

“Entrepreneurs create jobs. They drive and shape innovation, speeding up structural changes in the economy [...] Entrepreneurship is thus a catalyst for economic growth and national competitiveness.”⁴⁶

2. State of the Discussion

2.1 Entrepreneurship and Innovation Research

2.1.1 Strategic Entrepreneurship and the Entrepreneurial Firm

“The historical evolution of ideas about the entrepreneur is a wide-ranging subject.”⁴⁷ A variety of approaches toward to a defining and conceptualizing entrepreneurship from a broad array of cross-disciplinary perspectives can be identified in the literature.⁴⁸ There is a wide perception that entrepreneurship is as a process of discovery, evaluation, and exploitation⁴⁹ in which individuals pursue opportunities to create market innovations⁵⁰ and therefore cause creative destruction on current market conditions.⁵¹ Due to their superior efficiency such entrepreneurs set new market standards by founding new firms or organizational entities and crowding out established corporations reluctant to change their routines.⁵² Within this understanding of entrepreneurship the term is, consequently, predominantly directly linked to innovation⁵³ and defines the function of the entrepreneur as “to reform or revolutionize the pattern of production by exploiting an invention [...] for producing a new commodity.”⁵⁴ Entrepreneurship can also be defined as “acts of organizational creation, renewal, or innovation that occur within or outside an existing organization.”⁵⁵ This perspective refers to a Schumpeterian point of view of entrepreneurship, which emphasizes the importance of innovation in context of new venture creation. A successful entrepreneur creates profits based on an innovation premium realized by specific capabilities. The will to act and the resources under control shape the values and attitudes

46 Kelley/Bosma/Amorós 2011, p. 12.

47 Ricketts 2006, p. 33.

48 See for a detailed overview: Ireland/Webb 2007b, pp. 897-914.

49 See Shane/Venkataraman 2000, p. 218.

50 See Stevenson/Jarillo 1990 p. 23; Krackhardt 1995, pp. 53-55; Pechlaner/Doepfer 2010, pp. 84-85.

51 See Schumpeter 1996, pp. 81-87.

52 See Brouwer 2002, p. 90.

53 See Drucker 2002; Bessant/Tidd 2011.

54 Schumpeter 1996, p. 132.

55 Sharma/Chrisman 1999, p. 17.

of the entrepreneur.⁵⁶ This perception does not fit the concept of the 'economic man' balancing marginal costs and benefits. Rather, entrepreneurial behavior is understood as a non-rational striving for the improvement of individual social status regardless of the time and effort spent.⁵⁷ This intrinsic motivation is seen as a source of economic development and as the initiator of business cycles.⁵⁸ "Entrepreneurship depends on the decisions that people make about how to undertake that process."⁵⁹

In contrast to this resource-based perspective of entrepreneurship, which neglects the demand side and market conditions as an active and influential part in the innovation process⁶⁰ researchers have emphasized an analysis of prevailing market conditions as the source of entrepreneurial opportunities. Entrepreneurial behavior, consequently, may also draw on the capability of the entrepreneur to identify imbalances of demand and supply and on individual skills from specific expertise.⁶¹ Consequently, the question arises "whether opportunities make entrepreneurs or whether entrepreneurs create opportunities."⁶² This approach reflects a reduction of risk, based on an analytical procedure to minimize uncertainty of economic success within market entry. Risk-taking considered inherent in entrepreneurship within the pursuit of innovative entrepreneurial opportunities⁶³ and is considered a typical characteristic of a successful entrepreneur.⁶⁴ In this context risk can be thought of as "the investment of resources in which the decision maker knows the probability distribution of all possible outcomes from entrepreneurial action, but does not know which outcome will occur."⁶⁵

Based on the dimensions of entrepreneurial behavior presented, innovativeness and risk taking, the concept of entrepreneurial orientation allows extending these attributes to approach the complex phenomenon.⁶⁶ The decisive impetus for engaging in innovative and risky ventures is the independent spirit to act autonomously. "Autonomy refers to the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion."⁶⁷ Furthermore, in order to profit from the discovery of market opportunities a proactive behavior is considered as decisive to realizing a first-mover premium. Pro-activeness meets a market-based perspective toward entrepreneur-

56 See Littunen 2000, p. 295.

57 See Brouwer 2002, pp. 90-91.

58 See Schumpeter 1978.

59 Shane/Locke/Collins 2003, p. 258.

60 See Metcalfe 2006, p. 76.

61 See Kirzner 1973, pp. 30, 68.

62 Saravasvathy 2004, p. 308.

63 See Miller 2007, p. 57.

64 See Littunen 2000, p. 295.

65 Shepherd/McMullen/Jennings 2007, p. 77.

66 See Lumpkin/Dess 1996, pp. 140-149.

67 Lumpkin/Dess 1996, p. 140.

ship and emphasizes the potential of exploiting emerging markets by anticipating and pursuing opportunities. The final component of entrepreneurial orientation is the relevance of competitive aggressiveness, which is elaborated by drawing on corporate strategy. Since young ventures are apparently more likely to fail compared to established businesses, aggressive market behavior is seen as critical to the survival of the venture.⁶⁸ Consequently, instead of reacting toward changing market conditions entrepreneurs need to act proactively “taking the initiative in an effort to shape the environment to one’s own advantage.”⁶⁹ This dimension of entrepreneurial orientation shows a strong linkage to strategic management and includes organizational factors and environmental aspects into an entrepreneurial thought pattern, leading toward an integrated perspective of entrepreneurship and strategy.

2.1.1.1 Strategic Entrepreneurship

“An entrepreneurial opportunity consists of a set of ideas, beliefs and actions that enable the creation of future goods and services in the absence of current markets for them.”⁷⁰

Among researchers a long-run discussion has been taking place whether a combination of entrepreneurship and strategic management can be applied to an organizational setting.⁷¹ Based on the origins of strategy with reference to an organization of forces and resources within a military context,⁷² strategy can be understood as a set of decision making rules for guidance or organizational behavior.⁷³ “The essence of strategy is choosing to perform activities differently than rivals do.”⁷⁴ Based on the analysis of market conditions to identify attractive market positions⁷⁵ and the possession of valuable, rare, imperfectly imitable, and non-substitutable resources specific to the firm, strategic approaches have been elaborated to achieve competitive advantage.⁷⁶ Later research in the field emphasizes the relevance of firm-specific knowledge and the development of dynamic capabilities drawing on systematic learning routines in interaction with external stakeholders such as competi-

68 Porter (2004) emphasizes the relevance of aggressive market behavior to achieve competitive advantage with reference to a cost-leadership position and pricing strategy (pp. 19; 508), pursuit of learning (p. 87), patenting (p. 440), and investments for growth (p. 467).

69 Chen/Hambrick 1995, p. 457.

70 Saravasvathy et al. 2003, p. 142.

71 See e.g. Gronhaug, K./Reve, T. 1988; Ireland 2007.

72 See Kotler/Singh 1981; von Oettinger 2001.

73 See Ansoff 1984, p. 31.

74 Porter 1996, p. 64.

75 See Porter 1998b; Porter 2004.

76 See Barney, 1991, pp. 106-112; Grant 1991.

tors and customers.⁷⁷ Strategic management, consequently, follows a perspective of a systematic and effective advantage-seeking behavior.⁷⁸ The transferability to less established and less hierarchical organizations, characterized by flexibility, intrinsic motivation and an opportunity-seeking behavior, requires specific consideration. Therefore, the application of strategic management aspects has been discussed as striving for the elaboration of a strategic entrepreneurship concept.

The concept of strategic entrepreneurship can be understood as a combination of entrepreneurship and strategic management unifying the opportunity-based behavior of entrepreneurship with the strategic advantage-seeking behavior to create entrepreneurial performance and wealth.⁷⁹ With reference to the elaborations of Ireland/Hitt/Sirmon (2003) a theoretical framework of strategic entrepreneurship is presented describing the core components (entrepreneurial mindset, entrepreneurial culture and leadership, strategic resource management, and the application of creativity and innovation development) and their interplay toward competitive advantage and wealth creation (see Figure 3).

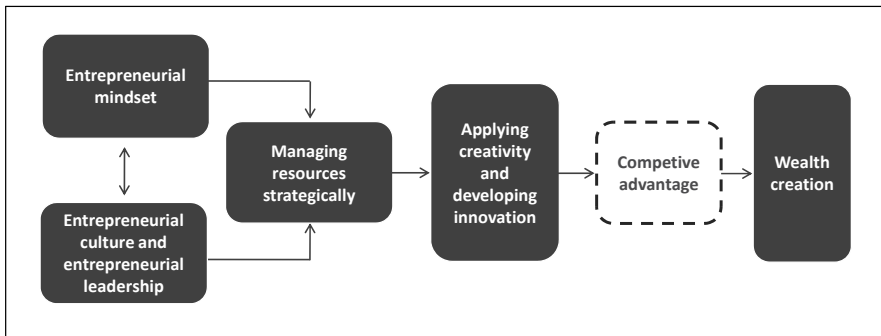


Figure 3: Path model of strategic entrepreneurship

Source: Ireland/Hitt/Sirmon 2003, p. 967.

- Entrepreneurial mindset: Capturing the benefits of uncertainty by taking risks to exploit new opportunities clears the way to outperform competitors.⁸⁰ An entrepreneurial mindset draws on this attitude and can be defined as “a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and re-

77 See Grant 1996a, p. 113; Teece/Pisano/Shuen 1997; Teece 2009.

78 See Ireland/Hitt/Sirmon 2003, p. 966.

79 See Hitt et al. 2001, p. 481; Ireland/Hitt/Sirmon 2003, p. 963.

80 See Miles et al. 2000, p. 101; Shepherd/McMullen/Jennings 2007, p. 77.

newal.”⁸¹ The recognition of entrepreneurial opportunities represents an initiator for the entrepreneurial process and may be seen as the decisive competence of the entrepreneur.⁸² Caused by an asymmetric share of information within dynamic market conditions, entrepreneurial opportunities might result from changes in legislation or technology leading toward a fluctuation of the relative value of resources currently controlled.⁸³ Furthermore, the ability of the entrepreneur to be alert toward an increasing demand of a certain product or service or in general the identification of market imbalances in the form of “flashes of superior insights” must be considered.⁸⁴ To exploit the opportunities arising from these circumstances an entrepreneurial mindset systematically approaches the time required and the relevant wealth-creating goals in order to pursue the opportunity in the form of an entrepreneurial framework.⁸⁵ Consequently, apart from opportunity recognition competencies, strategic and organizing competencies are considered relevant components within the entrepreneurial mindset.⁸⁶

- Entrepreneurial culture and entrepreneurial leadership: Based on a combined organizational approach toward opportunity- and advantage-seeking behavior “an effective entrepreneurial culture is one in which new ideas and creativity are expected, risk-taking is encouraged, failure is tolerated, learning is promoted, product, process and administrative innovations are championed, and continuous change is viewed as a conveyor of opportunities.”⁸⁷ Organizations of such culture are attractive to people with entrepreneurial mindsets acting either as intrapreneurs⁸⁸ or entrepreneurial leaders. According to Covin/Slevin (2002) an entrepreneurial leadership can be characterized by six imperatives: (1) The enrichment of human capital by developing individual entrepreneurial capabilities such as creativity and strategic resource management. (2) An open flow of information among organizational members regarding radical innovation projects. (3) The communication of values resulting from opportunities identified. (4) The question-

81 Ireland/Hitt/Sirmon 2003, p. 968.

82 See Man/Lau/Chan 2002, 132.

83 See Shane/Venkataraman 2000, p. 220.

84 See Alvarez/Barney 2002, p. 89. Faltin (2010) emphasizes in his approach to entrepreneurship ‘flashes of superior insight’ as decisive component of entrepreneurial success. Based on the case study of Teekampagne, he discusses the hypothesis that good ideas are more relevant than capital to start a successful venture. Teekampagne directly imports Darjeeling tea from the plant in Nepal to Germany, cutting out various stages of the import process offering a high-quality product at lowest market price (www.teekampagne.de/en).

85 See Ireland/Hitt/Sirmon 2003, p. 969.

86 See Man/Lau/Chan 2002, 132.

87 Ireland/Hitt/Sirmon 2003, p. 970.

88 See Pinchot 1985; Pinchot/Pellman 1999.

ing of the dominant logic⁸⁹ by evaluating resource allocation decisions. (5) The questioning of the corporate vision to identify the perspective of the firm toward opportunities. (6) Being strategically entrepreneurial and developing a corporate culture of opportunity- and advantage-seeking behavior.

- Strategic resource management: This draws on the elaborations of the resource-based view of the firm defining resources as tangible and intangible assets such as capabilities and knowledge controlled by a corporation enabling the firm to implement strategies to improve performance.⁹⁰ These resources are of strategic relevance to the firm if they are valuable, rare, imperfectly imitable, and non-substitutable.⁹¹ Ireland/Hitt/Sirmon (2003, pp. 973-977) elaborate on financial capital, human capital, and social capital as the critical portfolio of tangible and intangible resource requiring a strategic management due to its dynamic character within a strategic entrepreneurship perspective. This approach contains three dimensions to managing resources strategically: (1) Portfolio structuring refers to a continuous evaluation whether resources create synergies in combination with other resources of the corporation's portfolio. (2) A bundling of resources aims at creating specific capabilities required to implement corporate strategies. This may serve, on the one hand, to maintain competitive advantages or, on the other hand, (3) to create a leverage of capabilities across business units exploiting opportunities to achieve competitive advantage.⁹²
- Application of creativity and innovation development: This refers to the concept of creative destruction, where innovations continuously crowd-out obsolete goods, services and processes initiating corporate growth and wealth creation.⁹³ Creativity, consequently, can be understood as the basis for innovation and defined as "an approach to work that leads to the generation of novel and appropriate ideas, processes, or solutions."⁹⁴ Depending on the individual perspective of knowledge base and competences the intensity of innovation impact may differ. Furthermore, organizational structure plays a decisive role in the capability of people to be creative.⁹⁵ Therefore, one has to differentiate between sustaining innovations that incrementally improve current products or services and radical innovations that require restructuring and organizational change due to a higher innovation impact.⁹⁶ Using strategic entrepreneurship effective-

89 For a detailed discussion of the concept of 'dominant logic', see Prahalad/Bettis 1986; Bettis/Prahalad 1995.

90 See Barney 1991, p. 101.

91 See Barney 1991, pp. 106-112.

92 See Ireland/Hitt/Sirmon 2003, p. 979.

93 See Schumpeter 1996, pp. 81-87.

94 Perry-Smith/Shally 2003, p. 90.

95 See Amabile 1998.

96 For a more detailed discussion of the dimensions of innovation see Chapter 2.1.2.1.

ly “leads to a comprehensive and integrated commitment to both sustaining and disruptive innovations as drivers of wealth creation.”⁹⁷

The interplay of the aspects introduced toward to gain competitive advantage and wealth creation requires a continuous balance of opportunity- and advantage-seeking behavior. It can be anticipated that “successful organizations as ones in which strategic entrepreneurship will be used to deal with the organizational tension that surfaces as firms try to simultaneously emphasize today what they already do well (relative to competitors) while exploring for opportunities to build the foundation for their future success. Thus, we believe that superior firm performance will be a function of the degree to which firms learn how to combine the best of strategic management and entrepreneurship past the source of today’s and tomorrow’s competitive advantages.”⁹⁸

2.1.1.2 The Entrepreneurial Firm

Based on the elaborated understanding of entrepreneurship as a process of discovery, evaluation, and exploitation of opportunities to create market innovations,⁹⁹ an entrepreneurial firm is understood as a corporation “that engages in product-market innovations, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch.”¹⁰⁰ The entrepreneurial firm is characterized by an entrepreneurial orientation or posture emphasizing the pursuit of opportunities, in the light of the risk involved to achieve innovation, which requires an anchoring of a specific thought pattern within management practices as well as corporate strategy. This pattern is embodied in the entrepreneur or the employees of a decision-making authority such as top management. “An entrepreneurial strategic posture is characterized by frequent and extensive technological and product innovation, an aggressive competitive orientation, and a strong risk-taking propensity by top management.”¹⁰¹ This perspective allows understanding entrepreneurship as a management approach. It is based on the pursuit of opportunities combining, on the one hand, management practices such as planning, organization and control and, on the other hand, the implementation of entrepreneurial behavior applicable to new ventures as well as established organizations.¹⁰²

97 See Ireland/Hitt/Sirmon 2003, p. 983.

98 Ireland/Webb 2007a, p. 59.

99 See Shane/Venkataraman 2000, p. 218; Stevenson/Jarillo 1990 p. 23; Krackhardt 1995, pp. 53-55.

100 Miller 1983, p. 771.

101 Covin/Slevin 1989, p. 79.

102 See Drucker 2002, p. 131; Stevenson/Jarillo 1990, p. 23.

New ventures, especially in technological fields, may demand high specific technological knowledge but lack the required management skills to follow a sustainable development of the organization. Established corporations, instead, face the pressure of continuous improvement and innovation performance to sustain market share and competitiveness, and therefore require continual stimulation of entrepreneurial spirit. Drawing on the works of Sharma/Chrisman (1999, p. 11) and Brown/Davidsson/Wilkund (2001, p. 953), which describe a firm-level perspective of entrepreneurship in the form of a corporate entrepreneurship paradigm as an area of research which “is still in its infancy,” several contributions can be identified that systemize and ground the construct. “Corporate entrepreneurship refers to the process whereby the firms engage in diversification through internal development. Such diversification requires new resources combinations to extend the firm’s activities in the areas unrelated, or marginally related, to its current domain of competence and corresponding opportunity set.”¹⁰³ The field of corporate entrepreneurship, consequently, offers a unified perspective of entrepreneurial behavior and management practices conceptualized as opportunity-based firm behavior, respectively, entrepreneurial management.¹⁰⁴

The construct of entrepreneurial management, which has raised attention in the academic discussion following the contribution by Stevenson/Jarillo (1990), considers the concept of entrepreneurship as something radically different than corporate management. While corporate management is understood as an administrative process aligned for the most efficient use of resources controlled, “entrepreneurial management may be seen as a ‘mode of management’ different from traditional management, with different requirements of control and rewards systems,”¹⁰⁵ set on pursuing and exploiting opportunities regardless of the resources currently controlled.¹⁰⁶ Although the concept was published as ‘a paradigm of entrepreneurship’ in the *Strategic Management Journal*, only few articles can be identified that directly refer to the terminology.¹⁰⁷ Based on the works by Stevenson,¹⁰⁸ Brown/Davidsson/Wilkund (2001) operationalize the entrepreneurial management construct and create a continuum for differentiating an entrepreneurially focused organization from an administratively focused organization (see Table 1). Within this continuum an entrepreneurial firm refers to the character of a promotor striving for the pursuit of

103 Burgelman 1983, p. 1349. For an overview of definitions of corporate entrepreneurship see Sharma/Chrisman (1999, p. 14).

104 See Brown/Davidsson/Wilkund 2001, p. 953; Stevenson/Jarillo 1990, p. 21.

105 Stevenson/Jarillo 1990, p. 25.

106 See Stevenson/Jarillo 1990, p. 23; Brown/Davidsson/Wilkund 2001, p. 955.

107 See e.g. Steier/Chrisman/Chua 2004; Rae 2007; Freiling 2009. For a systematic literature review on ‘entrepreneurial management,’ see Pechlaner/Doefer (2010, pp. 83-85).

108 See Stevenson 1983; Stevenson/Gumpert 1985; Stevenson/Jarillo 1986; Stevenson/Jarillo 1990.

opportunities, whereas an administrative firm is characterized by a trustee aiming at an efficient use of resources. This comparison is based on the following eight dimensions:

<i>Entrepreneurial focus</i>		<i>Conceptual dimensions</i>		<i>Administrative Focus</i>
Driven by perception of opportunity	←	Strategic orientation	→	Driven by controlled resources
Revolutionary with short duration	←	Commitment to opportunity	→	Evolutionary
Multi stage at minimal exposure	←	Commitment of resources	→	Single state with complete commitment
Episodic	←	Control of resources	→	Ownership
Flat, multiple informal networks	←	Management structure	→	Hierarchy
Based on value creation	←	Reward philosophy	→	Based on responsibility and seniority
Rapid growth	←	Growth orientation	→	Safe, slow, steady
Promotion of search for opportunity	←	Entrepreneurial culture	→	Opportunity search based on resources controlled

Table 1: Continuum of entrepreneurial management

Source: Based on Brown/Davidsson/Wilkund 2001, p. 955.

- **Commitment to opportunity and strategic orientation:** A promotor focuses on the emergence of opportunities and is willing to act ad hoc accordingly to pursue the opportunity regardless of the prevailing conditions. A trustee, in comparison, primarily analyzes the situation to evaluate potential risks. The opportunity, consequently, is assessed within the framework of resources controlled and is seen as attractive if an opportunity for increasing efficiency can be identified.¹⁰⁹ Strategic orientation in this case is based on efficiency-seeking behavior, whereas the promotor derives strategy directly from emerging opportunities leading to a reconfiguration of processes defined.¹¹⁰
- **Commitment of resources and control of resources:** While a trustee aims for a long-term bonding to resources, preferably in terms of ownership, and a complete control of these as a basis for entrepreneurial behavior,¹¹¹ a promotor follows the idea of making “a little bit more with a little bit less.”¹¹² The entrepreneurial behavior of the promotor aims at the pursuit of opportunities regardless of the resources controlled. Consequently, value creation is maximized by exploiting opportunities, whereas a bonding to the necessary resources is minimized. In multi-stage testing the extent of resources necessary is determined preserving the flexibility to react quickly to changing conditions.¹¹³

¹⁰⁹ See Paladino 2007, p. 549.

¹¹⁰ See Brown/Davidsson/Wilkund 2001, p. 956.

¹¹¹ See Covin/Slevin 1991, p. 15.

¹¹² See Stevenson 1983, p. 11.

¹¹³ See Brown/Davidsson/Wilkund 2001, p. 956; Stevenson 1983, p. 10.

An entrepreneurially focused firm proposes a minimum bondage to tangible resources; the establishment of intangible resources such as knowledge, capabilities, and competencies is strived for.

- Management structure and reward philosophy: A promotor strives for the establishment of a flat structure with multiple informal networks. This creates a working atmosphere in which all members can act freely to pursue the exploitation of opportunities. Consequently, firms with an entrepreneurial focus align payment directly to value creation performance. A trustee, instead, prefers a clear hierarchical structure and precisely defined areas of responsibility aligned for an efficient use of resources controlled. Therefore, payment is linked to hierarchical levels and the corresponding responsibility of existing resources.¹¹⁴
- Growth orientation and entrepreneurial culture: Corporations with an entrepreneurial focus aim at realizing high growth rates.¹¹⁵ Achieving this goal requires an intense specificity of an entrepreneurial culture characterized by the pursuit of opportunities and the inter-connected willingness to take risks.¹¹⁶ The active practice of such a culture stimulates the development of new ideas as well as the promotion of creativity and the testing of new possibilities. Enabling a collective exchange of ideas and creating a creative climate characterize a culture of this kind.¹¹⁷ In comparison, a corporation with an administrative focus tends to avoid volatility and shows more risk-averse behavior and thus targeting steady and continuous growth rates and causing a sustainable impact on corporate development.¹¹⁸ A working atmosphere is created in which a pursuit of opportunities is only supported only within the framework of feasibility and resources controlled.¹¹⁹

Thus, the entrepreneurial firm may be characterized by an entrepreneurial focus promoting the pursuit of opportunities, even though most corporations are unlikely to be entrepreneurial over the entire spectrum.¹²⁰ Taken together, the concept of an entrepreneurial firm refers to the thought pattern of Stevenson's elaborations which emphasize a opportunity-based firm behavior expressed by a strategic and organizational design of the facilitating members' of the organization to take entrepreneurial action and therefore to pursue and exploit opportunities to achieve corporate performance.

114 See Brown/Davidsson/Wilkund 2001, p. 956.

115 See Stevenson/Jarillo 1986, p. 10.

116 See Stevenson/Jarillo 1990, p. 25.

117 See Tidd/Bessant 2009, pp. 130, 433; Trott 2008, p. 76.

118 See Bessant/Tidd 2011, p. 323.

119 See Brown/Davidsson/Wilkund 2001, p. 956.

120 See Brown/Davidsson/Wilkund 2001, p. 965.

Co-Innovation Competence

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