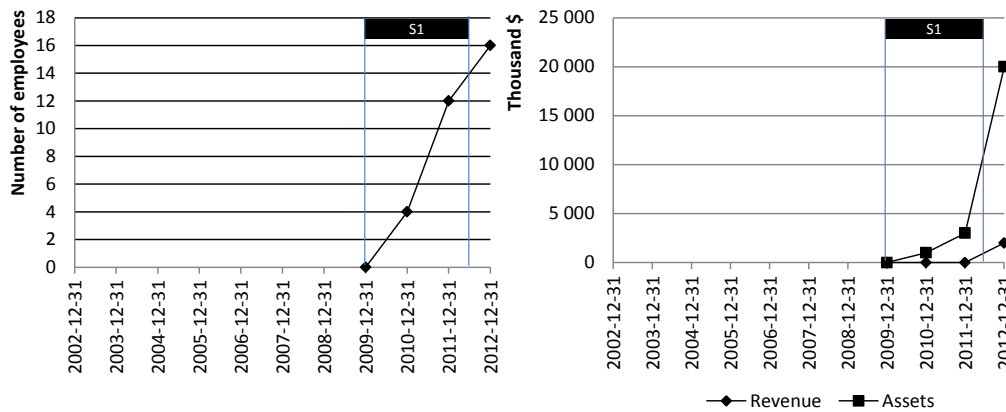


Figure 2: Growth history of Case B.

Some snapshots of the free short description of Case B are presented in the following paragraph by the CEO of the company: ...how we got started. Basically we developed and conceptualized the idea of the business and allocated the business by going to industry experts and advisers. Developed our first, investor presentation, if you will. We self-funded the company ourselves. We also did an internal round with employees. Then, went out and did an angel round of money that we raised, and along that process (we were) raising the money we started building our product... we launched an actual study environment with the customer(s) to prove our concept. Once we had enough outcomes, (-) our study, and we felt our product was stable enough, we proceeded then to go try and sell that to our first paying customers. and now with our first paying customers coming on (contracted) we go out (for an) A round of funding, which will really take us a much larger level of commercialization... We concentrated our sales efforts, localized in the (States), California. Business is somewhat capital intensive. (After) (-) raise this much larger round, we're looking (if we can actually raise) six million dollars, that money will allow us to really (-- ) (more) to a stronger level ... We've been running the company in a virtual capacity, everybody, (-- ) office spaces, we chose not (to be in an) office space yet 'cause that's (burnt) money. but now (-- ) we will formalize offices in the west coast and the east coast, and, as well bring on more (-), full-time employees (-) technology (developments, nurses) and other staff. The majority of the incidents recalled by the managers of Case B were in line with the framework. The fresh viewpoints related to the assumptions at stage 1 are presented in Table 4 below.

Table 4: The parallel and contradictory aspects related to the assumptions of the framework

Assumptions	Fresh viewpoints related to assumptions
1-A1:	<i>no contradictions</i>
1-A2:	<i>no contradictions</i>
1-A3:	<i>no contradictions</i>
1-A4:	<i>no contradictions</i>
1-A5:	<i>no contradictions</i>
1-A6:	<i>no contradictions</i>
1-A7:	<i>no contradictions</i>
1-A8:	The original management team broke up early due to a strategic disagreement One of the original team members did not share the vision and mission of the rest.
1-A9:	Some team members unsatisfied with the equity-based reward system shut down communication links with management and started to spread negative communications in the company. Open communication was a real challenge.
1-A10:	<i>no contradictions</i>
1-A11:	Formal organisation building was already tried at this stage.
1-A12:	<i>no contradictions</i>
Other perspectives:	The company was run virtually. Only virtual office space was used in order to avoid unnecessary 'money burning'.

The growth history of Case C is presented in Figure 3 below.

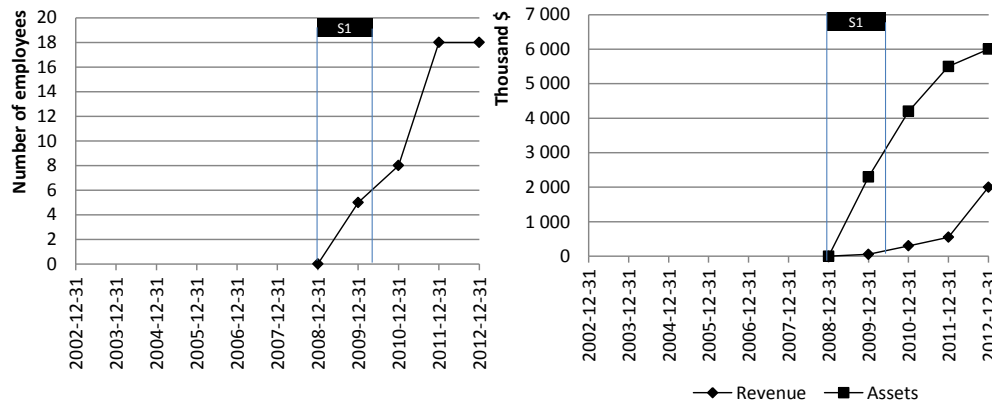


Figure 3: Growth history of Case C

Some snapshots of the free short description of Case C are presented in the following paragraph by the CEO of the company: So obviously, it's just like when you go to a market, the first thing I did was, just to evaluate the marketplace to understand if there's need, conducted interviews, over the phone with [customer segments], just.. basic market research just to try to understand the level of need, and I realised there's a massive gap, and a huge need. And even the articles that were, you know, the Wall Street Journal, late 2008, early 2009, and some other prominent business journals, showed that more than ever, [key decision makers] and the community were showing up to the [potential customers] to help because they realised that [potential customers] are in trouble. But when they got there they ran into this broken model, this old and tired model of... and there wasn't, again there wasn't a real technology or science, being applied to these massive, what I would call an epidemic failure of the, [major] institutions understanding of a power of a brand. And what that alone, causes, all of these [key decision makers in the customer organisation] to complete mismanage their, businesses... So I did the market research myself, realise there's a big gap and then realised that we needed a few, things, I needed a really strong technical person that can understand how to bring this together, I needed really understand sourcing and manufacturing and bring someone in who could understand that. I knew that this was not gonna be something that I could fully self-fund so I needed someone strong in the area of fundraising to help me, make sure that we'd be able to raise some money for the business, and from there we put together a strong business plan, couple of great PowerPoints, and went on the road to tell the story. We raised.. While we were raising the money, we raised 2.3 million dollars in (--). I'd put up most of the seed money and we put a very basic technology platform in place, to do one [customer], we ran one pilot and the acceptance of the platform, the sails through the platform were probably ten times what we anticipated. So we knew that we were onto something just after one [customer]. So we raised that money based on the premise of one [success case] and then we did a three-customer pilot and it was demographic pilot, ...and from there we gathered tons and tons of demographic data that allowed us to say, this is our target market, this is really we were wanna be launching in the marketplace. ... And so, from there, we've been deploying capital and, we ran a beta, for... probably 15 months to understand, everything people are asking for, what they needed and for the last, well the beginning of 2012, so it's September now, first 6 months of the year we built an enterprise-level platform, to handle the growth that we're gonna have, we turned the enterprise system on in July and, you know, growth is exploding, we can't keep up. The majority of the incidents recalled by the managers of Case C were in line with the framework.

Table 5: The parallel and contradictory aspects related to the assumptions of the framework

Assumptions	Fresh viewpoints related to assumptions
1-A1:	<i>no contradictions</i>
1-A2:	From the beginning, the company's aims went beyond the product/service or a platform. The company aimed towards building a win-win relationship with the customer. As one interviewee stated: 'We do not sell drills – we sell the holes'.
1-A3:	<i>no contradictions</i>
1-A4:	<i>no contradictions</i>
1-A5:	<i>no contradictions</i>
1-A6:	<i>no contradictions</i>
1-A7:	<i>no contradictions</i>
1-A8:	The management team faced a serious communication challenge due to the overestimation of one of the founder's contributions. One founder was removed from the active business.
1-A9:	<i>no contradictions</i>
1-A10:	<i>no contradictions</i>
1-A11:	The company hired corporate people who were not in sync with the mind frame of the start-up. The situation disturbed the structure of the product development team temporarily. The hires were expensive and unsuccessful.
1-A12:	-
Other perspectives:	-

The growth history of Case D is presented in Figure 4 below.

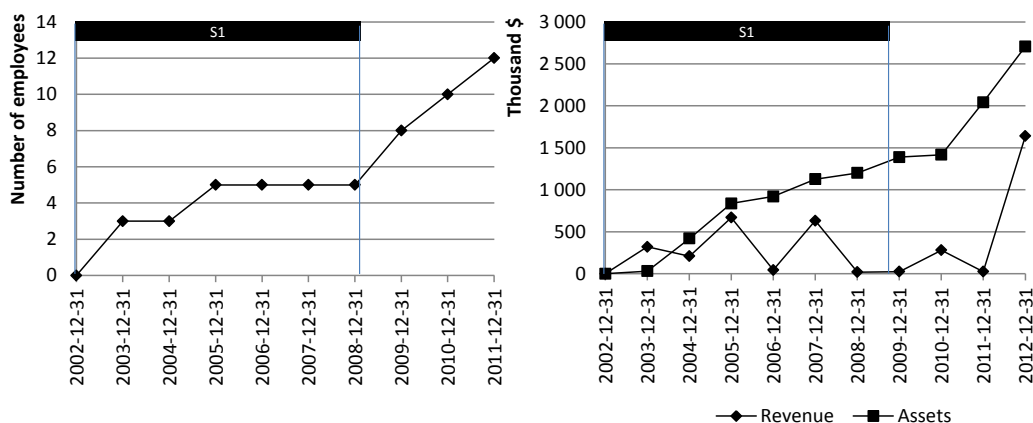


Figure 4: Growth history of Case D

Some snapshots of the free short description of Case D are presented in the following paragraph by the CEO of the company: We have invented a [fundamentally core] technology. So, one of the differences, (I mean), (-), in terms of, culturally here in the US versus our [European] founding is, our company was founded in 2003, in [Europe], here you wouldn't have even founded the company at that point because it was pure research and development. That early phase was taking the concepts from our mad scientist, and getting them into a, onto a software platform, that could run, you know, in Windows that we could actually test, that we could see if it actually.. Both whether it worked, but also to see if it had a value proposition. ...In advanced technology like ours, coming out of R&D, one of the challenges is always being too early or too late. Getting your timing right relative to the market. Because you can be ready and have it, but if no one's looking for it, and it's not made it into the mainstream conscious, then, you're there and you're just sputtering along, right, no one's playing any attention because there's no demand. [The core technology of the company] is a little weird in that sense because it has been around a long time. So by itself, if you just say [The core technology], that's, to a kid, it's new because that's [mainstream technologies], that's a bunch of things that are very fresh for them, but people in the industry have been talking about [core technology] for 30 years. So, it kind of had its boom and bust cycles and its hype cycles and all those things have already happened, so when [inventor] was initially plowing into this in the early 2000s and mid 2000s, and really until about a year and a half ago, the world was like, [core technology], you didn't even wanna call it because they would go, oh, that didn't work. ...It (wasn't)

until that happened really in the last year, year and a half, that, you know, the phone, didn't, wasn't ringing. People were just, people who were interested in it were AI scientists and academics and people that don't have checkbooks. OK, so now what's really cool, is we've really matured our stuff and we're way ahead of the curve, and the world sort of caught up, right, it's starting to accelerate. ... We're still very much on the front edge of it, that's why the [well known award] was sort of award for going forward, right, in content analytics, but not, but the mainstream is just getting to us. The majority of the incidents recalled by the managers of Case D were in line with the framework.

Table 6: The parallel and contradictory aspects related to the assumptions of the framework

Assumptions	Fresh viewpoints related to assumptions
1-A1:	<i>no contradictions</i>
1-A2:	<i>no contradictions</i>
1-A3:	In a science-based company, development of the core technology (a fundamentally new type of algorithm) took all the attention in the beginning.
1-A4:	<i>no contradictions</i>
1-A5:	The technology was not developed for specific customer applications in the first place. The focus was on developing a fundamentally game-changing technology, and market identification was seen as a secondary level objective.
1-A6:	<i>no contradictions</i>
1-A7:	<i>no contradictions</i>
1-A8:	<i>no contradictions</i>
1-A9:	<i>no contradictions</i>
1-A10:	<i>no contradictions</i>
1-A11:	The organisation functioned first as a research team of scientists with the objective of testing whether it had a value proposition in terms of its core technology. Taking pure concepts and translating them into software and making sure that the software embodies the pure theoretical concepts properly was a primary challenge. Keeping the team focused over a long period was also a challenge.
1-A12:	<i>no contradictions</i>
Other perspectives:	In the beginning, the technology was seen as marginal by the public. A core technology of a company is a theoretically-based value proposition, and the implementation was not the focus. In the beginning, the company was comparable to an academic research group with distant business objectives and a long way to reach the practical solutions.

## V. CROSS-CASE ANALYSIS

The number of incidents related to the assumptions of the framework is presented in the following table 8:

Table 8: The number of incidents related to the assumptions of the framework



Assumption	Parallel incidents	Contradictory incidents
1-A1: Newly established firm is owner-dependent	5	-
1-A2: The objective is product and/or technology development	11	1
1-A3: and establishment of an early customer base.	17	1
1-A4: The main activities relate to the business idea,	9	3
1-A5: identification of a market	22	5
1-A6: and resource mobilisation	30	3
1-A7: Development of a working prototype is started	10	-
1-A8: The management is informal, flexible and creative	3	3
1-A9: communication is face-to-face	1	1
1-A10: and the owner makes the decisions	2	-
1-A11: Organisation functions as a product-development team	3	7
1-A12: Cash flow falls into the red due to lack of product at this point.	3	-
Total number of incidents related to assumptions	116	27

As presented in the table, majority of the incidents were parallel to the framework. Actually, every assumption of the framework found support from at least one of the cases and many from every case. The four exploratory cases mostly supported the assumptions of the framework. The empirically based stage framework seems to form an effective tool for reflecting on and predicting challenges faced during the early development of a company.

## 5. CONCLUSION

The applicability of the Stage 1 of the four stage framework was explored in this study; moreover, an analysis of context-specific viewpoints was provided. It is necessary to recognise these viewpoints when using this framework in Southern California.

As an answer to the first research question, the meta-analytical synthesis, a four-stage self-evaluation framework for early-stage technology-intensive companies, is devised. The stages include conception and development, commercialisation, expansion and stability/renewal. Table 1 details these stages. This study used the synthesis as a set of assumptions to test four case studies.

Using the four exploratory case studies, the authors answered the second research question using SIT. We analysed four cases from Southern California to test how the experiences of the managers related to the assumptions of the framework. The applicability of the framework was preliminarily tested in the context of Southern California by analysing the number and content of parallel aspects in relation to the assumptions of the framework. The results are provided in Table x below.

Table 8: The proportion of the parallel aspects of the cases in relation to the assumptions of the stage 1 of the stage framework

Stage	Stage description/assumption codes
1. Conception and development	<b><i>The newly established firm is owner-dependent (1-A1). The objective is product and/or technology development (1-A2) and the establishment of an early customer base (1-A3). The main activities relate to the business idea (1-A4), identification of a market (1-A5) and resource mobilisation (1-A6). The development of a working prototype is started (1-A7). The management is informal, flexible and creative (1-A8); communication is face-to-face (1-A9), and the owner makes the decisions (1-A10). The organisation functions as a product-development team (1-A11). The cash flow falls into the red due to a lack of product at this point (1-A12).</i></b>
<b>bold</b> = the assumption is supported by every case; <b>bold italic</b> = the assumption is supported by the majority of the cases; normal = the assumption is supported by a minority of the cases; <i>italic</i> = the assumption is not supported.	

The results provide preliminary support for the applicability of the framework as all assumptions are supported to an extent.

The study's third research question clarifies the contradictory (fresh), context-specific viewpoints of the stage framework from Southern Californian perspective. The Tables 3, 4, 5 and 6 describe the stage-specific fresh viewpoints. The following types of contradictory incidents were found:

In this very early stage (Stage 1 of the framework), customer-centric companies may already look beyond product/technology development objectives (See assumption 1-A2); technology functions only as a necessary tool for solving customer problem and to build a win-win community together with customer. Technology companies with revolutionary ideas and patient funding may postpone the establishment of early customer base (See assumption 1-A3) as core technology is under development, value proposition unclear and target market distant from the core technology. The start-up may be established to run a business idea (See assumption 1-A4) entirely developed in the earlier businesses or pivoting prior to the establishment. The business idea and market (See assumption 1-A5) may be identified with the customer before the establishment of a company. The market and potential customers may also be very distant in the beginning when the company has a strategy to develop science based new core technology with unlimited range of potential applications – too specific customer/market focus may be seen as a limiting factor in this type of business. Human resource generation (See assumption 1-A6) may not be an issue in start-up which is established by the team of serial entrepreneurs and experienced product development team who have worked together for long in the earlier businesses/project prior to the establishment of a new start-up. The experienced team may speed up the first stage in terms of funding too. The informality, flexibility and creativity (See assumption 1-A8) of management team may be disrupted e.g. serious communication challenge due to lack of contribution, disagreement of the vision and mission. That may lead to brake-up of an original management team. Open communication (Assumption 1-A9) may become a real challenge as unsatisfied team members shut down communication link to management and spread negative atmosphere in the company. Company may depart from product development team structure (See assumption 1-A11) temporarily to a more corporate format due to hires not used to start-up environment. Team may also be impatient and greedy to move to the next levels of organising after many pivots, trials and stat-all-overs. Science based company may continue function with research team logic for a long time according to the requirements set-up by the context of building new core technologies. No contradictions were found related to assumptions 1-A1, 1-A7, 1-A10, and 1-A12.

To conclude, this study formed and preliminarily tested the first phase of a four-stage framework describing the early stages of technology-intensive companies. The four cases evaluated mostly supported the assumptions of the framework. The empirically based stage framework seems to be an effective tool for reflecting on and predicting the challenges faced during the early development of a company. Moreover, this study revealed a number of context-specific viewpoints contradictory to the framework: companies in different contexts face culture- and context-specific issues in their early growth. Growth is a multidimensional phenomenon, and each and every early technology-intensive company is unique to an extent.

The case-study strategy using SIT proved effective for the open-ended analysis of early growth, taking the sequential character of the process into account. The construct validity of the study is based on a sound

research plan, multiple sources of evidence, synergy between quantitative and qualitative data and an established chain of evidence. Analytic generalisation (generalisation to a theory) is possible in the case of building context-specific frameworks applicable to the Southern California contexts. The findings of the study cannot be generalised to other countries or business contexts, and they depend on the time of data collection. Reproducing the same case study in the same environment later would change some of the findings. In addition, researchers' viewpoints may affect the findings. However, case-study protocol was followed and a database established, allowing further testing of the findings.

The research focus of this study is limited to the context studied. This limits the applicability of the explorative and descriptive results to other contexts.

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