



Understanding social innovation as an innovation process: Applying the innovation journey model

Peter R.A. Oeij^{a,*}, Wouter van der Torre^a, Fietje Vaas^a, Steven Dhondt^{a,b}

^a TNO, The Netherlands Organization for Applied Scientific Research, Schipholweg 77-89, 2316 ZL Leiden, the Netherlands

^b KU Leuven, Leuven, Belgium

ARTICLE INFO

Keywords:

Social innovation
Innovation process
Adoption
Innovation journey

ABSTRACT

The innovation journey is a process model distinguishing between the initiation, developmental and implementation/termination period of innovations; it looks at drivers and barriers, like innovation managers, investors, setbacks, adaptation, infrastructure. We operationalize this model to apply it to the process of social innovation. Eighty-two cases are re-analysed in a secondary analysis using qualitative comparative analysis to assess how social innovations develop and to investigate if they resemble the ‘innovation journey’ of innovations in technology/business.

The results show that six combinations of seven elements of the innovation journey model have the highest chance to result in adoption of the social innovation. Yet, while differing paths lead to similar outcomes (equifinality), success is dependent on contingent factors: not ‘anything goes’. The implication for practitioners is to study the six successful combinations and steer their social innovation initiatives towards a combination that fits best with their own practice.

1. Introduction

Social innovation is a fast-growing phenomenon. More and more businesses are trying to understand how social innovation can help their business model (Davies, 2014). The *Stanford Social Innovation Review* also shows many accounts of companies developing successful social innovation and/or social enterprises (see <https://ssir.org/>). The social innovation field is, however, characterized by conceptual ambiguity and a diversity of definitions. This situation impedes the development of generalizable knowledge and the formulation of articulate theories and hypotheses about the antecedents and consequences of social innovation, and under which circumstances they operate, emerge and scale (Van der Have & Rubalcaba, 2016). Businesses need this clarity if they are to adapt their business model. One of the core issues is that social innovation initiatives abound but many of them fail to become sustainable in their effort to improve social conditions. Several obstacles and barriers to this upscaling are listed in the literature. Caulier-Grice, Kahn, Mulgan, Pulford, and Vasconcelos (2010), for example, categorized four main barriers: (1) limited access to finance; (2) limited examples of scaling; (3) insufficient skills and formation/staff; and (4) missing networks and intermediates. The EU-FP7 project ‘Social Innovation: Driving Force of Social Change’ (SI-DRIVE), which investigated 1005 cases of social innovation initiatives, reported that the

upscaling in three out of four initiatives suffered from concrete barriers. In more than half of the cases, a lack of funding impedes the growth of the initiatives. A lack of (qualified) personnel and knowledge gaps hinder about one in three initiatives. Legal restrictions and insufficient political support are a third block of barriers, relevant for 14–17% of the cases (Howaldt, Schröder, Kaletka, Rehfeld, & Terstriepe, 2016, pp. 74–75). In addition to these shortages of resources – financial, human, (scientific) knowledge, legal and political – social innovations often lack organizational and leadership capabilities and infrastructural embedding, creating environments that are not friendly enough for sustaining and upscaling such initiatives (Dhondt, Oeij, & Schröder, 2018). Such barriers can be reasons why social innovations do not sustain or scale up. These insights are all focused on what does not help upscaling. With the term scaling we mean to say that social innovations scale up if an institutionalized social change in the system occurs, and that they scale out once they spread to more people without social change in the system itself.

This contribution tries to learn from successful social innovations and uses an innovative methodology for that purpose. The objective is to find out which factors contribute to the adoption of social innovation. Adoption means that the social innovation is accepted, used and applied because it is experienced as providing social and public value.

Why is this relevant for business research? Businesses understand

* Corresponding author.

E-mail addresses: peter.oeij@tno.nl (P.R.A. Oeij), wouter.vandertorre@tno.nl (W. van der Torre), fietje.vaas@tno.nl (F. Vaas), steven.dhondt@tno.nl (S. Dhondt).

that they do not operate in a societal vacuum. Future profits depend on how the business impacts on their social environment. Technology is clearly not the only driving force of business model innovation: companies need to tap into their human resources and social environment to remain successful (Howaldt & Schwarz, 2010). More and more, businesses understand that their own sustainability depends on understanding how to convince their customers that they are producing or servicing for people, planet and profit. For example, many companies see the importance of social entrepreneurship, which emphasizes social value creation together with profit making. Rebuilding the company to support social innovation enhances the social and economic participation of larger groups. It also helps to achieve other goals such as less consumption and engaging the community. Social innovation can help business innovation (Davies, 2014; Zahra, Gedajlovic, Neubaum, & Shulman, 2009). Practitioners and researchers in business need to learn from social innovation, how social innovations succeed and what the factors are that drive their emergence and growth. In the Netherlands, for example, some municipalities started to experiment with public-private partnerships that fund effective social services through a performance-based contract, the so-called ‘social impact bonds’. This stimulated social entrepreneurship initiatives to build business cases around social issues, such as employment. The Social Impact Factory is a platform of the City of Utrecht that helps to ‘match’ entrepreneurs with ‘social return’ objectives. In line with such actions, a more general Dutch governmental policy is that Dutch municipalities are asking these social entrepreneurs to spend 5% of their commission on ‘social return’ when the amount contracted out by the municipality exceeds €100,000. Social return can be effected by creating jobs or by offering support or knowledge regarding local initiatives or social enterprises, and this stimulates social entrepreneurship (OECD/EU, 2019; Oeij, Dhondt, & Ooms, 2018).

The innovative methodology consists of understanding the innovation journey of a large set of cases of social innovation. To identify the innovation journey model in these cases, a fuzzy-set qualitative comparative analysis (fsQCA) is used (Rihoux & Ragin, 2008). The present article starts with a specific definition of social innovation, together with an innovation development model for the analysis. The model stems from technological innovations. Second, the case material and fsQCA methodology are presented. Third, the contribution ends with a discussion on theoretical and practical implications, along with conclusions and suggestions for future research. The article is based on an extended report on the research (Oeij, Van Der Torre, Vaas, & Dhondt, 2018).

2. Social innovation and technological innovation

2.1. Components of social innovation

There are many definitions of social innovation but there is hardly any consensus in the academic field (Amanatidou, Gagliardi, & Cox, 2018; Edwards-Schachter & Wallace, 2017; Howaldt, Butzin, Domanski, & Kaletka, 2014; Howaldt & Hochgerner, 2018; Van der Have & Rubalcaba, 2016). To create a definition that is useful for business research, three building blocks are needed: first, it needs to be about implemented solutions with value for society; secondly, the implementation needs to be understood as a process; and thirdly, it must be clear that most implementations fail.

Social innovation as understood by the European Commission/European Union is meant to ‘empower people, and drive change’ in the sense that it leads to social change that produces sustainable social inclusion (Fougère, Segercrantz, & Seeck, 2017). A widely cited definition of social innovation is: ‘Social innovation is a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals’ (Phills, Deiglmeier, & Miller, 2008, p. 39). This useful definition stresses the need for

innovations to be implemented to support the inclusion of socially weaker groups. In our view, a successful innovation should be an implemented innovation, and imply the social inclusion of deprived target groups as well. Therefore, we suggest this working definition of social innovation: *the invention, development and implementation of new ideas to solve social problems faced by individuals, groups or communities*. This definition sees the ‘implementation’ of innovation as an indicator of success in solving social problems. Social problems are any situation that prevents individuals, groups or communities from being included in society as is understood in ‘inclusiveness’ and ‘participation’; or, conversely, any individual, group or community that is socially excluded from social welfare and well-being. Social inclusion is the process by which societies combat poverty and social exclusion (Atkinson & Marlier, 2010).

Social innovation is not only a slippery concept because the social element is hard to pin down, but also the term ‘innovation’ in relation to ‘social’ is a complicated matter. Innovation is mainly understood in the context of tangible goods or services. Garud and colleagues suggest that we learn more about this phenomenon if we consider innovation – including social innovation as we see it – as a process (Garud, Tuertscher, & Van de Ven, 2013). That process is inherently complex, because many variables interact, and the outcome of their interplay cannot be predicted or controlled. With regard to the process of innovation, Garud et al. (2013) distinguish three sequential phases, namely invention, development and implementation. Each phase requires different skills and different kinds of stakeholders. Different kinds of complexities arise in innovation processes: a) co-evolutionary complexities, because they simultaneously imply multiple levels of analyses; b) relational complexities, as they involve a diversity of social actors and material elements; c) inter-temporal complexities, as temporal events and sequences are experienced in multiple ways; and d) cultural complexities, as they unfold in contextualized settings. Finally, innovation processes unfold at different levels, namely firms, multi-party networks and communities. This implies differences in the kinds of interactions, in legal status, in competitiveness and co-creation, and in public, private or public-private entities (Garud et al., 2013, pp. 774, 777). While complex innovation processes cannot be controlled and managed, one can learn to manoeuvre them, as such processes are never similar, they do tend to follow remarkably similar patterns (Van de Ven, 2017; Van de Ven, Polley, Garud, & Venkataraman, 1999/2008). Complexity also helps to explain why social innovations have difficulties in scaling up. According to Westley, Antadze, Riddell, Robinson, and Geobey (2014), social innovators require different skills to move from scaling out to scaling up, where the first is limited to engaging more people and covers a larger geographic area, whereas the latter aims at a social, institutional change of the system itself. The findings of Herrera suggest that for social innovation, process variables are instrumental for its success (Herrera, 2016).

The final component in the understanding of social innovation is that most social innovations fail to get successfully implemented. Many authors on innovation, organizational change, project management and restructuring see about seven out of ten innovation efforts fail in the sense that their journey does not arrive at the desired spot (for instance Mulder, 2016; Sauser, Reilly, & Shenhar, 2009). Apparently, the successful outcome of innovation processes is not easy to predict. The progress of innovation processes is non-linear, hard to predict, rich with emergent properties and serendipities, and can sometimes even have wicked or chaotic consequences (Van de Ven, 2017). This will also be the case with social innovation.

2.2. Borrowing from innovation journey studies

Therefore, to study and analyse social innovation we need a conceptual approach that is open to a complexity perspective of the social innovation process and is helpful in understanding the adoption of the social innovation. Such an approach should allow patterns of the

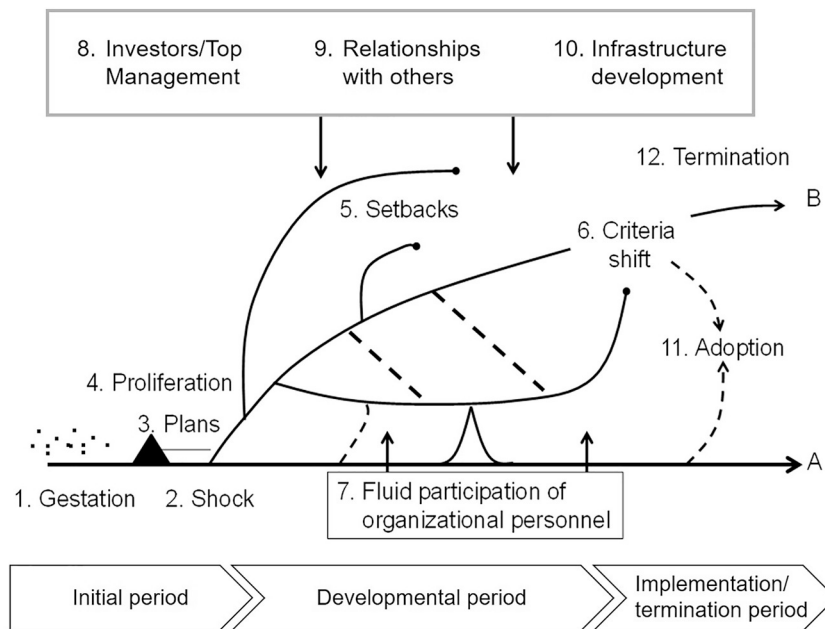


Fig. 1. Key components of the innovation journey of technological innovations (Van de Ven et al., 1999/2008, p. 25).

innovation process to be discerned and the theoretical insight into the mechanisms that drive the adoption of social innovations improved. The ‘innovation journey’ model for technological innovations suits these requirements. This model was developed during the Minnesota Innovation Research Program of the last century (Van de Ven, 2017; Van de Ven, Angle, & Poole, 1989; Van de Ven et al., 1999/2008). Fig. 1 summarizes the main insights from these studies.

From this figure, it can be seen that the concept of the innovation journey summarizes innovations as a non-linear cycle of divergent and convergent activities that may repeat over time and at different organizational levels if resources are obtained to renew the cycle. Although innovations are unique, there seem to be patterns of commonality pertaining to the initiation, development and implementation periods. Preceding the initiation of an innovation there is a gestation period of seemingly coincidental events, ‘shocks’ from internal and external resources triggering the concentration of efforts and making of plans to obtain resources. A developmental period sets in after this stage-setting launching period, during which concentrated efforts are undertaken to transform the innovative idea into a concrete reality. Finally, an implementation or termination period is observed in which the innovation is adopted and institutionalized as an ongoing programme, product or business, or it is terminated and abandoned (Van de Ven et al., 1999/2008).

The ‘richest’ period in terms of events and complex interactions is often the developmental period. Van de Ven et al. (1999/2008) make it clear that much is happening with ups and downs in an iterative way, without really being able to control what is happening. The initial innovative idea proliferates into numerous ideas and activities that follow different paths. There are frequent setbacks and mistakes because plans go awry, or unanticipated environmental events alter ground assumptions of the innovation. Over time, criteria for success and failure often change, resulting in power struggles between stakeholders, especially resource controllers and innovation managers (innovators) inside and outside the organization. Innovation personnel participate in highly fluid ways. They are involved part-time or project-based, have high turnover rates and experience changing human emotions (euphoria, frustration, closure). Investors and top managers have a strong influence in exerting checks and balances on one another and performing interventions. They make important decisions or solve problems.

Finally, there is the involvement of third parties, such as competitors, trade associations, government agencies and so on, that either support or hinder the development and implementation of innovations.

It therefore seems impossible to manage innovation easily, let alone plan it (Van de Ven, 2017), it can only be intended and facilitated. The complexity of interactions is growing by the day. The strong heterogeneity of customer demands has a diverging effect on innovation paths. Meeting customer demands has stimulated open innovation. Shorter product life cycles have led to a continuous need for venture capital and pushed innovation to become a multi-player endeavour. But what do you do if you still need to manage an innovation, and must deal with uncertainty (Böhle, 2011; Wolf, 2011)? One has to manoeuvre carefully, based on broad knowledge and experience (Van de Ven, 2017).

The model of the innovation journey has been applied mainly to technological innovation; its application to social innovation is, as far as we know, novel. It is therefore relevant to mention a few differences between social innovation on the one hand, and technological innovation and ‘innovation in management’ on the other (the latter meaning to include innovation in management, organization and business) (Dhondt & Oeij, 2014). Social innovation differs from innovation in managerial and technological contexts. Where social innovation addresses fulfilling social needs and meeting public demands and public value (and social value) in a social way, innovation related to management and technology is more strongly linked with profitability, market demands and commercialization (Phills et al., 2008; Pol & Ville, 2009). Yet, apart from such differences there are also connections, as social innovation also affects new business models (Zahra et al., 2009) of both private and public organizations. Social innovation offers benefits from two sides: it is useful for producing public goods without (much) public red tape, but also for producing socially valued goods and services without only being dependent on financial capitalism. In this regard, one could point to the initiatives from business with the intention of contributing to social goals (see also Herrera, 2016). Sustainable production, green technologies and corporate social responsibility are examples of these. Moreover, there is an increasing importance of social innovation as compared to technological innovation, because better deployment of social resources is a sine qua non for solving societal challenges (Howaldt & Schwarz, 2010).

Table 1
Social innovation journey compared to business/technological innovation journey. Innovation journey model (in bold the variables used in QCA).

Key element	Business & technological innovation	Operationalization towards social innovation	Questions and answering categories (1–5-point scale)
Initial period			
1. Gestation (incubation)	Phase of incubation in which people engage in activities that set the stage for innovation. Often chance plays a significant role. But structural differentiation is an enabler, if structural boundaries are permeable (i.e. organizational climate). Increases in the number of initiatives undertaken by a large number of interacting people increase the probability of stimulating innovation.	1. (initial) Stakeholder commitment (Agest1) Bringing together the people who start developing a social innovation initiative. Incubation can sometimes be rather lengthy, even years.	A. To what degree were relevant stakeholders involved in the start-up phase? [relevant = played a significant role in starting the SI initiative; stakeholders = here others than the target group] 1 = no relevant stakeholders were involved 3 = (some but not all) stakeholders were involved but their role was not relevant/clear-cut 5 = significant stakeholders were involved. [The element of shocks is incorporated in 'setbacks'.]
2. Shocks	Shocks trigger innovation. These are internal or external events that concentrate attention and focus the efforts of stakeholders, e.g. new leadership, product failure, budget crisis, loss of market share, etc. (i.e. critical incidents). Stakeholders need to be convinced. Direct personal confrontations with the sources of the problems or opportunities are needed to motivate them to act.	A sense of urgency to launch the initiative by mobilizing the right stakeholders or creating a network ('mass'); or by a social evil/abuse. Social shocks may be clear triggers to create the sense of urgency, but also down-to-earth 'social needs' and 'empathy' or 'altruism' as a driver.	
3. Plans	Development of plans and budgets submitted to top management and investors to launch the innovation. Innovators are often too optimistic to convince investors. They need more time for capital investment than the time they get for innovation start-up (too overoptimistic to commit investors). Miscalculations are based on overoptimism (risk-taking) and self-deception (mindlessness, confirmation bias).	2. Financial/political support (Bplan2) Developing a concrete approach and a concrete goal coupled to a concrete target group that attracts investors/subsidizers. Industriousness and charismatic leadership of individuals can also be drivers. In hindsight one can reconstruct a business case.	B. To what degree was there concrete support for the initiative? [support can be funding, political backing] 1 = there was no support 3 = there was some support, but it was still not easy to acquire budgets/funding and (political) support 5 = there was substantial support [e.g. because there was a concrete (business) plan, with concrete goals, which enabled the acquisition of budgets/funding and (political) support].
Developmental period			
4. Proliferation	After launching developmental activities the process proliferates into diverse pathways, complex to manage and like a 'fireworks' model, due to four factors: the ambiguity and uncertainty of the process; innovations were developed not in single entities but in families of related entities creating complexity; through multiple pathways diversifying and leveraging risk was sought after; and different paths require different logics or mechanisms to govern them. The interaction of a few relatively simple developmental processes can cause complexity (i.e. butterfly effect).	Tension between social value and economic value, between government goals and the goals of the social innovation, between the interests of participating stakeholders that complicate the launch or the clear direction of the course. At individual level and in the cases of individual leaders, proliferation can also mean that the burden gets too high or the tasks become too complicated.	[This topic is too difficult to measure]
5. Setbacks	Setbacks occur frequently because initial plans go awry or unanticipated environmental events occur that significantly alter ground assumptions and context. Path dependency causes problems to accumulate in vicious circles (spillover effects, interdependencies). Due to four types of learning disabilities the setbacks went uncorrected (noise and mixed signals, ignoring naysayers, premature changes, shifting criteria).	3. Overcoming setbacks (Cset3) Setbacks include the ending of initial funding and the absence of follow-up funding; the absence of good-quality personnel; the lack of acknowledgement by policy; the dependency of the project on the initiator or volunteers. As social innovations are heavily dependent on individuals and networks, setbacks can also manifest themselves in a lack of resilience and motivation.	C. To what degree were the project team/ members resilient enough to effectively deal with setbacks? [setback = a critical incident that threatens the continuation of the SI initiative] 1 = there was no resilience/resilient team (observed) [possibly there were no serious setbacks either] 3 = there was some resilience [there were some minor setbacks, but no serious ones] 5 = there was ample resilience (and there were serious setbacks that threatened the continuation).
6. Criteria shift	The divergent-convergent pattern of outcome criteria held by (internal) innovation managers and (external) resource controllers implies that at the beginning IMs stress input but RCs outcome, while at the end RCs stress input and IMs outcome. During the phases of innovation the power balance may shift depending on how stakeholders frame the progress (as success or failure) and act accordingly (e.g. external resource controllers decide about budgets).	4. Consensus (Dshift4) Upscaling an initiative requires sustainable organizational structure and institutionalizations, initial successes and a clear focus on the intended results, but with more stakeholders it is difficult to achieve consensus. Conflicts and difference of opinion may play a role among crucial stakeholders.	D. To what degree is consensus created among the relevant stakeholders? 1 = there was hardly any or no consensus among stakeholders (serious conflicts of interest remained) 3 = there was some/growing consensus, but not enough to make good progress 5 = there was a high sense of consensus among stakeholders (resulting in stability and cooperation, and good results).

(continued on next page)

Table 1 (continued)

Key element	Business & technological innovation	Operationalization towards social innovation	Questions and answering categories (1–5-point scale)
7. Fluid participation	Personnel in innovation teams show part-time work, high turnover rates, and lack of experience (no 'organizational memory') due to job mobility and promotion processes; in addition, non-innovation jobs (which they have) have incentives that draw people away from their innovation jobs. Individual transitions, and different human emotions and dynamics during different periods, can lead to contradictory individual-group dynamics, which erodes team cohesion and effective teamwork and emphasizes the need for coalition building. This also means that appropriate types of leadership change over time.	5. Availability of staff (Epart5) Volunteers may come and go and the initiator may lack the stamina needed, or the qualifications to guide the project from one phase to another.	E. To what degree are qualified personnel/staff available? 1 = good-quality personnel are lacking (participation is fluid and unstable) 3 = qualified personnel are not constantly available (there is much turnover) 5 = qualified personnel are constantly available, despite possible fluidity and turnover.
8. Intervention investors/top management	Top management involvement and roles differ according to conditions and organizational settings (direct involvement or at a distance; sponsor, mentor, critic or institutional leader role; responsive to conditions rather than planned action) and were most evident when significant setbacks were encountered. Depending on their positions, multiple levels of management involvement provide a balance of cross-checks among contradictory forces.	6. Leadership (Flead6) Stakeholders, partners, investors and policy supporters may complicate the project, or may leave the project; or they can give the project a positive boost and clear direction.	F. To what degree did leadership create synergy? 1 = stakeholder or leadership interventions have limited results (as conflicts of interest remain present) 3 = the present leadership cannot create clear direction 5 = stakeholder or leadership intervention creates synergy (it can transform conflicts of interest into synergy and/or shows charisma). [This topic is integrated into 'intervention investors/top management' and 'infrastructure development'.]
9. Relations with (external) others	Over time more players participate, resulting in a complex network of exchange relationships, leading to a variety of unintended consequences (risky transactions, 'hung juries', competition, groupthink, defection). The interdependencies create a point of 'self-organizing criticality' where managing relations should be focused on the web/network of relations instead of dyads.	As a non-commercial endeavour, partnerships are needed to move the project forward and to scale up, which requires policy skills for cooperation but which also complicate managing relationships. In social innovation projects, relationships can be based on common ideals in which individuals may be more individualist than collectivist at times.	
10. Infra-structure development	To implement or commercialize an innovation a community of industry infrastructure needs to be created with financial, educational and research organizations. Attention needs to be given to the role of the public sector as a stimulator/inhibitor, to the organization of the infrastructure, the firms that cooperate, resource distribution channels of firms, and competitors vs cooperators. Inherent is the paradox of cooperation and competition (triple helix, innovation ecosystem).	7. Infrastructure (Ginfr7) To become sustainable or to scale up, an infrastructure is needed that bundles a variety of expertise/experts and (supporting) organizations. Many social innovations start as a personal endeavour for which becoming an organization or being embedded in an infrastructure is just unlikely.	G. To what degree was a sustainable infrastructure created? 1 = there is no infrastructure (just the project organization/leaders) 3 = there is some infrastructure but not all relevant partners participate (not very sustainable and with fluid relations) 5 = there is a sustainable infrastructure (embedded, organized and coupled cooperation among experts, partners, financiers and/or stakeholders to deliver the SI service/product).
Implementation/termination period			
11. Adoption	Implementation begins when an innovation is applied and adopted (there is a difference between implementation within the organization that developed the innovation – home-grown – and when the innovation is developed elsewhere). Home-grown: linking and integrating the new with the old, instead of replacing the old with the new. Autonomy to internalize an innovation is better than formal compliance to adopt an innovation. Innovation roll-outs (breadth strategy) are better for innovation adoption than pilots/demonstration projects (depth strategy) because with roll-outs top management provides institutional legacy by visibility, top management stays in control and increases its power and provision of budgets, there are fewer hurdles (low hanging fruit), and fewer opportunities for opposition and sabotage.	8. Adoption (Hadop0) Adoption and dissemination of social innovation depends on the public/social value experienced by target groups and stakeholders/policymakers. Due to the lack of economic viable business models a continuous funding is required. To implement the social innovation elsewhere, adaptation to local needs is required, including a network or community or organization to host the social innovation and bring it to full stature. This can be in the form of new combinations of partners, or transformations from private to public, public to private or into public-private partnerships. In that case we can speak of scaling up.	[Outcome variable] H. To what degree did the social innovation (SI) scale up to achieve growing cooperation and stimulating social change? 1 = the SI only incidentally/partially served the target group (but no dissemination and no social/societal change) 3 = the SI was disseminated geographically/grew in scope (but limited social change) 5 = the SI became institutionalized as a sustainable practice (which influenced social change, i.e. it significantly meets a social need that reduces the social problem).

(continued on next page)

Table 1 (continued)

Key element	Business & technological innovation	Operationalization towards social innovation	Questions and answering categories (1–5-point scale)
12. Termination – implementation or failure	Innovations terminate when implemented or resources run out. Top managers have an antithetical role as supporters and resource allocators, but their role as resource controllers is decisive for an innovation, and depends on how they evaluate the progress and attribute success or failure; this attribution process is biased by their position (close to or at a distance from the innovation) and has consequences for the remedy (train, easier innovation, reprimand, second chance) and the career of the innovator (negative spillover or not).	Innovations terminate when implemented or resources run out. Successful termination implies institutionalization, formalization as policy or growth into market products/services.	[This topic is ‘absent’ in the sample of cases.]

3. The scope of the study

Our study investigates patterns of the innovation process in cases of social innovation. These patterns can inform us of possible strategies for adopting the innovation, and as such, for scaling up such initiatives to embed and become more institutionalized. The studied cases differ in the extent to which they drive social change, in that some have resulted in significant change, but many have not, and have remained rather marginal improvements from a societal point of view, as they focused on relieving direct social needs for smaller groups or geographical areas.

This article investigates the degree to which social innovations were adopted in society. By ‘adoption’ we mean whether they scaled up to achieve growing corporation and stimulate social change. We measure those social innovations against the dimension where at one end the social innovation only incidentally and partially served a target group of disadvantaged persons of communities (but did not achieve dissemination or social/societal change), and at the other end we position social innovations that became institutionalized as a sustainable social practice (which influenced social change, i.e. it significantly met social needs that reduced the social problem) (Howaldt & Hochgerner, 2018). The values between both ends indicate a combination of geographical dissemination and participation and partnerships. If social innovations scaled up (institutionalized social change in the system) or scaled out (spread to more people without social change in the system), we want to know which combination of elements played a role, for which we use the model of the innovation journey as developed by Van de Ven et al. (1999/2008).

4. Methods

4.1. Data

The data comprise 82 case studies of social innovation initiatives and projects that were conducted for seven policy fields in the SI-DRIVE project ‘Social Innovation: Driving Force of Social Change’ (2014–2017). The policy fields are: education and lifelong learning; employment; environment and climate change; energy supply; transport and mobility; health and social care; and poverty reduction and sustainable development. Within each policy field about ten to eighteen in-depth case studies were performed by different researchers, which were reported in seven separate reports and one overview report (Ecker, Gruber, Haider, & Holtgrewe, 2017).

The selection framework of the 82 cases was the database of the 1005 cases mapped by the SI-DRIVE project (Howaldt et al., 2016). The cases were nominated for in-depth study based on the theoretical framework (Howaldt et al., 2014) and the SI-DRIVE partners’ knowledge and experience of those cases, which was to indicate that the selected

cases were among the most successful in terms of operational sustainability and achieved results, i.e. positive effects for their target groups. Practical selection criteria included access to data and people, and the willingness of the initiatives’ representatives to participate in the research and guaranteeing a certain general regional variety were considered as well. The cases of the seven policy fields stem from more than 30 countries worldwide (Ecker et al., 2017) and are not homogeneous, as they are selected by SI-Drive partner researchers. The cases thus differ in many respects:

First, those cases were not selected only with a successful end result as a criterion. They could be endeavours to try to combat social issues from seven different policy fields;

Second, the selected cases play at different levels, namely individual, community, organization, municipal, regional and national (sometimes international).

Third, initiators of cases could be individuals, non-profit organizations/NGOs, private businesses, the state/government, or a combination of these.

Fourth, cases are diverse in their history and existence. Some are of a recent nature, while others started in the last century. Some have become large organizations, others have remained small, some have become widespread and others have remained locally concentrated. Fifth, some initiatives have commercial and entrepreneurial goals, while others only strive after social and societal value.

The cases are analysed and described according to the case study format of the SI-DRIVE project and reported separately. Our task was to perform a secondary analysis of those 82 case reports by applying the grid and the operationalized variables of the model of the innovation journey (see Table 1). The original case reports are written by different researchers and, although they used a similar format, they differ in depth, richness and quality, because researchers have different scientific experience and cultural background, and because the cases differ in national, economic and cultural contexts as well. We wanted to make a comparison between the cases but needed to increase the reliability of such a comparison. Therefore, we had to reprocess the information. To treat those cases in a similar fashion the analysis was performed by three researchers with a similar national and cultural background. They first analysed each case in person and gave scores to the questions in the grid. In a second step, the three researchers discussed their scores and exchanged their argumentations to ensure that their interpretation of the case descriptions was in common agreement. This sometimes resulted in adapting their individual scores if the difference between the minimum and maximum score was more than two points (on a five-point answering scale). Calculating the scores that the researchers gave to the social innovation cases on seven independent variables and one dependent variable resulted in a high and significant intraclass

correlation (ICC, two-way random, average measures = 0.892). This indicates that there is much agreement among the evaluators, indicating that the inter-evaluator reliability is satisfactory.

4.2. Method of analysis: qualitative comparative analysis (QCA)

To analyse the selected cases, we used qualitative comparative analysis (QCA) as a research technique (Legewie, 2013). QCA is largely regarded as a comparative, case-oriented approach and aims to capture the complexity of a case while providing a certain level of generalization (Rihoux & Ragin, 2008). It enables the researcher to examine the complex causal relationships within each case, and thus to uncover its underlying patterns or configuration. We opt for using fuzzy-set QCA (Rihoux & Ragin, 2008) instead of multiple regression analyses, because the latter method is inadequate for capturing equifinal configurations common in asymmetric and non-linear data sets; moreover, the number of cases is too low to include many variables in the regression. The fsQCA method allows for multiple combinations of variables to produce the same outcome; using fsQCA to analyse data sets that are asymmetrical and non-linear is preferable in our situation (Herrera, 2016; Woodside, 2013). We expect, in line with the innovation journey model (Van de Ven et al., 1999/2008), that different combinations of variables can result in adopting social innovation.

4.3. Measures

The innovation journey model of Van de Ven et al. (1999/2008) about the process of technological and business innovation is used as a framework to study the process of social innovations (see Fig. 1). Van de Ven et al. distinguish three phases in time (initial period, developmental period, implementation/termination period) and within these phases they have empirically assessed 11 key elements. We have selected the main elements of their innovation journey model and mapped these to the process of social innovation, and subsequently operationalized those elements, which we renamed the ‘social innovation journey’ (see Table 1).

4.4. Results of the analysis

4.4.1. A four-step approach

The QCA analysis follows four steps:

Step 1 – Calibration: In fsQCA the original data must be transformed into an interval scale (ranging from 0 = non-membership to 1 = full membership) using the ‘calibration method’ (Ragin, 2008; the extension ‘c’ to each variable in Tables 2 and 3 indicates ‘calibrated scores’; each score with 0.5 was manually changed to 0.51). First, the values for the anchor points (0.05, 0.5 and 0.95) are set using the 25th, 50th and 75th percentiles of each variable separately. This is justified by the notion that for this explorative study we lack the

Table 2
Analysis of necessary conditions (Outcome variable: Adoption [HadopOc]).

Variables	Consistency	Coverage
(Initial) stakeholder commitment (Agest1c)	0.640394	0.630456
Financial/political support (Bplan2c)	0.689902	0.684674
Overcoming setbacks (Csetb3c)	0.552217	0.527902
Consensus (Dshif4c)	0.719704	0.690617
Availability of staff (Epart5c)	0.673399	0.660546
Leadership (Flead6c)	0.682513	0.670945
Infrastructure (Ginfr7c)	0.815271	0.778457

Consistency threshold < 0.90 indicates no necessary conditions; coverage indicates the relative empirical weight of a condition (somewhat comparable to ‘explained variance’); the extension ‘c’ to each variable indicates ‘calibrated score’ (Rihoux & Ragin, 2008; Schneider & Wagemann, 2012).

theoretical or in-depth knowledge to do otherwise, as we did not carry out the case studies ourselves, although ideally QCA demands that the researcher moves back and forth between theory and data to retain the value of ‘thick case descriptions’ for the analysis. An inspection of the calibrated data did not lead to the threshold for the outcome variable Adoption (HadopO) being adjusted (manual recalibration). Remember that the 82 cases are a best-of selection from the sample of 1005 social innovation practices.

Step 2 – Analysis of necessary causal conditions: Necessary conditions are variables that should always be present for the outcome to occur. Hence, if the outcome is present in such a situation, so is that particular condition, and if that particular condition is absent, the outcome is absent as well. In order to see whether the outcome has the necessary conditions, a necessity analysis was performed with all the condition variables, for which a conservative consistency threshold of 0.90 was used (Schneider & Wagemann, 2012, p. 143; see also Ragin, 2008). The results of the analysis of necessary conditions showed that the consistency scores of all variables were all below 0.90, meaning that there are no necessary conditions for Adoption (HadopOc) to emerge in most configurations. As Ginfr7c (infrastructure) with 0.82 has a high score, it will emerge in many solutions.

Step 3 – Truth table analysis of sufficient causal conditions: A truth table consists of all the possible combinations of the seven condition variables ($2^7 = 128$ combinations). The frequency threshold is 1 (at least one case must fit in a combination) and the consistency threshold is 0.80 (Ragin, 2008). From the calculated complex, intermediate and parsimonious solutions, the last one uses the least number of variables to explain the data, resulting in a lower number of solutions. This means that parsimonious solutions are better to interpret. The purpose of this step is to keep consistent paths in the final solution, which implies that any combination of variables in such a path is a row that suffices for Adoption (HadopOc) to emerge. The parsimonious solution for the initial model, i.e. HadopOc = f (Agest1c, Bplan2c, Csetb3c, Dshif4c, Epart5c, Flead6c, Ginfr7c), produced six paths.

Step 4 – Finalizing solutions: The final step in the analysis is to interpret the six paths (combinations or configurations) that lead to outcomes, and to conclude which cases correspond to certain solutions (Table 3). The aim is to find the solutions with the highest coverage score (cover as many empirical cases as possible, similarly to explained variance), the highest consistency score and the minimum possible number of conditions (most parsimonious solution).

The model solution consistency is high (0.856) and the solution coverage (0.741) indicates that 74% of the cases in the analysis are covered by the model. Paths 2, 3 and 5 are the most consistent paths (> 0.90 consistency); the unique coverage of a path indicates the contribution to the model solution. No path has a high unique coverage, which indicates that there is no dominant path that leads to adoption of social innovation.

The six paths, which contain 66 cases in total, are consistent, and indicate that cases exhibiting a given combination of causal conditions also exhibit the outcome of interest. Yet, social innovators can follow different strategies to achieve the same goal: adoption. What do the six paths represent (Table 4)? The terminology ‘must be present’ and ‘must be absent’ used in Tables 3 and 4, implies that a condition is either relevant or irrelevant for the outcome to emerge, given a certain combination of conditions; the term ‘does not matter’ means that a condition can either be present or absent, but is not crucial for the outcome to emerge.

4.5. Explaining the separate paths to success

For Path 1, for example, there are four cases that use the same path

Table 3
Configurations explaining Adoption of the social innovation (parsimonious solution).

Solution	Causal conditions							Descriptives				
	Stakeholder commitment	Financial and political support	Overcoming setbacks	Consensus	Staff availability	Leadership	Infrastructure	Raw coverage	Unique coverage	Consistency	Number cases > 0.5 membership	
1	●	○					●	0.178818	0.0140394	0.857143	4	
2	○	●					●	0.203448	0.0406404	0.907692	4	
3			○	●			●	0.414040	0.0162561	0.922106	16	
4	●	●		●				0.468719	0.0490147	0.865000	20	
5					●	●	●	0.425123	0.0635467	0.900365	18	
6	●		●		○		●	0.122660	0.0118226	0.849829	4	
Total											66	
Model	Solution coverage: 0.741379											
	Solution consistency: 0.855357											

Model: HadopOc = f (Agest1, Bplan2, Csetb3, Dshif4, Epart5, Flead6, Ginfr7).
Cell: ● = must be present; ○ = must be absent (~); no sign = does not matter (ambiguous).

Table 4
Innovation process elements leading to the adoption of social innovation.

Solutions (paths)	Elements of social innovation as a journey		Cases
	Present	Must be absent	
1. Filling a gap	Stakeholder commitment Infrastructure	Financial and political support	4
2. Self-reliant empowerment	Financial and political support Infrastructure	Stakeholder commitment	4
3. Incremental progress	Consensus Infrastructure	Overcoming setbacks	16
4. Power-based design	Stakeholder commitment Financial and political support Consensus		20
5. Powerful people and leadership	Availability of staff Leadership Infrastructure		18
6. Resilient goal-getting	Stakeholder commitment Overcoming setbacks Infrastructure	Availability of staff	4

to adoption of social innovation, consistently showing the same combination of variables in their strategies. Technically speaking, ‘Path 1 Filling the gap’ states that 86% of the social innovations with the characteristics of gestation, infrastructure and the absence of plans in conjunction are members of the set ‘cases representing adopted social innovation’. Let us see what the cases tell us about these six paths. We begin with Path 4, which contains the largest number of cases, and provide an extended example. The other paths will then be illustrated with shorter examples.

4.5.1. Path 4: power-based design

Appropriate social innovations take off when they are in themselves sound concepts but require power to get accepted (*financial and political support*), because, for example, they are new technologies, or require the application of new technology. Ingenious people (such as, in one case, a university professor) make such plans accessible and understandable, and soon many relevant stakeholders follow (*initial stakeholder commitment*), public-private partnerships emerge or communities carry it forward. Consensus gradually grows (*consensus*). Because of its appropriateness, the idea fits within the present system, which consequently easily enables funding. Infrastructural embeddedness seems not required, as sometimes the roots of these ideas have already been simmering in society for a while as more or less accepted (but not

institutionalized) practices: you cannot be against the idea.

She Taxi (India)
Core of the social innovation

She Taxi is a cab service for women travellers operated by women entrepreneurs. The social innovation project has three important characteristics that form the base of the solution, namely: (a) the safety and security of women; (b) entrepreneurship by women; and (c) employment for women. The core idea was to come up with safe transport options for women and families that can further help gender equity. The solution was to create a taxi service especially for women by women entrepreneurs. Crime rates against women are high and travelling alone is unsafe for women, especially during night times. This hinders their labour market and educational participation, and also female entrepreneurship.

Strategy

Gender Park, an autonomous institution, developed the idea together with the Minister of the Department of Social Justice (in the state of Kerala). Gender Park (GP) as an institution was promoted by this department to resolve the gender inequity in development. After governmental approval it issued a public notice in the newspaper dailies as a call for an expression of interest in the roles of vehicle partner and technical partner, and for female cab drivers.

Drivers and barriers

She Taxi was launched and flagged off by the Minister for Social Justice and features a multi-stakeholder, public-private partnership that facilitates the whole process. The government, the private sector and the women entrepreneurs are all important stakeholders of this process and were involved from the beginning. The project was instigated following the murder of Soumya (2013), a woman who was travelling by train in Kerala and was raped and murdered. Media coverage and publicity generated by a prominent film actress acting as a brand ambassador for She Taxi were driving forces. The proactive presence of the state and its ability to facilitate a meaningful business partnership with business/private stakeholders (public-private partnerships) propelled this social innovation. There was no government funding, apart from funding the launch. Banks provided loans to the interested women entrepreneurs.

Outcome/result

She Taxi has expanded to several cities and districts in Kerala state and beyond and has been replicated in other states as She Bus and G Taxi (for transgenders). She Taxi increased the visibility of women in public spaces and the (safe) mobility of women in cities. And it increased the economic participation of women.

She Taxi exemplifies the path ‘Power-based design’. In this case, an influential institution to promote gender equality (Gender Park, GP) that was created by a ministry developed a convincing plan. Right from the beginning, several important stakeholders were committed: the government, the private sector and women entrepreneurs. In addition to this powerful (political) support, GP generated strong publicity with the participation of a well-known film actress. The idea fitted in the present climate concerning more gender equity after the rape and murder of a woman on public transport in the region, which was reflected in a growing consensus over this social innovation initiative.

4.5.2. Path 1: filling a gap

Initiators see a system failure as a supply is missing that is needed. Authorities are hesitant to act and finance the initiative: they prefer to wait and see. Other stakeholders undertake joint action (*initial stakeholder commitment*) to fill the gap, using networks that are already in place (*infrastructure*). They progress in pragmatic ways with limited financial and political support (absence of *financial/political support*). When eventually it has proved to work, a quick acceptance and integration in the system or adaptation of the infrastructure follows (again *infrastructure*). One example is Healthy Kinzigtal, a hospital in Germany, which succeeded in creating integrated care where at first a lack of cooperation between existing institutions and professionals (from general practitioners, hospitals, nurses, physiotherapists and insurance companies to fitness centres and voluntary associations) led to ineffective and inefficient working processes. The logic of the sound idea of this social innovation to build an integrated care model for a whole population or region fitted well into the existing infrastructure.

4.5.3. Path 2: self-reliant empowerment

In this path, relatively few relevant stakeholders were involved in the initial stage of problem analysis and the development of solutions (absence of *initial stakeholder commitment*). Although no large representation of stakeholders was committed at the beginning, the initiative disposes of substantial financial and/or political support (*financial/political support*). Often the initiators developed the initiative with their own resources. Hence, the solutions, which bear the character of high self-evidence, are quickly embedded in existing organizations or their networks (*infrastructure*), like NGOs or educational organizations, and sometimes scale up when being adopted by international organizations (e.g. UNESCO, the Salvation Army). Institutionalization thus further unfolds (once again *infrastructure*). An example is Learning Cycles, a social innovation in Colombia, where children and their families who are socially vulnerable and dropping out of formal schooling systems are encouraged to receive an education, so that these children can successfully enter the formal education system. This case reflects self-reliant empowerment, because despite the fact that there were only a small number of committed stakeholders at the beginning (absence of *initial stakeholder commitment*), their support in realizing a plan that had a very clear and concrete social goal was crucial. This social innovation initiative eventually received financial support from an international NGO and used existing infrastructures (local communities, NGOs and later schools) to scale up the initiative.

4.5.4. Path 3: incremental progress

Initiators (researchers, policymakers, social workers) with a convincing idea and with stamina are capable of setting things in motion that along the way create an ever-growing consensus, for instance by mobilizing media attention (*consensus*). The idea does not require much evidence and does not experience serious adversity (absence of [the need for] *overcoming setbacks*), as it often speaks for itself. Step by step the social innovation becomes embedded within the system (*infrastructure*) and more stakeholders join the initiative. Storytelling Grandmas from Argentina offers a clear example, whose core idea is, on the one hand, to promote the intergenerational tradition of reading in early childhood to improve reading practices with the help of storytelling grandmothers, and on the other hand, to provide these grandmothers (elderly people) with a new meaningful role in society to enhance social cohesion (solidarity). The case exemplifies an incremental social innovation: there was a growing consensus for the self-evident initiative without serious setbacks, and the initiative gradually developed towards a national programme, which has even been copied by other countries.

4.5.5. Path 5: powerful people and leadership

A leading initiator (a person or an NGO or foundation) is capable of mobilizing, inspiring and creating synergy or direction (*leadership*).

Qualified personnel are present (*availability of staff*). Eventually either infrastructure is created, or the present infrastructure is used by the initiator and their staff to sustain the social innovation (*infrastructure*). The Kenyan social innovation initiative One Acre Fund is a non-profit social enterprise that supplies financing and training to help small farmers grow their way out of hunger and build lasting pathways to prosperity. Set up by an American MBA student, it developed into a bundle of services consisting of market support, financing, training, linkages to suppliers, and helping farmers to change their methods and improve their income. Now being rolled out across six countries, the OAF itself has grown and professionalized as an organization along the way and has a sound business model based on being a paid-for service organization. The model was developed by an inspiring leader with such a strong concept that he could mobilize funds and inspire his staff and the farmers.

4.5.6. Path 6: resilient goal-getting

Initiatives set up in contexts of political and economic instability are able to conquer resistance and pitfalls (*overcoming setback*), largely due to being capable of mobilizing relevant stakeholders (*initial stakeholder commitment*) such as (international) NGOs and representatives of the establishment. At the beginning, there are no qualified personnel (absence of *availability of staff*), but eventually the initiative becomes rooted and institutionalized (*infrastructure*). One example is School for Life, a Ghanaian NGO supported by an international aid agency, that aims to bring basic literacy education to 8- to 14-year-olds from poor families who would otherwise not receive schooling. This social innovation prepares children for entry into the formal education system. In addition, 'barefoot teachers' were trained, and significant numbers of both children and teachers then graduated into the formal education system. The geography of the initiative's (adapted) application has expanded to Liberia, Sierra Leone, India and Kenya. School for Life exemplifies resilient goal-getting because, despite various barriers such as an insufficient number of teachers, and hierarchical and cultural obstacles, a local NGO succeeded in mobilizing (international) financial support, found practical solutions (barefoot teachers) and kept on chasing the goal for years.

4.6. Reconstructing the argumentation of the six paths

Another way of looking at the data is to try to understand why the social innovations followed their chosen paths. For this purpose, we asked ourselves: 1] why cases chose their path and what were the preconditions for this selection; 2] what the strong elements were that enabled them to develop their social innovation; and 3] what the limits to their approach were that might be potential pitfalls or, in other words, risks and uncertainties. We reconstructed the argumentation behind six exemplary cases (see Oeij, Van Der Torre, et al., 2018) in each path.

Table 5 shows that initiators are quite pragmatic, as they anticipate problems in the initial period, and then choose to do what might practically work. When these applied preconditions seem to be supportive, they manage to find ways to ensure the continuation of the initiative during the developmental period. In the implementation period it is key to converge interests among stakeholders and ensure the social innovation becomes embedded in the societal infrastructure. Although social innovations face different barriers to institutionalization, the 'usual suspects' are common to all cases: namely financial resources, qualified staff, interests of stakeholders, attractiveness to target groups and attitudes to change. The implication is that successfully manoeuvring the innovation journey requires management of one or more of these possible threats.

The six paths differ but have the importance of *infrastructure* in common, except for Path 4. In all but one path, namely 5, some kind of backing, agreement or cooperation is required, in the form of *stakeholder commitment*, *financial/political support* or *consensus*. The presence

Table 5
Reconstructed arguments for the chosen strategy.

	Path 1	Path 2	Path 3	Path 4	Path 5	Path 6
1. Preconditions – why this path?	A threatening deadlocked investment situation had to be overcome by cooperation within an integrated care model	This initiative used a clear and convincing plan and applied its own funds to avoid major resistance from those with possible conflicting interests	The initiator used its credibility to create consensus via communication such as mass media, and slowly built a community of followers, which avoided any resistance emerging	To improve gender equality the opportunity to bundle the forces of government and private business had to be seized now the climate for change was right	This initiative applied a business model and gathered validated data to convince the target group of its effectiveness, as the target group had to contract a loan	Setting up the initiative as a carefully designed sequence of steps and an orderly plan to scale up one region after another was needed to develop an infrastructure of the right stakeholders and staff
2. Strengths – enabling SI to develop	Breaking down silos and building a joint venture showed profitable results quite soon	A certain degree of independence and boldness led to success and convinced institutional bodies to join	The incremental approach and relying on high credibility helped to become embedded in the educational infrastructure	The public-private partnerships opened financial and political doors for this initiative	An enabler of the initiative was to set up a pilot that guaranteed staff, infrastructure and the presence of leadership	Being able to acquire steady donors, having a keen eye for possible barriers and stress solidarity goals enabled the development of this SI
3. Limits – risks and uncertainties	Short-sighted defence of individual interests and waiting for others to make a first move is a risk for changes like these to be set in motion	Being not too dependent on others at the beginning was helpful, so dependency of stakeholders is a risk for taking off the initiative	While this initiative demanded that followers could slowly adopt the new idea, a pitfall would have been to disseminate the idea too fast and too forcefully	Cultural resistance against a more equal position for women is a threat, particularly to acquiring enough female taxi drivers	A risk for initiatives like these is the absence of rigorous preparation and enough charisma and start-up funding	Uncertainties that threaten this initiative include limited resources and qualified staff and political and cultural counteraction by resentful local powers

of *availability of staff and leadership* was, somewhat remarkably, only for determining relevance in one path only, namely Path 5. The innovation journey model can capture all six paths in a meaningful way, even when every path is different from the others.

5. Discussion and practical implications

What can one learn from the six paths in terms of strategies for actors and/or businesses for upscaling their initiative? The term ‘strategies’, as used in this context, indicates that in each path choices could be made to become successful. The combination of variables in each of the six paths is seen as a different road to success.

First, in the absence of broad financial or political support, an initiative can still be successful if few but relevant stakeholders strongly embrace the idea from the beginning, and if the idea is either self-evident or easy to embed in the present infrastructure (Path 1 ‘Filling the gap’).

When the plan is sound, it fits in the present infrastructure and the initiators themselves have sufficient resources at their disposal, then a solid ground among stakeholders is not a requirement for successful adoption in the end (Path 2 ‘Self-reliant empowerment’).

In the case that initiators have developed an idea that fits into the present infrastructure and setbacks are absent (or overcome), a strong basis among sponsors seems less crucial than bringing directly involved stakeholders along one pathway and slowly letting consensus grow (Path 3 ‘Incremental progress’).

If an initiative right from the start gets embedded in a strong network of stakeholders and sponsors and is based on an idea for which consensus is being continued and reconfirmed during the developmental process, then the infrastructure is not a determining element for eventual adaptation (Path 4 ‘Power-based design’).

A social innovation initiative can also become successful(ly adopted) when a strong group of directly involved people, executors and/or staff are guided by a strong leader, who (together) develop(s) an idea that fits well into the existing infrastructure. Beginning to build up a basis among stakeholders and sponsors is not required (Path 5 ‘Powerful people and leadership’).

An initiative that right from the beginning is well anchored into the network of relevant stakeholders is able to overcome setbacks and become successfully adopted, even if staff are fluid, providing it fits well into the present infrastructure (Path 6 ‘Resilient goal-setting’).

The study indicates that while not ‘anything goes’, there is not ‘one best way’ either. People tend to simplify complexity in their desire to get crystal-clear recommendations about ‘what to do’ when there are many options to choose from. What is needed, however, is that people accept, indeed embrace, this complexity, and realize that specific skills are required to manoeuvre innovation processes that are unpredictable and uncontrollable to quite some extent (Van de Ven, 2017; Westley et al., 2014). With a mindset that is open one easily realizes that complexity also offers opportunities to mould the design one desires the most, on the condition that one accepts inevitable path dependencies and externalities that cannot be influenced.

Although there is no one best way, it seems important, for practical purposes, to anticipate how to connect the social innovation initiative with the existing infrastructure and seek embedment within the network of relevant stakeholders. When striving after a solid business case for social innovation it is important to make sure, for instance, that the starting phase incorporates crucial stakeholders and that the plan finds support; during the innovation process consensus among stakeholders is important.

The research has some weaknesses that should be mentioned. One point is that the case studies show a high degree of variation, which could not be held constant. The variation in, for instance, the types of social innovations, the number of policy domains, the number of different countries, cultures and languages, etc. may therefore raise questions about the validity of the measured data. On the other hand,

the application of QCA resulted in six social innovation paths or strategies that are relatively robust within the data set.

6. Conclusions and future research

The research question was which factors can be identified in successfully adopted social innovations. To determine which factors to include in our research we applied the innovation journey model of [Van de Ven et al. \(2008\)](#). An additional question thus was whether the innovation journey model, originating from research into product and technological innovation, could be applied in the field of social innovation.

The QCA model proved to have a significant solution consistency and solution coverage among the cases. The model consists of six configurations (paths) but none of them is a dominant unique path that leads to adoption of social innovation. Thus:

- There is no one best way to design an innovation process that enables the adoption of social innovation (equifinality);
- Social innovators with a similar purpose can follow different strategies (organizational choice); there are no necessary conditions;
- Successful adoption of social innovation always consists of more than one element that represents the innovation process, as there are no sufficient conditions.

The six configurations are successful strategies for innovation journeys towards the adoption of social innovation; some strategies have better chances than others (they have higher consistency scores). It does not mean that all configurations are valid strategies because out of the possible 128 combinations of variables only these six are the most promising based on the empirical data. Although social innovation strategies represent variation, there are patterns, which indicate that the empirical heterogeneity in fact represents variations of recurrent themes. Patterns imply that social innovations can be controlled to a certain extent, in that they enable realistic risk management and proactive and preventive mitigation of risks.

If we look at the seven conditional variables we see that ‘infrastructure’, referring to ‘embedded, organized and coupled cooperation between experts, partners, financiers and/or stakeholders to deliver the SI service/product’, is present in five of the paths. Apparently, the creation or presence of an infrastructure is often a condition for the adoption of social innovation. Infrastructure is present in the three paths with the highest consistency scores.

Another conclusion may be that the innovation journey model ([Van de Ven et al., 1999/2008](#)), originally developed within the context of technological innovation, can be applied to social innovation as well. This is because it is a process model of the innovation process, for which the content of the innovation is to a large extent irrelevant. Our analysis, however, makes no clear distinction in the relevance of the start-up phase, developmental phase and implementation phase as in the original model. The importance of each phase varies by case, so it seems. Nonetheless, it seems fair to say that our results show that processes of social innovations have more agreements than differences compared to technological innovations.

A question that arises is whether our findings regarding social innovation could be equally expected for technological and commercial innovations. All innovations – social, technological, commercial, etc. – are complex and from their innovation process, patterns will emerge that cannot be fully predicted. However, it can be expected that such complex processes have different patterns, but similar outcomes. Nonetheless, as indicated, social innovations differ from technological and commercial innovations in a number of ways: for example, in their goals (public value versus economic value), their stakeholders (interest groups – i.e. socially deprived groups – versus investors, and social entrepreneurs versus capitalist entrepreneurs), and their infrastructure

(governmental support versus market mechanisms). This would mean that the variables within the same innovation journey model will show different associations, different patterns. In short, the combination of the theoretical innovation model with the QCA method would also be applicable to technological and commercial innovations, but the patterns leading to successful innovation are likely to differ.

Another question is whether QCA as applied provides more validity and reliability than the cross-case analysis approach used in the original study by [Van de Ven et al. \(1999/2008\)](#). The answer is that this study extends the findings of their study. The original study by Van de Ven et al. was a cross-case analysis that in fact resulted in the innovation journey model. It was a theory-building exercise. The QCA analysis applies the theoretical model and its variables to empirically assess which patterns have a greater chance of emerging from the theoretical possibilities: from those 128 options only six remain. QCA is actually another kind of cross-case analysis, namely more formalized, that allows for better – although limited – generalizability. It reduces theoretical options based on its statistical technique, but expertise from researchers regarding the practice is still required to draw meaningful conclusions. QCA allows for generalizability but it is limited ([Rihoux & Ragin, 2008](#)). Including more and different cases in an analysis would likely result in extra paths emerging as valid combinations leading to the same outcome. Further research is needed in this area to sharpen the innovation journey as a theory.

Looking back at other empirical analysis of the 1005 cases ([Howaldt et al., 2016](#)), of which the 82 cases in this article are a subgroup, some conclusions of that study can be put into perspective. [Howaldt et al. \(2016\)](#) claimed that shortages of financial, human, (scientific) knowledge, legal and political resources, a lack of organizational and leadership capabilities, and infrastructural embedment are barriers that play an important role in the failed upscaling of many social innovation initiatives. Our study shows that despite the presence of some of these barriers, social innovations can still be successfully adopted. We also found that in some paths ‘financial and political support’, ‘stakeholder commitment’ and ‘availability of staff’ ‘must be absent’ ([Table 4](#)). While this may look contradictory with the findings of Howaldt and colleagues, it means that sometimes such highly plausible conditions can apparently be compensated by other conditions, making them unnecessary. This stresses the relevance of a complexity perspective ([Westley et al., 2014](#)), that in different contexts, different combinations of variables are effective strategies, and that the predictability and controllability of social innovation remain limited, but not completely impossible.

Research into social innovation by the SI-DRIVE project resulted in analysing the main characteristics – such as drivers of, and obstacles to, success – of the database of 1005 social innovation cases ([Howaldt et al., 2016](#)), and the same for the 82 cases divided across seven different policy fields ([Ecker et al., 2017](#)). Three further investigations looked at typologies of innovation, patterns of innovation and models of innovation (all discussed in the *Atlas of Social Innovation* of [Howaldt, Kaletka, Schröder, & Zirngiebl, 2018](#)). The presented article is a follow-up on all these studies, where we wanted to know more about the combinations of variables that drive social innovation to scale up. Applying the QCA method further to the same data could lead to the suggestion of future research questions. Examples include: what determines the success of social innovations if different innovation types follow different paths, if different countries follow different paths, if different policy fields follow different paths, and if different welfare systems and economic models follow different paths? Answering such questions would require the construction of made-to-measure adaptations of the innovation journey model, implying the selection of other variables, a new coding of all 82 cases and new analyses. While this is beyond the scope of this contribution, it could be taken up as possible areas for future research.

Acknowledgement

The authors would like to thank the anonymous reviewers whose comments helped to significantly improve the article. Findings in this article were used in an earlier presentation entitled ‘Contemporary Practices of Social Innovation: Collective Action for Collaboration’ at ISA2018, XIX ISA World Congress of Sociology (July 15–21, 2018), based on an EU project on social innovation (Oeij, Van Der Torre, et al., 2018).

The authors state that there is no conflict of interest. There was no funding received for this article.

References

- Amanatidou, E., Gagliardi, D., & Cox, D. (2018). Social engagement: Towards a typology of social innovation. *MIOIR/MBS working paper series-working paper 82*<https://doi.org/10.13140/RG.2.2.28787.84002>.
- Atkinson, A. B., & Marlier, E. (2010). *Analysing and measuring social inclusion in a global context*. New York: United Nations.
- Böhle, F. (2011). Management of uncertainty: A blind spot in the promotion of innovations. In S. Jeschke, I. Isenhardt, F. Hees, & S. Trantow (Eds.). *Enabling innovation. Innovative capability – German and international views* (pp. 17–29). Berlin: Springer.
- Caulier-Grice, J., Kahn, L., Mulgan, G., Pulford, L., & Vasconcelos, D. (2010). *Study on social innovation. Paper prepared by the Social Innovation Exchange (SIX) and the Young Foundation for the Bureau of European Policy Advisors*. Sine Loco: European Union/The Young Foundation. Retrieved from <http://socialinnovationexchange.org/node/4959>. Accessed date: 8 April 2018.
- Davies, A. (2014). Social innovation process and social entrepreneurship. In J. Howaldt, A. Butzin, D. Domanski, & C. Kaletka (Eds.). *Theoretical approaches to social innovation – A critical literature review* (pp. 60–78). Dortmund: Sozialforschungsstelle: Social Innovation: Driving force of social change - SI-Drive.
- Dhondt, S., & Oeij, P. (2014). Social innovation related to innovation in management studies. In J. Howaldt, A. Butzin, D. Domanski, & C. Kaletka (Eds.). *Theoretical approaches to social innovation – A critical literature review* (pp. 122–150). Dortmund: Sozialforschungsstelle: Social Innovation: Driving force of social change - SI-Drive.
- Dhondt, S., Oeij, P., & Schröder, A. (2018). Resources, constraints and capabilities. In J. Howaldt, C. Kaletka, A. Schröder, & M. Zirngiebl (Eds.). *Atlas of social innovation – New practices for a better future* (pp. 74–77). Dortmund: Sozialforschungsstelle: TU Dortmund.
- Ecker, B., Gruber, N., Haider, W., & Holtgrewe, U. (2017). *Compilation of in-depth case study reports. (SI-DRIVE deliverable 3.5), SI-DRIVE, Social Innovation: Driving Force of Social Change* Vienna: Centre of Social Innovation - ZSI.
- Edwards-Schachter, M., & Wallace, M. L. (2017). ‘Shaken, but not stirred’: Sixty years of defining social innovation. *Technological Forecasting and Social Change*, 119, 64–79.
- Fougère, M., Segercrantz, B., & Seeck, H. (2017). A critical reading of the European Union’s social innovation policy discourse: (Re)legitimizing neoliberalism. *Organization*, 24(6), 819–843.
- Garud, R., Tuertscher, P., & Van de Ven, A. H. (2013). Perspectives on innovation processes. *Academy of Management Annals*, 7(1), 775–819.
- Herrera, M. E. B. (2016). Social innovation for bridging societal divides: Process or leader? A qualitative comparative analysis. *Journal of Business Research*, 69(11), 5241–5247.
- Howaldt, J., Butzin, A., Domanski, D., & Kaletka, C. (2014). *Theoretical approaches to social innovation: A critical literature review*. Sozialforschungsstelle, Dortmund: Deliverable of the project: ‘Social Innovation: Driving Force of Social Change’ (SI-DRIVE).
- Howaldt, J., & Hochgermer, J. (2018). Desperately seeking: A shared understanding of social innovation. In J. Howaldt, C. Kaletka, A. Schröder, & M. Zirngiebl (Eds.). *Atlas of social innovation – New practices for a better future* (pp. 18–21). Dortmund: Sozialforschungsstelle, TU Dortmund.
- Howaldt, J., Kaletka, C., Schröder, A., & Zirngiebl, M. (Eds.). (2018). *Atlas of social innovation – New practices for a better future*. Dortmund: Sozialforschungsstelle, TU Dortmund.
- Howaldt, J., Schröder, A., Kaletka, C., Rehfeld, D., & Terstriep, J. (2016). *Comparative analysis (mapping 1). Mapping the world of social innovation: A global comparative analysis across sectors and world regions. SI-DRIVE report D1.4*. Dortmund: TU Dortmund.
- Howaldt, J., & Schwarz, M. (2010). Social innovation: Concepts, research fields and international trends. Studies for innovation in a modern working environment. *International monitoring*. 5. Aachen: IMA/ZLW & IfU.
- Legewie, N. (2013). An introduction to applied data analysis with qualitative comparative analysis. *FQS Forum Qualitative Sozial Forschung/Forum Qualitative Social Research*, 14(3), <https://doi.org/10.17169/fqs-14.3.1961>.
- Mulder, N. T. (2016). *Value-based project management. How to bring focus into complex projects*. Els, Belgium: Mulder Project management.
- OECD/EU (2019). *Boosting social entrepreneurship and social enterprise development in the Netherlands, in-depth policy review, OECD LEED Working Papers, 2019*. Paris: OECD Publishing.
- Oeij, P., Dhondt, S., & Ooms (2018). Social innovation in the Netherlands. In J. Howaldt, C. Kaletka, A. Schröder, & M. Zirngiebl (Eds.). *Atlas of social innovation: New practices for a better future* (pp. 105–107). Dortmund: Sozialforschungsstelle, TU Dortmund.
- Oeij, P. R. A., Van Der Torre, W., Vaas, S., & Dhondt, S. (2018). *Understanding social innovation as an innovation process. Report based on data from SI-Drive, Social Innovation: Driving force of social change*. Leiden: TNO.
- Phills, J. A., Deiglmeier, K., & Miller, D. T. (2008). Rediscovering social innovation. *Stanford Social Innovation Review*, 6(4), 34–43.
- Pol, E., & Ville, S. (2009). Social innovation: Buzz word or enduring term? *The Journal of Socio-Economics*, 38(6), 878–885.
- Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. Chicago (etc.): University of Chicago Press.
- Rihoux, B., & Ragin, C. C. (Eds.). (2008). *Configurational comparative methods. Qualitative comparative analysis (QCA) and related techniques*. Thousand Oaks, CA: Sage.
- Sausser, B. J., Reilly, R. R., & Shenhar, A. J. (2009). Why projects fail? How contingency theory can provide new insights: A comparative analysis of NASA’s Mars Climate Orbiter loss. *International Journal of Project Management*, 27(7), 665–679.
- Schneider, C. Q., & Wagemann, C. (2012). *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis*. Cambridge: Cambridge University Press.
- Van de Ven, A. H. (2017). The innovation journey: You can’t control it, but you can learn to maneuver it. *Innovation*, 19(1), 39–42.
- Van de Ven, A. H., Angle, H. L., & Poole, M. S. (Eds.). (1989). *Research on the management of innovation: The Minnesota studies*. New York: Oxford University Press.
- Van de Ven, A. H., Polley, D. E., Garud, R., & Venkataraman, S. (1999). *The innovation journey*. Oxford and New York: Oxford University Press reprint 2008.
- Van der Have, R. P., & Rubalcaba, L. (2016). Social innovation research: An emerging area of innovation studies? *Research Policy*, 45, 1923–1935.
- Westley, F., Antadze, N., Riddell, D. J., Robinson, K., & Geobey, S. (2014). Five configurations for scaling up social innovation: Case examples of nonprofit organizations from Canada. *The Journal of Applied Behavioral Science*, 50(3), 234–260.
- Wolf, H. (2011). Beyond planning and control. Alternative approaches to the management of industrial research and development. In S. Jeschke, I. Isenhardt, F. Hees, & S. Trantow (Eds.). *Enabling innovation. Innovative capability – German and international views* (pp. 35–45). Berlin: Springer.
- Woodside, A. G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. *Journal of Business Research*, 66(4), 463–472.
- Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24(5), 519–532.

Peter R. A. Oeij, is a senior research scientist & consultant affiliated with TNO Innovation for Life, a Research and Technology organization in The Netherlands. His field of work is innovation management, workplace innovation, social innovation and team dynamics.

Wouter van der Torre, is a research scientist affiliated with TNO Innovation for Life, a Research and Technology organization in The Netherlands. His field of work is workplace innovation, new technology and job design, the labour market for self-employed persons.

Fietje Vaas, is a guest researcher affiliated with TNO Innovation for Life, a Research and Technology organization in The Netherlands; and a self-employed consultant. Her field of work is workplace innovation, social innovation and organization/job design.

Steven Dhondt, is a senior research scientist & consultant affiliated with TNO Innovation for Life, a Research and Technology organization in The Netherlands; and professor of social innovation at KU Leuven, Belgium. His field of work is workplace innovation, smart industry, and blockchain application related to management & organization issues.