Report on the outcomes of a Short-Term Scientific Mission[1]

Action number: CA 18236

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Details of the STSM

Title: Social entrepreneurship in architectural HEIs for a more sustainable social innovation

Start and end date: 27/07/2022 to 19/08/2022

Description of the work carried out during the STSM

Description of the activities carried out during the STSM. Any deviations from the initial working plan shall also be described in this section.

(max. 500 words)

During the STSM, more than 50 research papers and articles have been examined. At first analysis is conducted on the underlying concept of the SEs, collaborative economy and the role of the digital technologies. State of the art literature was reviewed on the collaborative platforms that support the collaborative economy, and in which industry sectors and subsectors they are mostly used. Due to the variety of platforms and their application in collaborative economy, their characteristics are categorized according to certain authors, and are further examined, such as: generating flexibility, match-making, extending reach, managing transactions, trust building, and facilitating collectivity.

Analysis was performed regarding influencing factors in value creation by SEs and the role of online communities, key characteristics of SE partnerships, benefits and challenges for SEs in establishing organizational models for SEs which are citizen led. Also the analysis considered factors which determined to what extent SEs may perform better. Decision-making processes applied are noted alongside dynamic capabilities which relate to the capacities of SEs to adapt to a given context. Further, an analysis was performed on aspects stakeholder involvement (internal and external) and networking among SEs. The benefits and challenges in establishing organizational models in SEs were looked upon.

An analysis was undertaken regarding the innovative contribution of SEs in the creation of sustainable societies and circular economy. The influence of collaborative platforms for urban sustainability and sustainable societies is examined. Digital platforms for value creation among SEs are examined followed by aspects regarding economic resource mobilization by SEs and SEs sustainability initiatives in

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innovation. The aspects of digital mediation in the collaborative platforms is examined, in light of platforms for collaborative urban planning and urban issues solving. It is noted that the match-making is significantly reliant on systems of reputation and trust-building, where the latter one is strongly associated with the notion of collectivity and security of the platforms. The different organizational management of the collaborative platforms are examined, such as the centralized and decentralized models, as well as mixed models depending on certain activities.

Researchers state that there is an increasing need for knowledge alliances between higher education institutions (HEIs) and enterprises which aim to foster innovation, entrepreneurship, creativity, employability and multidisciplinary teaching and learning. As it is stated, it is a crucial challenge to determine what should be taught in the future and how it should be taught. The skills that have been identified by employers as most important in the UK, USA and Australia are communication, teamwork, critical thinking, problem solving, initiative and enterprise, self-management and learning through technology.

A short analysis is performed on legislation issues that arise in the co-design of sustainable societies by using collaborative platforms. Complementary, review is made on the solutions certain cities undertake in transforming their urban policies for tackling the adversities of the use of such collaborative platforms, among which are the concepts of regulation, deregulation as well as regulated deregulation.

The research continued with an investigation on the knowledge and skills necessary for HEIs to equip their students with, by combining Design Thinking with a problem-focused approach promoting greater innovation. Different managerial skills were examined in this part of the research. Moreover, entrepreneurial orientation (EO) was studies, as it is associated with superior performance and an advantageous market position. In this regard, networking and market learning are considered architectural marketing capabilities, that is, higher order processes required to efficiently develop marketing mix tasks. Researchers identify two distinct sets of marketing capabilities. The first one are architectural capabilities which can empower organisations to acquire market knowledge and use their internal and external networks to build resources and better understand their clients. The latter are the specialised capabilities, which are linked to the tactical activities required to design and commercialise the offer of the company, such as communication, selling, pricing etc. Other studies show that integration of notions of justice and equity, constructivism, humour and role-play as learning principles in entrepreneurship pedagogy can enhance the and learning outcomes

Next, an analysis was performed regarding how large scale building developments contribute towards SE by stimulating innovation, proactiveness etc. It can be noted that even though architecture and buildings can sometimes be very complex, and often difficult to address social problems, there are examples of carefully designed buildings which become drivers for positive and measurable social change. Researchers examine the contribution of corporate architecture to social value creation. They focus on the social effects of investments in experiential corporate architecture in industrial companies. Others investigate spatiality of social innovation regarding three major themes: Spatial planning and community development; Governance; Coproduction and service design. As some state, a common denominator for social innovation and urban development is the concept of an 'innovative milieu' which is a dynamic environment, where innovative capacity is nurtured and implemented through participatory community based projects.

Additionally, a semi-structured survey was prepared regarding the potential of collaborative platforms, possibilities for improvement of social entrepreneurship among HEI for architecture and empowering students in architecture as drivers for SI and SE. The questionnaire was organized in 2 sections, where the first one was related with the collaborative platforms and SE, consisting of 8 questions and the second part consisted of 10 questions regarding which skills students in architecture would require in order to promote SE and SI in architectural building design.

Hence the work carried out during this research is focused on fulfilling the objective of this research, which is to show that SEs are important vehicles for social innovation that can deliver in a participative

and efficient way, smart, inclusive and sustainable solutions in crucial areas such as sustainable societies and neighbourhoods. The main aim of this STSM was to identify possibilities of SEs and collaborative platforms for creating sustainable societies. Also, one of the specific aims was to investigate the knowledge and skills necessary for HEIs to equip their students with, by combining Design Thinking with a problem-focused approach promoting greater innovation.

The findings and results produced during the STSM will be published in a relevant conference or journal, such as Social Innovation, Journal of Architectural Research etc.

Description of the STSM main achievements and planned follow-up activities

Description and assessment of whether the STSM achieved its planned goals and expected outcomes, including specific contribution to Action objective and deliverables, or publications resulting from the STSM. Agreed plans for future follow-up collaborations shall also be described in this section.

(max. 500 words)

Social enterprises (SE) are organizations combining entrepreneurial dynamic in order to deliver services, goods or values in the society. Social enterprises (SEs) are generating income from innovative activities while achieving social, economic, cultural or environmental goals. Social entrepreneurship links the social entrepreneur, the social and economic behaviour of a community, promoting and creating social and economic values. Even more, the social economy is noted as a central pillar for the European recovery and transition towards a more inclusive, participatory and sustainable society.

Researchers state that the social enterprises and sharing economy organizations are both forms of organizing that have developed to overcome the downsides of the contemporary capitalism. Such organization and value creation in the ecosystem of SEs is often significantly supported via online communities in terms of collaboration and partnerships between different actors, thus stimulating the collaborative economy. Collaborative platforms are noted to provide possibilities for SEs for creating networks, cross-sector partnerships and involving multiple stakeholders, which can have many benefits for the SEs and the collaborative economy, such as: sharing expertise and resources, collaborative consumption etc.

Analysis was undertaken regarding the innovative contribution of SEs in the creation of sustainable societies and circular economy. Further, an analysis was undertaken regarding factors which determine to what extent SEs may perform better. From the literature review it can be noted that influencing factors, with different relative weight, can be: organizational management, mission of the enterprise, the governance structures, the legal forms, the type of economic resource mobilization model etc. Further, analysis was performed on key characteristics regarding partnerships of SEs, benefits and challenges for SEs in establishing organizational models for SEs which are citizen led. The organizational management and resources are noted to be one the most important factors. Authors define four representative models of social enterprises, such as: the entrepreneurial non-profit model, the public social enterprise model, the social-business model, and the social-cooperative model. But, it can be concluded that new models can be developed depending on the given circumstances and overall context.

Also, it is noted that organizational model of SEs are can be quite diversified, leading to their potential for adaptability. Four important organizational sub-factors are identified which influence the innovation by SEs, such as: the business model (BM), partnerships, knowledge management and culture. The business model is important to capture the value created by the SEs strengths and knowledge and the opportunities presented. Partnerships are a high importance driver, since SEs are more effective when working in collaboration with partners and within networks. Further, three themes regarding knowledge management are highlighted, such as: organizational learning (learning from previous practices and training of stakeholders for internal development), user learning and bricolage (meaning, using combination of existing resources for new purposes). The culture components of SEs is important, as it enables suitable environment for collaboration, value creation, resource sharing etc. The managerial factors can relate to personal characteristics of the manager, such as: passion, motivation, leadership

and other soft skills, accompanied with hard skills, such as knowledge on the topic, expertise etc. The managerial factors identified can be influencing on the product, process and value creation overall.

During the investigation on the knowledge and skills necessary for HEIs to equip their students with, it is identified that the management practices are a significant factor influencing the outcome of the collaborative work.

Authors state that entrepreneurs "think and to some extent act like designers". The skills they share are commons, such as skills in "observation, synthesis, searching and generating alternatives, critical thinking, feedback, visual representation, creativity, problem-solving and value creation". Hence, architectural students can be empowered with SE by design thinking pedagogical approach.

From the semi-structured survey regarding the potential of collaborative platforms, possibilities for improvement of social entrepreneurship among HEI for architecture, several conclusions were outlined. It is noted that the students need to be educated more in SE, as well as in the domain of management, design thinking (supporting value creation for SI and SE throughout the life-cycle of the project), managing stakeholders (stimulating value creation among different stakeholder profiles), use of project management methodologies, techniques that enable peripheral vision (enabling finding opportunities and solutions for value creation from unexpected sources), risk management (ensuring success in the value creation project), sustainable management methodologies (PRISM, ISO, PMBOK and others, which holistically integrate the stakeholders and consider the realization of the project in a sustainable manner, taking in consideration the environmental, social and economic aspects during projects life-cycle and value creation) etc.

Moreover, the importance of collaborative relationships with stakeholders are emphasized as the most valuable organizational asset. Collaboration is also pinpointed as a key aspect in social innovation. Also, SEs should incorporate more of business-like logics to finding new solutions to a particular social problem and promote advocacy-oriented logics for societal transformation. It is evident that organizations perform better by identifying and acquiring resources that are needed for project realization, product development or service delivery. However, organizational adaptability and dynamics are also required. Such dynamic capabilities relate to the capacities of SEs: to sense, shape and seize opportunities; to maintain competitiveness through enhancing, combining, protecting and reconfiguring the business enterprise's intangible and tangible assets. Authors state that it is necessary to analyse each organization's motives and to compare them with partner organizations in order to obtain early indication of the transformative potential in a dynamic project and setting.

According to the work plan, an analysis was performed on collaborative platforms for urban sustainability and sustainable societies. In that regard, the benefits and challenges for SEs utilization of collaborative platforms in the context of a dynamic environment are investigated. Information and Communication Technology (ICT) and digital platforms are no longer seen only as repository for knowledge management, but also as an enabling tool for online collaboration in various forms and formats. Various platforms have been developed where SEs can: integrate resources, share (knowledge, information, practices), have competitive advantage, (iv) innovate their product and service via crowdsourcing and expand their operation with much lower financial pressure. The benefits of platforms are divided in actors-centric and platform-centric ones. The actors-centric describe the benefits connection, interaction, and resource exchange with various participants, while the platform-centric benefits facilitate value co-creation process, cost and time effectiveness etc., compared to traditional methods.

Further, an identification was performed on the possibilities of collaborative platforms for improving urban sustainability, circular economy and which support the strive towards zero-waste, zero-carbon society. From the analysis, six affordances in collaborative economy and platforms are identified, such as: generating flexibility for the user, match-making, extending reach, managing transactions, trust building, facilitating collectivity and having a sense of community. Notions of sustainability, often refer to efficiency in mobilizing underutilized resources, and in encouraging access over, associated with movements towards "anti-consumption," or "mindful consumption", according to different authors.

The review of collaborative platforms for collaborative design shows that they can be organized in a centralized manner, decentralized manner, and there are also brave visions for a lef-governance and bottom-up organizing leading to a citizen-led future. The differences between them are how they approach the issues of control, surveillance, and algorithmic management, as well as the decision-making process in the design and stakeholder involvement and tasks` organization. Therefore, the success of a collaborative design platform is strongly corelated to an underlying decision-making system during the design process and assigning appropriate weight to different stakeholders.

The research regarding building developments that contribute towards SE by stimulating innovation, proactiveness etc. several important findings can be outlined. For example, a small public interest design centre, via community partnerships had created a non-profit organization and construction of a farm building which is able to generate 15% of their own operating costs through the sale their own production. Also, researchers stress that social as a complex phenomenon involving dynamic interaction at each level of society can have a significant part in the SmartCity concepts and development.

Other studies combine social entrepreneurship and corporate architecture by highlighting the social effects of corporate architecture. Corporate architecture reflects the principles of the industrial revolution and it is mainly based on a utilitarian style based on the principle of "form follows function", proposed by the architect Louis Sullivan in the 19th century. The findings show that the management in corporation should consider that investments in corporate architecture are a deliberate strategy of the company; that profits are not a purpose in and of themselves, but rather a means to achieve the social mission's objectives; and the relationship with architects in terms of mutual involvement in order to understand corporate and local needs and effectively transform them into appropriate architectural solutions. More importantly, it is concluded that corporate architecture can assist solving number of social problems, such as: improving the community's quality of life, providing employments opportunities, allowing the community to benefit from places of socialisation and aggregation, and offering facilities and services that support culture and encourage cultural exchange.

The research stay provided the opportunity to establish new partnerships on the subjects of SE and SI. The Host expressed great interest in continuing the work that we've started during the STSM. Hence, the follow up collaboration will be focused on examining the aspects of SE and its integration in sustainable urban design and modelling sustainable societies. The STSM enabled establishing network for future collaboration in terms of joint application for future research projects in order to advance the research in this domain. The knowledge exchange between the Host and the Guest provided means further a mutual collaboration in order to apply for joint research and EU funded project on similar subjects regarding SEs and collaborative platforms. Also, the STSM provided basis for establishing future collaboration and networking with possibilities for staff exchange, guest lecture and a joint work in educating students, conducting seminars and workshops for professionals and the industry. It has been agreed to continue with the analysis of the obtained results and to integrate them in research papers for a conference and journal such as: Social Innovation, Journal of Architectural Research etc.