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From Model to Reality

Mehtap AKGÜÇ and Miroslav BEBLAVÝ

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Covers research on the «Economic Foundation of Social Innovation» related to measurement of social innovation at micro and macro-level as well as impact assessment to inform policymakers and other interested stakeholders.

SIMPACT

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From Model to Reality

Mehtap AKGÜÇ & Miroslav BEBLAVY*

* CEPS

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ABSTRACT

This policy brief describes the theoretical modelling and simulation approach developed in SIMPACT to economically underpin social innovations targeting disadvantaged individuals and highlights the main features of the modelling approach. The resulting modelling approach is the outcome of continuous feedback and discussion with SIMPACT consortium members as well as a number of stakeholders representing various vulnerable groups in European societies. The key features of the simulation model discussed in this policy brief include risk attitudes to social innovation, role of enabling factors such as social trust, uncertainty in the social innovation process and bureaucratic and managerial burden constraining the scalability of social innovations. Based on the discussion of these key features within the simulation model and in the context of social innovation field in reality, we then formulate some policy recommendations to facilitate social innovations. The goal is to inform policymaking using the results and predictions of the modelling perspective in order to facilitate social innovation, which is part of the effort to boost inclusive growth under Europe's 2020 strategy.

Contents

1   INTRODUCTION

This policy brief is the second deliverable (D2.2) of SIMPACT's Work Package 2 (WP2) Social Innovation Behaviour Scenarios corresponding to research activities of the following tasks:

- Task 2.1: Simulation Model and Reference Scenarios of Social Innovation (SI),

- Task 2.2: Small-scale Stakeholder Experiments – From Model to Reality,

- Task 2.3: Simulation Iterations (three iterations at months 18, 27, 32),

- Task 2.4: Social Innovation Scenario Building.

This policy brief summarises SIMPACT's theoretical model that economically underpins social innovation targeted to vulnerable individuals. More detailed description of the theoretical model together with its simulations and various future-oriented scenarios are provided in SIMPACT Deliverable 2.2 Social Innovation Simulation Model and Scenarios. The current policy brief emphasises the most important messages and policy recommendations that are based on the modelling and simulation results fed with stakeholder involvement to inform policymaking. The policy recommendations aim at guiding how public policy can facilitate social innovation. Another objective is to translate the main results of the economic underpinnings of social innovation using theoretical and simulation tools to a wider audience in a non-technical manner.

The model presented in the following section is chosen in the most parsimonious fashion for a tractable solution, but it still incorporated several prominent properties in the social innovation context, which are, in turn, regularly consulted and tested during the stakeholder experimental workshops (2014-2016). The latter step provides an external validation of the modelling and simulation approach and allows bringing the model closer to reality.

2   MAIN PROPERTIES OF THE SIMULATION MODEL OF SI

In order to gain further insights as to how social innovation is conceived, developed and sustained, CEPS has developed a theoretical economic model of social innovation for SIMPACT. The modelling approach takes into account individual preferences driven by intrinsic utility, risk preferences in an environment that incorporates uncertainty (e.g. demand or supply shocks), enabling factors of the ecosystem as well as bureaucratic barriers and managerial burden.

According to the definition from the economics literature, a model is a set of assumptions and equations describing, in general, behaviour of an actor (agent) or a set of actors (agents) under given circumstances. While economics research has extensively relied on modelling methods to understand how things work in reality, to the best of our knowledge, this approach has not been utilized in the context of social innovation research yet. The first deliverable D2.1 of SIMPACT developed during the project is a first attempt in this field.

Even though a model is a simplification of the reality and imposes a certain number of assumptions to understand its workings, the modelling approach allows theoretically conceptualising and capturing several aspects of social innovation by taking into account economic, social and behavioural elements. Ideally, the ingredients of the model have empirical relevance to the social innovation context to make to model closer to reality. From a theoretical point of view, once the analytical solution is found through quantitative methods, the model is then used to simulate various scenarios by assigning different parameter values. In other words, simulation method gives an ex ante idea on what kinds of situations could be expected in the future when the model's parameters are modified. This way, the model suggests different pathways, drivers and barriers along the process of social innovation and its sustainability.

The value-added of the theoretical modelling and simulation approach is mainly due to its complementary nature to other methods such as sociological approach, case study analysis and other approaches with stakeholder involvement.

Moreover, the modelling and simulation approach proves to be simple and flexible to implement and allows checking external validation. In this vein, the feedback from internal discussions with SIMPACT consortium partners after the collection of empirical evidence together with the "reality checks" conducted during the stakeholder experiments have been instrumental in elaborating the proposed model with the objective of reflecting the multi-faceted nature of social innovations.

The modelling approach starts from the micro-level by describing the decision making process of the individual social innovator. As common in modelling individual behaviour, agents are assumed to be rational, and they make decisions after weighting the costs and benefits of their actions, which is one of the minimum conditions on rationality. In a nutshell, an agent in the model maximises the utility by deciding whether to innovate or not, given the preferences over the number of users, risk attitudes, and intrinsic utility. The intrinsic utility captures the idea that the more individuals care about others and their unfulfilled social demand, the greater the chances of acting as a social innovator. The model also captures the network effects as the utility of the social innovator is boosted with the size of the population that benefits from the social innovation.

In the sequel, without going into technical details, we highlight some of the key messages that come out from the modelling approach to inform policymaking as well as potential social innovators or social entrepreneurs. For the technical background material on this part, we refer to the Deliverable 2.1 Social Innovation Simulation Model and Scenarios of SIMPACT.

3   FROM MODEL TO REALITY

In this section, we highlight some of the key features of the modelling approach developed for social innovations in real life. We first provide an overview of each concept, describe the predictions of the model regarding this concept and provide related policy recommendations

3.1   Risk Attitudes and Social Innovation

Innovation and risk taking are naturally linked, because the latter is uncertain in both process and outcome (Hartley, 2013). To this end, the theoretical model and scenario simulations of SIMPACT incorporate risk preferences of individuals commonly used in economics and finance fields. It refers to behaviour of people to attempt to reduce the uncertainty when they are exposed to it. In the case of risk aversion, it refers to the reluctance of a person to accept a bargain with an uncertain payoff rather than another one with more certain, yet possibly lower, expected payoff (Gollier, 2001).

The main result of the model regarding risk attitudes is that the level of social innovation, which is the main variable of interest, is negatively linked to risk aversion. In other words, the more risk averse individuals are in a society, the lower will be the chances of having social innovations, holding all other model parameters and variables constant. During the SIMPACT stakeholder experiments, the relation between risk openness and social innovation has also been highlighted and there has been a consensus that risk aversion would be a barrier for social innovation.

In terms of policy recommendation, the inverse relation between risk aversion and social innovation level suggests that public policy could be geared to support potential social innovators to cope with risks in order to provide a conducive environment for social innovation. Social, economic and financial security and insurance mechanisms could be developed to support and encourage the social innovators along the development of projects with risky outcomes (failure or success). Risk aversion could also be related to the clash between the "existing" and the "new": people might be reluctant to explore new and adventurous situations faced with social challenges. Openness to new ideas and promotion of innovative practices could help social innovators more confident to come up with their initiatives and similarly civil society members could feel comfortable in trying these new solutions available to them.

3.2 The Role of Enabling Factors: Social Trust

There could be various reasons influencing how a social innovation can successfully or efficiently expand or contract its targeted beneficiaries. One of the parameters included in the simulation model represents the smoothness for the social innovation to take its desired effect depending on the context or ecosystem. One plausible interpretation of this parameter is social trust. Social trust is an important notion relating how individuals feel about each other in a society. According to Fukuyama (1996), trust is the expectation that stems from a society with regular, honest and cooperative behaviour based on commonly shared roles. This is a relevant component in the social innovation context, as pointed by Georg Simmel: "trust is one of the most important synthetic forces within society" (Wolff, 1950). Empirical evidence collected by SIMPACT also suggests the important role of trust, confidence and solidarity in the social innovation context (Terstriep et al., 2015). In a complex social environment, strong trust base surrounding the social innovator and the targeted vulnerable groups can influence the success of the social innovation. Hence, social trust forms an essential part of the enabling factors of social innovation.

The simulation model developed in SIMPACT predicts that higher social trust is associated with higher social innovation levels. This could be because ecosystems with higher social trust are more convenient for social innovation to successfully occur and be sustained. In environments with higher social trust and confidence, the innovators could rely on solidarity within the community and have more support for their solutions addressing a societal challenge facing vulnerable people. During the SIMPACT stakeholder experiments, there was a consensus that social trust among individuals is a catalyst for social innovations and that in an environment of high social trust it is more likely that individuals and organisations might be more supportive of new social innovation ideas.

In terms of policy recommendation, the various enabling factors of social innovations could be promoted to boost social innovations; however, each enabling factor is likely to require a different policy tool. In that sense, it might not be obvious to find a way to foster social trust in a society to support the development of social innovations. Nevertheless, a combination of several policies and welfare state amenities could be relevant as regards to social trust. Transparency and accountability in public administration, openness to diversity and different cultures, being inclusive and fair, avoiding demeaning discourse and campaigns about marginalized groups by media, public authorities and opinion leaders could be relevant factors to support further social trust in a society. Finally, there is also a link between the welfare system, its generosity and related public policy tools in triggering the relevant enabling factors such as social trust.

3.3 Uncertainty and Shocks during the SI Process

Any innovative action is almost never free of uncertainty by its definition and this could be due to various reasons. Some examples include: an innovative solution might risk to fail in addressing an issue because resource constraints become too important (e.g. supply-side shock); an innovative solution might be working well, but the take-up rate of the solution by the target groups is not as expected (e.g. demand-side shock); or both the supply and demand sides could be matched, but the ecosystem or context, where social innovation takes place, does not have the institutional support for the social innovation to go forward as desired (e.g. environmental shock). Overall, there could be many factors creating uncertainty and unpredictability in the onset or process of social innovations influencing its success rate. These factors range from force majeure, economic crisis, or lack of interest on the side of the target groups. Sometimes, sectorial differences also create their respective uncertainties given the specific context; for example, the success rate of social innovations in the education sector could be associated with different levels of uncertainty than that of the social innovations in the health sector.

The simulation model incorporates an element of uncertainty in the success rate of social innovation by introducing a random variable with a certain probability distribution in the utility specification of the social innovator. Introduction of this random element in the model allows comparing

the overall level of social innovation between the deterministic (without uncertainty) and uncertain scenarios. The random component added to the model enables us to calculate a distribution of the level of social innovation as well as its confidence intervals in addition to the deterministic level and reflects the volatility of the expected level of social innovation that could be observed in various scenarios. For example, for a given number of users and model parameters and with the presence of high volatility, the level of social innovation is much lower in a "bad" scenario compared to a "good" scenario. Put differently, the predicted range of possible values for the social innovation level expands largely with the extent of the uncertainty in the model. Overall, this result highlights that innovation is a risky endeavour, with positive and negative shocks happening along the onset or process and affecting the overall level of social innovation.

In terms of policy recommendations, public sector, private sector and civil society actors could exchange knowledge and best practices to better cope with uncertainty threatening various actors in social innovation. Public policy can also mobilise resources to support promising social innovation initiatives in bad times as well as in good times. Various social, economic and financial insurance schemes could be promoted to support social innovators and social entrepreneurs at local levels. Social spending by public authorities and welfare systems could pay particular attention in different uncertainties and risks across different sectorial levels and tailor their support accordingly to help sustaining the creation of new ideas and social innovation initiatives. Active citizenship and participatory policy approaches could also boost social innovation developments and increase the trust relations in a society.

3.4 Bureaucracy and Managerial Burden: Barriers to SI

The last, but not least, feature of the simulation model relates to the scalability issue of social innovation. The scalability or diffusion of social innovation is an important element in the theoretical understanding of social innovation and it is about how various solutions offered by social innovation could be transferred or adapted to other

contexts or users. However, there is still the issue of whether scaling-up or diffusion is a necessary condition for social innovations. On the one hand, social innovation could start as a response to a specific and local challenge and, therefore, its solution could be more relevant in that specific and local context. On the other hand, some socially innovative solutions addressing the vulnerabilities can be adapted to other local contexts and applied when similar social challenges arise elsewhere.

In the context of the simulation model developed in SIMPACT, the initial utility specification of the social innovator assumes that the level of social innovation is eventually increasing in the number of users (with a decreasing rate though) given everything else. To move beyond this setting, we imagine the case where the utility of the social innovator does not always and monotonously increase in the size of the beneficiaries. One could think of this as though the social innovator initially enjoys helping a certain number of people via the social innovation. In this first stage with relatively lower number of addressed people, the social innovator might feel the direct impact of the social innovation on the addressed individuals. However, as the target group gets very large in size, so that the management of such a large population becomes too complicated, the social innovator might face the phase of high managerial burden, where the direct impacts on the others are no longer visible as it used to be in the initial stage. Moreover, the bureaucratic barriers to manage a large-scale social innovation initiative, which initially started at a small-scale, could become so important that the motivation of the social innovator might fade away. This could create a disutility for the social innovator and can imply that the situation can be managerially so cumbersome that the initial intrinsic utility of helping the vulnerable via the social innovation is no longer larger than the disutility of bearing the managerial or bureaucratic costs of the social initiative. All this would put a strain to the scaling of social innovations and imply that having a too large number of beneficiaries might actually limit the expansion of social innovation due to managerial and bureaucratic burden. In economic terms, this implies that the size of the demand does not necessarily increase the production of social innovation, implying a non-linear relation between social innovation and profits. This case is also useful

in illustrating the different nature in scalability or diffusion of a social innovation compared to a market-driven innovation, whereby in the latter case, the larger is the user-base (hence larger demand), the more would be the profits.

In terms of policy recommendations, policies towards more efficient and transparent public administration with the aim to diminish various bureaucratic barriers and red tape could facilitate the management and help ease the social innovation start-ups and their further development. The comparative indices such as "ease of doing business" could be developed and adapted to the social innovation context at the European level to motivate public authorities to achieve better targets. The role of ICT and technological advancement is also essential to help deal with traditional bureaucratic and managerial barriers and can ease some of the burden from the shoulders of social innovators.

4 CONCLUDING REMARKS

This policy brief presented concisely the theoretical modelling and simulation approach developed in SIMPACT to economically underpin social innovations targeting disadvantaged individuals facing social challenges and other vulnerabilities and highlighted its main features. The eventual objective is to inform policymaking to facilitate social innovation, which is part of the effort to boost inclusive growth under Europe's 2020 strategy.

The modelling approach is the result of continuous feedback and discussion with SIMPACT consortium members as well as a number of stakeholders that represent various vulnerable groups in European societies and have been part of the stakeholder involvement throughout the project's lifespan.

The key features of the simulation model discussed in this policy brief include risk attitudes to social innovation, role of enabling factors such as social trust, uncertainty in the social innovation process and bureaucratic and managerial burden constraining the scalability of social innovations. Putting these key features within the social innovation context, we then reported the relevant results and predictions from the model related to these key features.

Based on the discussion of these key features within the simulation model and in the context of social innovation field in reality, we then formulate some policy recommendations to facilitate social innovations.

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