Path dependence in the entrepreneurial process

Introduction

Viewing the entrepreneurial venture creation process (Kelley et al. 2011; Brixy et al. 2011; Bhave 1994; Sánchez López 2012; Berger 2014; Berger 2015), it might appear that a path leads through process steps from generally considering becoming an entrepreneur, over generating business ideas to finally founding a company. As these steps are in sequence in the process, it might seem that the natural way would be to progress from one step to the other and dropping out of a step would be rather an exception. However, it can be argued that the opposite is the case. By applying the concept of path dependence (David 1985; David 2001; Arthur 1989; Arthur 1990; Stack & Gartland 2003; Sydow et al. 2009) on the entrepreneurial process this study unveils that staying within the process is actually the exception and that the path in every single step in the process leads out of it. This study assumes that staying in the process and finally becoming a founder requires constant breaking of the path.

Path dependence

A powerful concept that can help to better understand the process of venture creation and causal chains that lead to success or failure is the concept of path dependence (David 1985; David 2001; Arthur 1989; Arthur 1990; Stack & Gartland 2003; Sydow et al. 2009). According to Sydow et al. (2009), the concept of path dependence provides a framework which explains the process how organizations can get into a situation, where their operating range tightens and eventually predicts their destiny. Originally, the organization starts with a wide scope of possible options to choose from (Phase I, see Fig. 1). The process of becoming path dependent starts with certain events as a root cause. Under certain circumstances, these events can develop a self-reinforcing dynamic, due to a number of economic and social patterns. As these dynamics get stronger and stronger, a critical juncture is reached, where the operating range of the organization narrows (Phase II). When this juncture is passed, the organization inevitably ends up in a lock-in situation with a “corridor of limited scope of action that is strategically inefficient” (Sydow et al. 2009). In this state (Phase III), decisions and commitments taken in the past cannot be undone anymore and trigger follow-up decisions and eventually a lock-in situation (Freiling et al. 2010; Sydow et al. 2009). The organization then finds itself in a state of inertia and suffers from the effect that its “history

matters" (Sydow et al. 2009; Freiling et al. 2010; Teece et al. 1994). Usually the path, the organization is doomed to follow at this point in time is not the most favorable one.

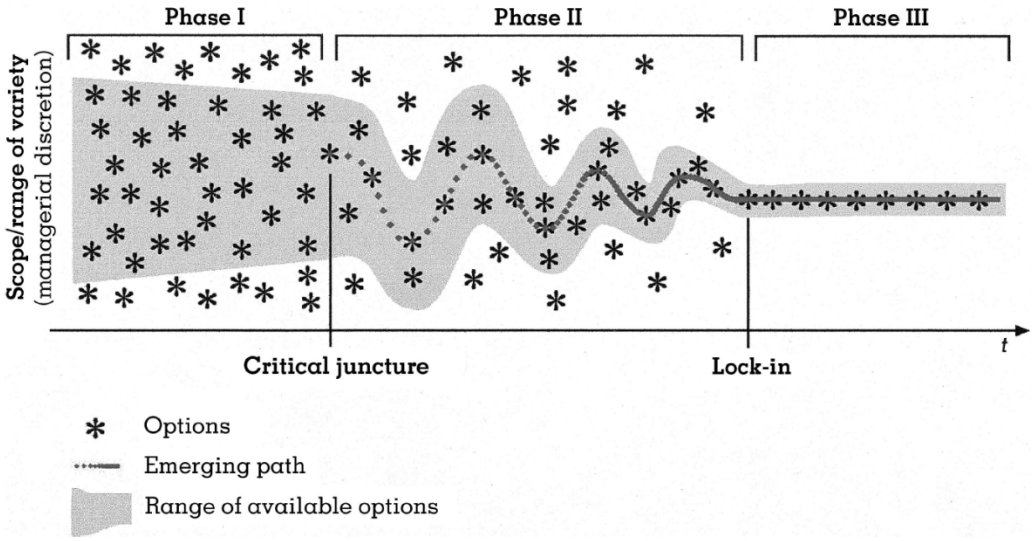

Fig. 1: The Constitution of an Organizational Path (Sydow et al. 2009, p.692)

Sydow et al. (2009) identify four major self-reinforcing effects that can potentially trigger states of path dependence in organizations: (i) learning effects, (ii) adaptive expectations (the adaption of behavior based on the experiences and expectations of other persons' reactions on the behavior), (iii) coordination effects (c.f. network effects) and (iv) complementary effects (Panzar & Willig 1981). Depending on the intensity and inter-relatedness of these effects path dependence may occur.

Foundation requires repeatedly breaking the path

These four major self-reinforcing effects triggering path dependence (Sydow et al. 2009) will be investigated in the entrepreneurial context to test the assumption of this study that staying in the entrepreneurial process and finally becoming a founder requires breaking the determined path repeatedly. Due to *learning effects* (Yelle 1979; Spence 1981; Adler & Clark 1991) "the more often an operation is performed, the more efficiency will be gained with subsequent iterations" (Sydow et al. 2009). As repetition usually creates efficiency, there is an incentive to stick to the same actions as performed before. Whatever an individual has done before, stopping to do it and becoming a novice entrepreneur is clearly something new. Learning of previous experiences and the subsequent efficiency gains of continuing cannot directly be used when becoming an entrepreneur. This also applies for the use of highly

efficient mental models and heuristics for decision-making (Prahalad & Bettis 1986) which cannot be applied in an entirely new situation, like becoming an entrepreneur. This situation can be compared with established companies with a high staff turnover, where new employees enter the company at another level of the learning curve. Research shows, that such companies “significantly underperform their rivals” (Hatch & Dyer 2004, p.1155). Usually, the longer the individual was in his/her current occupation, the better he/she got in it (Spence 1981). This builds up opportunity costs and makes it harder to give up this current occupation. The supposable path is to continue the current situation the same way as before. Becoming an entrepreneur therefore requires breaking the path, as the illustration in Fig. 2 suggests.

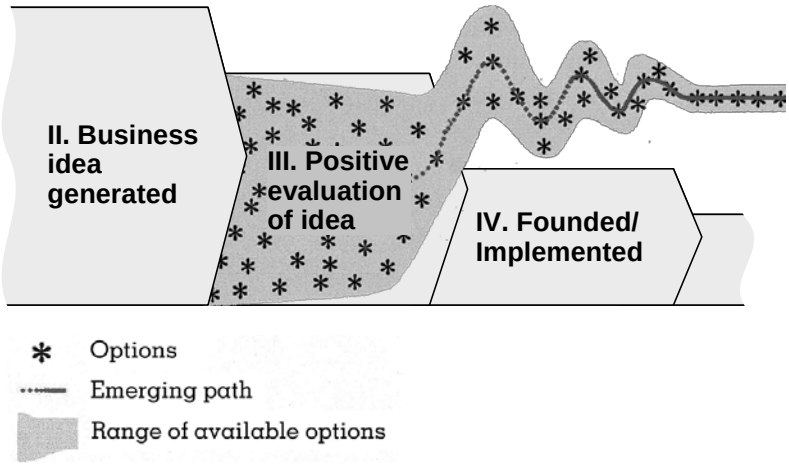

Fig. 2: The concept of path dependence (Sydow et al. 2009) applied to the entrepreneurial process

Adaptive expectations describes the phenomenon that decision makers tend to anticipate what others expect from them and to decide accordingly (Sydow et al. 2009). As people usually expect for the future what they experienced in the past, this causes a continuous path (Sydow et al. 2009). Members of the organization tend to follow these best practices in expectation that others would do the same, since they want to be part of the mainstream (Kulik et al. 2008). This adaptation reinforces these best practices, since "[a]daptation creates rules (and even rituals) of behavior" (Luhmann 1995, p.122).

Before a person becomes an entrepreneur, (s)he is in another context, for example in a previous occupation, still in education or even in unemployment. Whatever the previous state is, the potential entrepreneur faces certain expectations of his/her environment. Being in an employment situation, supervisors, co-workers and even external parties who interact within

the business context expect from the individual to continue the current occupation. At most, they expect changes within the current organization, for example by being promoted to a superior position or switching to another division. What they do not expect is that the potential entrepreneur leaves the company. These examples illustrate that in most thinkable situations the potential entrepreneur could come out of before founding, the social environment has often strong expectations of the individual not to become an entrepreneur. If the prospect founder still does so, (s)he does not live up to the peers' expectations and takes the risk of becoming an 'outsider' of his/her social group (Kulik et al. 2008). Taking the decision to found, actually founding and being an early entrepreneur requires ignoring the expectations of others and not adapting to them. The natural path leads out of the entrepreneurial process at this stage and staying within the process and becoming an entrepreneur requires breaking the path.

Coordination effects describe the phenomenon that sticking with established teams and processes makes the outcomes predictable and hence more efficient and comfortable. Implicit or explicit rules facilitate coordination among different people the more, the more people use them (North 1990; Sydow et al. 2009). This creates a "[m]ore efficient interaction among these actors" (Sydow et al. 2009, p.699) and hence "coordination costs can be significantly reduced" (Sydow et al. 2009, p.699).

In his/her previous, well-rehearsed professional as well as private social situation the prospect entrepreneur benefits from this coordination and the resulting synergies and cognitive confirmation. Often employees have developed a certain feeling over time which behavior in the job is appreciated and leads to acceptance and success and which does not (Sydow et al. 2009). Becoming an entrepreneur, the prospect founder has to give up this efficient, predictable context and move into unknown territory. This step is even harder than just switching jobs to a new company, because as the new company already exists, there are these unwritten rules and cultural behavior guidelines already in place (Luhmann 1995; Szulanski 1996). They just have to be learned and adapted to, but not newly developed. These coordination effects can cause escalating commitment towards the current choice of decisions and actions (Freiling et al. 2010) and incentivize the potential entrepreneur to stay in his/her previous well-rehearsed situation. Taking steps to give up this developed efficiency and starting a new venture requires breaking the path.

Complementary effects describe the combination of certain input factors, processes or output factors that create additional value due to ‘economies of scope’ (Panzar & Willig 1981). This could apply to two or more employees or business divisions working together as an established ‘dream team’ (Sydow et al. 2009) or a combination of certain products or services being more efficient than producing or selling them separately (Sydow et al. 2009). A potential entrepreneur in his/her previous occupation can take advantage of these complementary effects. Having other components provided by the organization reinforces the impact of the own components. These interactions determine a path of sticking to the current complementary entities which get increasingly dominant as action patterns (Leonard-Barton 1995). When the potential entrepreneur leaves such established clusters, (s)he has to leave the resulting benefits behind. Complementary units have to be built up from the scratch in the newly founded venture. Therefore, complementary effects tend to force the prospect entrepreneur to stay on the current path and continue the previous occupation. Implementing his/her idea and actually founding a company requires breaking this path.

Path dependence in the single steps of the entrepreneurial process

The investigation of the self-reinforcing effects that can lead to path dependency (Sydow et al. 2009) shows that all of them counteract when becoming an entrepreneur. So far the discussion above mainly focused on changing from an employee position to self-employment – as the entrepreneurial process over all. However, it can also be applied to the single steps in the entrepreneurial process. While no irreversible steps have been taken to start the own venture, for example quitting the previous job, the potential entrepreneur always has still the fallback option of discarding his/her idea of founding a company and continuing with the current occupation (McGrath 1999). Therefore, for every single step in the entrepreneurial process before the actual foundation of the company, the above arguments can be made to support the thought of the dependent path leading out of the funnel (see Fig. 3).

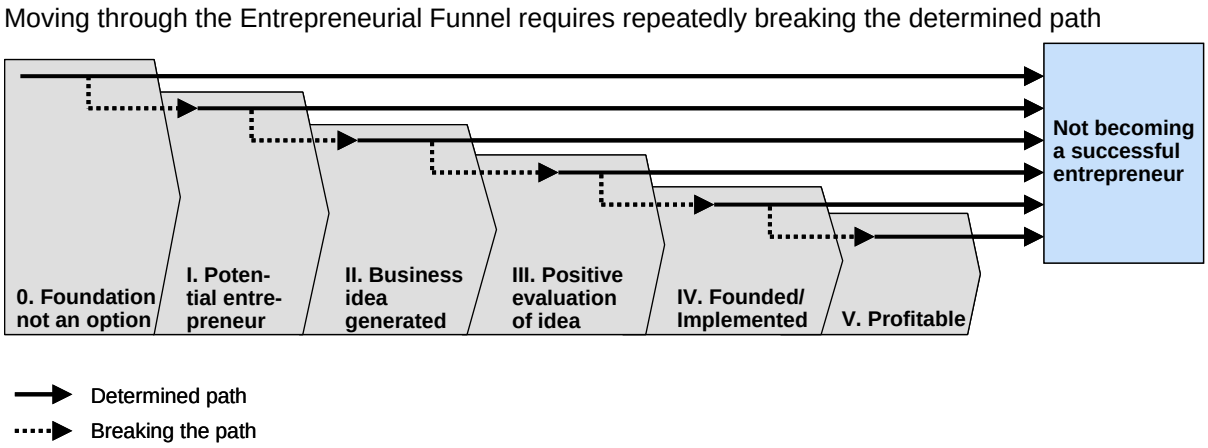

Fig. 3: Path dependence in the different steps of the entrepreneurial funnel

Conclusion and Implications

The argument above concludes in supporting the idea that moving through the entrepreneurial process requires leaving the predetermined path repeatedly. This might be counterintuitive, because the steps of becoming an entrepreneur in the process view seem to be automatically following each other subsequently. However in reality, moving all the way through the process is rather the exception. The findings are relevant to entrepreneurship education and policy-making to identify and overcome obstacles that can prevent foundations of new ventures.

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