

2. Research strategy

The purpose of this chapter is to show the research objective and the research process with literature study, theoretical analysis, conceptual analysis, synthesis and empirical study to illustrate the design concept and theoretical constructs for holistic intrapreneurship. The research strategy (see chapters 2.1 and 2.2) is implemented with five key elements. Firstly, the starting point is made clear, a frame of reference defined and the process of the research is established (see chapter 1). Subsequently, there is an informed literature study concerning clarification and description of the role of intrapreneurship in a global environment (see chapter 3) and the analysis and declaration of the three key tasks of an entrepreneurial organisation (see chapter 4). A design concept for intrapreneurship in a dynamic and global business environment is developed by building models and concepts (see chapter 5). The role of intrapreneurship in practice is examined in an empirical study (see chapters 6.1 and 6.2). The implementation and application of the role model is analysed by a survey of experts and described in a specific (cultural) context (see chapter 6.3). The reflection of theory and practice brings not only theory-based empirical research but also feedback for the development of theory. In addition, there is an outline of a conceptual framework for developing and strengthening a vital entrepreneurial learning organisation (see chapter 6.4). Conclusions therein summarise the findings (see chapter 7).

2.1 Research objective and process of study

Clarification of the role of intrapreneurship by describing the central tasks of an entrepreneurial organisation in a dynamic, global business environment (see chapter 4) can be said to be the research objective²⁸. Which roles must an entrepreneurial organisation carry out to fulfil the central entrepreneurial tasks of securing viability (see chapter 5.1)? How can the interaction between the entrepreneurial organisation and the business environment be described as an operational field (see chapters 5.2 and 5.3)?

²⁸ At the centre of the examination is the research of knowledge about the entrepreneurial interaction between organisation and environment and also within the entrepreneurial organisation via the development of theory and the associated empirical studies (see Dubin 1969).

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At the same time, when describing the interaction between organisation and environment, reference should also be made to the findings of systems thinking²⁹, as in a complex world, a holistic, networked examination of the research problem and objective appears to be necessary. When specifying and designing the division of labour within the entrepreneurial organisation, reference should also be made to economic thinking (Homann and Suchanek 2005). Even when the actual actors will not always behave rationally in the sense of the economic behaviour model, this perception offers an important frame of reference for the necessary design of the incentive system of an entrepreneurial company system³⁰.

This economic design approach to organizational architecture (Brickley et al 2004) should help the organisation to act entrepreneurially itself when the real actors are driven by egoistical motives. When bringing economic and holistic thinking together, a key factor when specifying the role of intrapreneurship and setting up the model is the development of a role concept for the entrepreneurial organisation in its function as a corporate actor interacting with the external business environment. The entrepreneurial organisation is active in global operational fields. Understanding the dynamic and complex business environment is fundamental for the entrepreneurial organisation in terms of identifying opportunities and risks.

Against this background, a conceptual framework is presented which describes the general operational field of intrapreneurship. An aggregated systems model will be developed to specify the basic interactions between the viable entrepreneurial company and the external business environment. An overall concept of the role of intrapreneurship in a changing business environment is examined using the conceptual framework that specifies the business environment, the systems model for specifying the exchange relationships between the entrepreneurial organisation and the environment and the role model of the entrepreneurial organisation (see Chapter 5).

²⁹ Networked thinking – see Vester (2005) or holistic thinking – see Ulrich and Probst (1991) – is also spoken about in the literature.

³⁰ For a critical microeconomic evaluation of the organisation design's orientation see Osterloh and Frost (2000a:492-496).

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The research process follows the business research methods outlined by Cooper and Schindler (1998). The starting point of the examination is marked by a constantly changing external business environment. Increasing business networking in global markets that are highly competitive and technological developments are important drivers of change in the business environment. Companies have to adjust to dynamic developments (management dilemma). Apart from efficiency in existing businesses, they must use innovations in the areas of products, the market and technology and also systematically make use of opportunities and risks from the business environment in order to set themselves internal and external challenges (management questions).

An entrepreneurial organisation can find the answer to the challenges. Organisations in dynamic environments can secure their viability with an entrepreneurial orientation. What does intrapreneurship mean in a global business environment (see chapters 3.1.4 and 5.3)? How can an entrepreneurial organisation be specified and achieved in a way that resolves the management dilemma (see chapter 3.1.5)? What central tasks does an entrepreneurial organisation have (see chapters 3.4 and 4)? Which roles have to be fulfilled as a whole and which ones by division of labour (see chapter 5.1)? How can the operational fields for opportunities and risks (see chapter 5.2) and the interaction between the entrepreneurial organisation and the external business environment (see chapter 5.3) be specified? What role does intrapreneurship play in the company reality of global technology companies (see chapters 6.1 and 6.2)? How are the central tasks and roles of an entrepreneurial organisation implemented (see chapter 6.3)?

In chapter 3.1, the role of intrapreneurship in a global, competitive environment characterised by technological developments is examined with reference to relevant literature (Kornmeier 2007:109-136) from the research field relating to entrepreneurial thinking and action in organisations. In so doing, it becomes clear that salient significance must be allocated to the specification of the business environment and the interaction between the organisation and environment. Accordingly, models and aspects for specifying the business environment are studied (chapter 3.2), as well as holistic approaches for specifying the organisation as a system which is exposed to the environment (chapter 3.3).

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The literature study in chapter 3 identifies three central tasks of an intrapreneurship system. These three central tasks of the entrepreneurial organisation are analysed in chapter 4. In this process, the retrieval of entrepreneurial information (chapter 4.1) as well as an entrepreneurial shaping of the future (chapter 4.2) are key factors. The entrepreneurial shaping of the organisation (chapter 4.3) considers, in particular, the structural components of the entrepreneurial organisation. In the synthesis, a design concept with three building blocks is introduced. Firstly, a role model for the entrepreneurial organisation is developed (chapter 5.1). A conceptual framework of the business environment is presented as the second building block, enabling a systematic identification of opportunities and threats and making it possible to deduce entrepreneurial opportunities (chapter 5.2). The third building block can be defined as an aggregated, qualitative model (Bossel 2004) for examining networks (Vester 2005) and the fundamental pattern of interaction between businesses and the business environment (chapter 5.3).

An empirical study of the role of intrapreneurship and of the role model developed (chapter 6), applies the theoretical research results to globally active technology companies in the Bodensee-Oberschwaben region of southern Germany. In addition, a research design with three studies and three consciously selected spot checks as samples is designed and implemented in the empirical part of the research process (see Schnell et al 2005:7-15). As part of this, managers and employees from globally operative technology companies are asked in writing and telling about the role of intrapreneurship and the role model (see Mayer 2006:57-116). A further written survey is directed at managers and project workers in a highly innovative technology company with the aim of being able to derive additional findings about this reference group (chapter 6.2). In order to make the picture of the empirical study into a full template, a third building block of the empirical study is a survey of experts (see Bogner et al 2005) which contains some additional aspects of intrapreneurship (chapter 6.3). Thus, a systematic gaining of knowledge³¹ about the entrepreneurial orientation of technology companies and about the implementation of the central entrepreneurial tasks and roles in the practices of the company is pursued using a questionnaire and questionnaire guideline (see appendix).

³¹ For qualitative content analysis from interviews with experts, see Gläser and Laudel 2009:197-259).

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In chapter 6.4, five design elements for developing a vital entrepreneurial learning organisation are outlined which are derived from the theoretical and empirical findings of chapters 3 to 6. These design elements can be used for company research projects and to strengthen the entrepreneurial orientation of individuals and the company. The management workshop for shaping the entrepreneurial future (building block 1) offers a framework concept for individual and collective learning of entrepreneurial competencies taking into account the three central entrepreneurial tasks of an entrepreneurial organisation through entrepreneurial agents. Learning from individual entrepreneurial activities (building block 2) is founded on a systematic documentation of individual entrepreneurial activities through entrepreneurial agents as a basis for learning for future entrepreneurial activities and to raise managers' awareness of entrepreneurial orientation.

Culture analysis by cultural agents (building block 3) helps to analyse as well as to design common mental models. The analysis of countries by country agents (building block 4) helps to analyse the general macro environment for opportunities and risks. The analysis of industry sectors by industry agents (building block 5) helps with the analysis of the specific micro environment for opportunities and risks. Specific implementation of the central entrepreneurial tasks and roles in a specific context of an organisation are the domain of specific company research projects. The role model developed can be used and specified for various cultural frameworks and stimulate additional empirical studies in specific contexts.

Thus, the central research results of this study provide a framework for the systematic specification of the settings of a globally active business, clarify the role of intrapreneurship in a business world that is particularly driven by technological developments, define the roles of the entrepreneurial organisation, describe the central structural components of the entrepreneurial company system and offer, for the first time, a comparison with business practice. This is achieved by a well substantiated study of the literature together with an analysis and theoretical processing of the research task. On this basis, the model building blocks for the design concept are developed as part of the synthesis. An empirical study takes a look at the role of intrapreneurship and the implementation of the role models in business practice (see figure 4).

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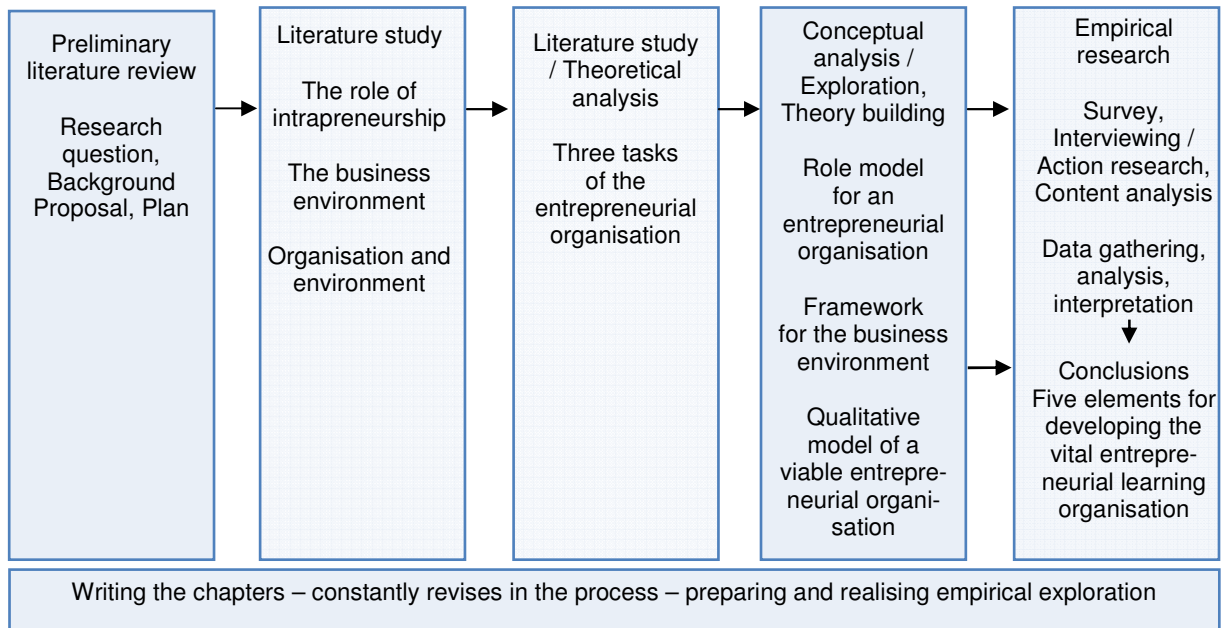


Figure 4: Research design³²

2.2 Research design and methodology of study

In terms of the research methodology, the starting point of the study is marked by the conclusion that an increasingly complex and dynamic business environment requires an increasingly entrepreneurial orientation from companies if they are to secure viability (Morris et al 2008). The research and explanation of the role of intrapreneurship in a dynamic, global business environment is done on the basis of an intensive literature study. In reworking the literature (see Kornmeier 2007:109-121), it becomes clear that the economic and management theory³³ concepts found in the literature treat a whole range of individual aspects of intrapreneurship. A synoptical illustration of the individual theoretical concepts³⁴ and the association of central elements of an entrepreneurial organisation can thus lead to a holistic view which can, in turn, be considered as the ultimate prerequisite for entrepreneurial orientation (see Haines 1998:204). Thus, it would appear to be helpful to consider not only economic and management theory concepts but also systems thinking as a theoretical frame of reference (see Winter 2005:57-59) for entrepreneurial thinking and action.

³² For management and research projects see inter alia Mouton (2001). Mouton presents a map for standardisation of research studies. For the research design selected here, see particularly pages 150-153,165-167,175-180.

³³ For the history of management approaches see Ghillyer (2011).

³⁴ For a chronological tabular synopsis of the theoretical illustrations analysed see appendix.

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The connection between the economic view that the behaviour of the organisation ensues from the interplay of individual actors (self-serving) and systems thinking (see Wright 1989, O'Connor and McDermott 2006), according to which the organisation can, through coordinated interplay, become an integrated whole – which is more than the sum of the parts – enables a holistic understanding of intrapreneurship. With a dual perspective, i.e., a holistic view of the organisation and its parts in interaction with the dynamic environment on the one hand, and a microeconomic view of the objectives of the individual actors in the process of internal coordination through the harmonisation of individual and collective targets (see Katz and Kahn 1966:88) on the other, the role of intrapreneurship can be considered as being substantiated. In addition, a contextual frame of reference is developed in order to then examine and describe, in the in-depth literature study, intrapreneurship, the business environment and the interaction between the organisation and the environment (Dubin 1969).

From the theoretical eclectic literature study (see Kornmeier 2007:196), it is possible to account for, define and carry over into the three central entrepreneurial tasks nine elements for the specification of holistic intrapreneurship. Using the economic concept of the corporate actor (see Homann and Suchanek 2005:304-309), the three entrepreneurial tasks can explain the role of intrapreneurship on the level of the whole organisation. The theoretical analysis of the three entrepreneurial tasks by way of a further substantial literature study enables a deeper understanding of intrapreneurship and the lever for the design of a viable entrepreneurial organisation.

In the process of building the model, a design concept for holistic intrapreneurship with three theoretical constructs (Pidd 1996) is developed with a theory-based exploration (see Bortz and Döring 1995:334-341). The role model of the entrepreneurial organisation specifies and explains the roles necessary for implementation of the three entrepreneurial tasks that an organisation as a whole must fulfil in an integrated way.

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This *modus operandi* thus links the microeconomic concept of the corporate actor with the role concept from the discipline of sociology³⁵. The role model thus offers a holistic perspective to the theoretical reflections and principles on the role of intrapreneurship identified in the literature study.

A conceptual orientation framework is presented which integrates the different concepts for the specification of the business environment arising from the literature study with a holistic perspective for the systematic specification of the business environment based on theoretical findings³⁶. The interdependence between the entrepreneurial organisation and the external operational fields is illustrated by a qualitative systems model on aggregated levels (see Bossel 2004). Model building is prepared via a theoretical examination to identify basic system variables and bilateral property relations³⁷. The three complementary theoretical constructs of the role model, orientation framework and systems model form a reference system for the design of the three entrepreneurial tasks of organisation design, information gathering and shaping of the future in interdependence with the dynamic and complexity of the business environment. The design concept can act as a starting point and conceptual framework (Mouton 1996:114-124,195-202) for the theory-led empirical research (see Kornmeier 2007:90).

As part of the empirical study on the role of intrapreneurship there is a survey (see Kornmeier 2007:158-187, Schnell et al (2005), Cooper and Schindler 1998:303-309) of 100 managers in 50 technology companies from the Bodensee-Oberschwaben region together with 75 managers in a highly technological company from the Bodensee-Oberschwaben region, these being conscious choices taking into account the spatial unit, their global and technological orientation and also the regional economic significance. The formal questionnaire contains an accompanying letter with a short introduction of the content, an explanation of terms, as well as 24 questions with ratings.

³⁵ For application of the role concepts in the organisation and management theory, see inter alia Kieser and Kubicek (1983:394-406), Khandwalla (1977:111-119), Schein (1980:146-147), Koontz et al (1980:73-74).

³⁶ See inter alia Graf's levels of analysis (2005:331), Fahey and Narayanan's environment concept (1986), Johnson and Scholes' environmental characteristics (1993:78) as well as Trompenaars and Hampden-Turner's culture concepts (1998) or those of Hofstede (2001).

³⁷ This procedure is supported by Vester's sensitivity model (2005).

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The questionnaire is carried out as a web survey (survey of managers from 50 companies) or by a written questionnaire (survey of managers from the highly innovative company). Data preparation takes place on the basis of the *inkidu* survey system at the Ravensburg-Weingarten University. From the data analysis, statements on the role of intrapreneurship in technological companies in the Bodensee-Oberschwaben region are derived and, in addition, there is an examination of cross company profile trends (by the connection of mean values) relating to the features of an entrepreneurial organisation, the degree of support from intrapreneurship via structural design of the internal framework conditions and the potential of entrepreneurial thinking and action from managers. By comparing cross company profile lines with the profile lines of highly innovative companies, it is possible to examine development potential and success factors. Plausibility questions regarding the content enable consistent answers to the questions posed.

In the survey of experts (see Gläser and Laudel 2009, Bogner et al 2005) relating to implementation of the role model in practice, the selection of experts questioned was done with the conscious intention of defining access for the information gathering process that is as comprehensive as possible (see Gläser and Laudel 2009, Bogner et al 2005). With globally active technology companies in the Bodensee-Oberschwaben region in mind, contacts with managers and human resources managers are used so that those questioned can also act as agents for the involvement of further interview partners.

Thus, a sampling design is selected (see Cooper and Schindler 1998:212-247) which can be used to examine certain information needs based on theoretical considerations and taking into account the organisation as whole. In order to enable the systematic involvement of further interview partners, guide questions on the operationalisation of the research question are formulated in writing and are discussed in personal interviews. Using this research concept, further company-specific specialist knowledge can be obtained qualitatively. The data collection takes place involving company agents on the basis of written instructions with standardised guide questions.

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Also with this concept, it is possible to obtain and analyse implicit knowledge and accounts of motivated interviewees in a social information process. With qualitative data analysis, it is possible to derive a stylised implementation of the role model. In interpreting the findings of the survey of experts, one should however take into consideration that the stylised illustration reflects a (culture) specific context. By reflecting the findings of the empirical study against the theoretical findings of the literature study, one can see the benefit of the design concept developed for specifying and explaining the role of intrapreneurship. Furthermore, it is possible to identify design fields for strengthening entrepreneurial orientation for a specific (cultural) context. As an aside, five elements for developing of a vital entrepreneurial learning organisation can be outlined.

The research strategy thus balances out the theory concepts identified in the literature and the newly-developed theoretical constructs using empirical studies and examinations for the implementation of the theoretical findings, which in turn stimulate further theoretical considerations. The findings process itself is supported by systems thinking (see Haines 1998:91-95, O'Connor and McDermott 2006:45-51,140-151) and reflection (see Maturana and Varela 2009:19-36).

Thus, the research process (see figure 4) to clarify the role of intrapreneurship via a design concept for holistic intrapreneurship contains (1) a preliminary literature review to define the research objective and questions, (2) a literature study to describe the role of intrapreneurship via a synoptical illustration of theoretical constructs, the business environment and the interaction of the organisation and the environment, (3) a theoretical analysis to explore the tasks of the entrepreneurial organisation, (4) a conceptual analysis to develop the theoretical constructs for holistic intrapreneurship (role model for an entrepreneurial organisation, framework for the business environment, qualitative model of a viable entrepreneurial organisation), (5) an empirical research and content analysis on intrapreneurship in the company reality with conclusions which lead to five elements for developing the vital entrepreneurial learning organisation. After the outline of the research process in chapter 2 the following chapter 3 describes the cornerstones for the theoretical analysis (see chapter 4) and theory building (see chapter 5).