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Note from the Editor

The launch of the *European Public and Social Innovation Review* (EPSIR) has revealed itself as an intellectual, academic and financial challenging adventure, which was first motivated by the aim of contributing and enriching the field of Social and Public Sector Innovation at the European level.

Throughout the years, the influence and impact of Social Innovation has acquired growing importance in the academic and public agenda of countries all over the world. The business sector, non-profit and public organizations, the social economy, multilevel public administrations, policymakers and researchers, among other professionals, have been interested and explored different theoretical approaches, meanings, and measurement methodologies to understand the impact and social outcomes of Social Innovation. Innovative social problem solving of the vulnerable and excluded sectors of the population has, therefore, become one of the main topics inside social sciences.

Concurrently, the need for new and improved public policies and changes inside the Public Sector has given birth to the concept of Public Sector Innovation inside new public management and governance perspectives. This progress has had a major influence in how we think about the role of the public sphere and how modern governments worldwide are dealing with different problems and pressures. The significance of citizen engagement, ethics, transparency and effectiveness of public management programmes, have caused a major transformation in how we think, value, design and create public policies inside a mixed economy.

The *European Public and Social Innovation Review* (EPSIR) contributes to these fields being an online open access journal that attempts to lead the way into an interdisciplinary and transdisciplinary study of Social and Public Sector Innovation. It, thus, acknowledges the impact that these two fields may have in the co-creation and co-design of new and improved public policies and public management initiatives.

The journal will be based on an external double-blind peer review process, and all papers received will be handled according to this method, ensuring the quality and objectivity of the content, as well as the anonymity of the referees. Only original papers will be eligible for publication.

San Sebastian, 23rd of June 2016

Dr. Alfonso Unceta Satrustegui

MAPPING SOCIAL INNOVATION MAPS
The State of Research Practice across Europe

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Abstract: In an effort to better understand the various forms of social innovation, mapping has become a common and widely applied method for gaining insights into social innovation practices. The transdisciplinary nature of social innovation research has led to a plurality of distinct approaches and methods. Given the increasing interest in social innovation, and the apparent endeavour among policymakers to utilise social innovation to address current societal challenges, it is argued that mapping efforts need to be streamlined in order to make better use of their results. The article describes 17 ongoing or recently finalised research projects on social innovation and their methodological approaches on "mapping" social innovations. It provides a systematic overview on project objectives, SI definitions and mapping approaches for each of the scrutinised projects and ends with a synoptical analysis on methods, objectives and missing research.

Keywords: Social Innovation, Mapping, Europe, Data Collection, Methodology.

Acknowledgements: This paper builds on the results of the research project SIMPACT – «Boosting the Impact of Social Innovation in Europe through Economic Underpinnings«. SIMPACT has received funding from the EU's 7th Framework Programme for research, technological development and demonstration under GA No. 613411.

1. Introduction

The concept of "social innovation" has dramatically gained attention on the research and policy agenda in recent years. But though high expectations are bound to the idea of social innovation, the term itself and the conditions under which social innovations emerge and flourish, are still to be explored and 'there is still no theoretically grounded concept that is suitable for empirical research' (Howaldt, Kopp, Schwarz, 2015: 10).

Jane Jenson and Denis Harrison (2013: 7) have taken stock of different notions of social innovation, the use of this concept in research projects, the ongoing work on theory building and dissemination activities and suggest 'useful cross-level discussion among projects should be encouraged.' This is where this article starts.

This article scrutinizes several EU funded projects on social innovation for their methodology. As a result of the still unknown conditions of this topic, ongoing research activities aim at understanding the concept by description of its phenomena. Along this insight we scrutinized the ongoing research for descriptive methods, because initial research showed that many project have in common that they have started mapping cases of social innovation recently. 'Mapping' within these projects refers to a variety of understandings of visualization – not all of them apply a spatial dimension, but envisage to 'map' qualitative aspects of the observed social innovations. This paper describes some of these 'social innovation maps' and brings together quite different visualisations, observation dimensions and notions of social innovation. It reveals different Cartesian categorizations and notions of 'mapping' – and of what counts as a 'social innovation'.

We start the discussion with an introduction of the distinct 'mapping approach' and the underlying understanding of 'social innovation'. The main goal is to provide an overview of the approaches currently applied. This review is, however, not all-encompassing because of the many initiatives that are not documented; rather this article serves the purpose of exemplifying and explaining the trend towards mapping as well as the consequence for future research.

The need to substantiate policy and practice by evidence is an emerging theme in social innovation. Although a growing body of examples of successful and less successful social innovations exists, these are rather scattered and cover an array of diverse aspects.[1] Today's challenge seems to be the combination of visualising social innovation phenomenons and to quantify or qualify their impact.[2]

2. Variety of Mapping Approaches

Based on the above considerations, identified mapping activities will be introduced to exemplify the distinct approaches applied including the underlying understanding of social innovation. Being aware of the multiplicity of

[1] Cf. http://siresearch.eu/blog/measuring-and-mapping-social-innovation

[2] Cf. https://www.ashoka.org/files/ICT-Based-Social-Impact_09-2014-report.pdf

ongoing mapping activities across Europe and beyond, the authors collected a variety of recent mapping exercises in this thematic field. To identify a base of projects to be scrutinised, the following selection criteria were applied: (1) activities funded under FP7 which are (2) ongoing respectively did not end later than twelve months earlier. This lead to the identification of 17 projects which are introduced in the following.

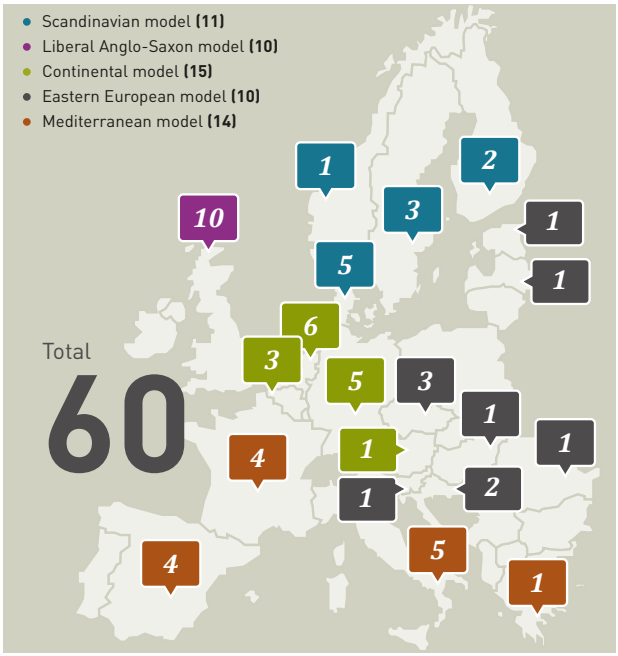
2.1. SIMPACT

The project. «Boosting the Impact of Social Innovation across Europe through Economic Underpinnings» (SIMPACT) has a twofold objective: It asks for the economic factors that underpin social innovation's social and economic impact, while emphasising social innovation's role in empowering vulnerable groups in society. Substantiating the economic dimensions of social innovation as a so far largely unexplored research field is expected to accelerate the social and economic impact of social innovation through an advanced knowledge base and tailored tools supporting policymakers, innovators, investors and intermediaries.

Definition of social innovation. According to SIMPACT's rational, social innovation is referred to as '[…] novel combinations of ideas and distinct forms of collaboration that transcend established institutional contexts with the effect of empowering and (re)engaging vulnerable groups either through the innovation process or as a result of it' (Terstriep *et al*., 2015: 6).

Mapping approach. In an initial step a «Multidisciplinary Literature Review» was conducted which laid the foundation for a concept to help identify the numerous factors that underlie economic and social impacts. Subject to an iterative process of theorising and evidence collection, the theoretically deduced categories and related hypotheses on economic components (actors, resources, institutions), objectives (social, economic, political) and principles (mode of efficiency and governance) build the point of departure for the empirical work. With the aim to establish strong synergies between the production of theory, strategy and appropriate methodologies, the evolutionary character of social innovations and its dynamics are reflected in the distinct forms and levels of analysis: Meta-analysis of existing social innovation cases - identifies through online repositories such as Ashoka or Innoserv – have been combined with Business Case Studies (BCSs) and Social Innovation Biographies (SIBs). The broad meta-analysis of existing cases, which captures multifaceted aspects of social innovation, was substantiated by in-depth analysis of specific economic factors. According to the project's rational, in an initial step two filters were applied to scan existing databases for relevant cases: firstly, distinct welfare regimes across Europe and secondly, fields of action, namely employment, migration and demographic change, as well as gender, education and poverty as transversal themes. The latter also constituted the unifying elements of cases across the distinct levels and foci of analysis. In total 94 social innovation cases were collected and documented in ID Cards, which summarise the basic information for each case. Meta-analysis in the form of a «qualitative comparative analysis» (QCA) was conducted for all 94 cases to identify meta-components, –objectives and– principles across the defined fields of action (horizontal analysis). In addition, patterns of social innovation were derived for each field of action (vertical analysis). These were compared across the distinct welfare regimes.

Figure 1. SIMPACT Map of Business Case Studies & Social Innovation Biographies.



Source: Terstriep *et al*. (2015).

Applying qualitative desk research, which made use of information from different sources (e.g. scientific publications, interviews, presentations, websites etc.), 26 BCSs were conducted to gain a better understanding of the social innovation ecosystem, value chains and business opportunities. By carrying out 34 SIBs the project applied a new methodology that enabled capturing the development paths, knowledge trajectories and stakeholder interactions throughout the innovation processes, from ideation to implementation. Following the process of creation with narrative interviewing methods and triangulation, the biography of an innovation is reconstructed including its components, objectives and principles. This leads to a better understanding of the spatial, social and temporal trajectories in the rise and spread of Social Innovations.

2.2. CrESSI

The project. «Creating Economic Space for Social Innovation» (CrESSI) explores the economic underpinnings of social innovation with a particular focus on how policy and practice enhance the lives of the most marginalised and disempowered citizens in society. Although research within CrESSI and SIMPACT cover the same topic, they complement each other due to their distinct theoretical frameworks.

Definition of social innovation. CrESSI understands social innovation '[…] as the development and delivery of new ideas and solutions (products, services, models, markets, processes) at different socio-economic levels that intentionally seek to change power relations and improve human capabilities, as well as the process via which these solutions are carried out' (Houghton Budd, Naastepad & van Beers, 2015: 3).

Mapping approach. CrESSI takes stock of examples of social innovations, including both historic and recent, as well as both successful and less successful ones. Building on the project's 'Extended Social Grid Model' (Nichols & Ziegler, 2015), which combines Beckert's (2010) 'Social Grid Model' with the 'Capabilities Approach' of human development and empowerment (Sen & Nussbaum, 2009) and Mann's (2013) 'Power' approach, social innovations across Europe are examined in longitudinal and historical studies.

2.3. SI-DRIVE

The project. Social Innovation – Driving Change (SI-DRIVE) strives to (1) determine the nature, characteristics and impacts of social innovation as key element of a new paradigm of innovation, (2) to map, analyse and promote social innovation in Europe and world regions to better understand and enable social innovations and their capacities in changing societies, (3) to identify and assess success factors in seven policy areas and to (4) undertake future-oriented research.

Definition of social innovation. Within SI-DRIVE social innovation is understood as '[…] a new combination of social practices in certain areas of action or social contexts with the goal of better satisfying or answering social needs and problems than is possible on the basis of existing practices' (Howaldt *et al*., 2014: 3).

Mapping approach. The overall aim of the project's mapping is to compare European approaches with global regional approaches, analyse the different approaches and priorities, as well as to identify good practice and lessons learnt. Hence, SI-DRIVE conducts the mapping in two steps – an initial mapping («baseline mapping») by means of desk research captures basic information about 1'000 actual social innovations in seven policy fields[3] from secondary data sources, leading to a typology of SI. Case screening used country-coverage (Europe, world-regions), aligned with the definition of social innovation and corresponding to defined policy fields as a selection criteria. Based on the project's five key dimensions of social innovation[4] from the 1'000 cases the 300 most important («prototypical») cases are chosen as basis for selection of 70 cases for in-depth analysis. Throughout the data collection it is distinguished between the micro-level of single projects/initiatives and the meso-level of practice fields. Whilst projects/initiatives refer a single concrete implementation of a solution, a practice field expresses general characteristics common to different projects/initiatives.

2.4. TRANSIT

The project. Overall aim is to develop a Transformative Social Innovation Theory (TRANSIT) of middle-range with a focus on empowerment and change in society that is both relevant and practical. Structured around the four thematic areas of governance, social learning, funding and monitoring, the project considers the micro-level of local and transnational initiatives in Europe and Latin-America as well as the role of macro trends in society (e.g. financial crisis, climate change, ICT-revolution), referred to as 'game changers'.

Definition of social innovation. Transformative Social Innovation (TSI) is conceptualised as a non-linear interaction between social innovation (micro-level), system innovation (meso-level) and game changers as exogenous developments at the macro-level. Social innovation is understood as '[…] new services, practices or ideas at the micro-level of «niches»', whereas system innovation refer to change of dominant institutions and practices, i.e. 'regimes' (Avelino *et al*., 2014).

Mapping approach. The mapping of TSI cases is lead by the research question, how social innovation interacts with other forms of (transformative) change, and how actors are empowered therein. Units of analysis are local initiatives and transnational networks. TRANSIT's map-

[3] SI-DRIVE has defined the following policy fields: education, employment, environment, energy, mobility / transport, health and social care, poverty and sustainable development.

[4] SI-DRIVE's five key dimensions are concepts, social need, resources, governance/actors and process dynamics (Howaldt *et al*., 2014).

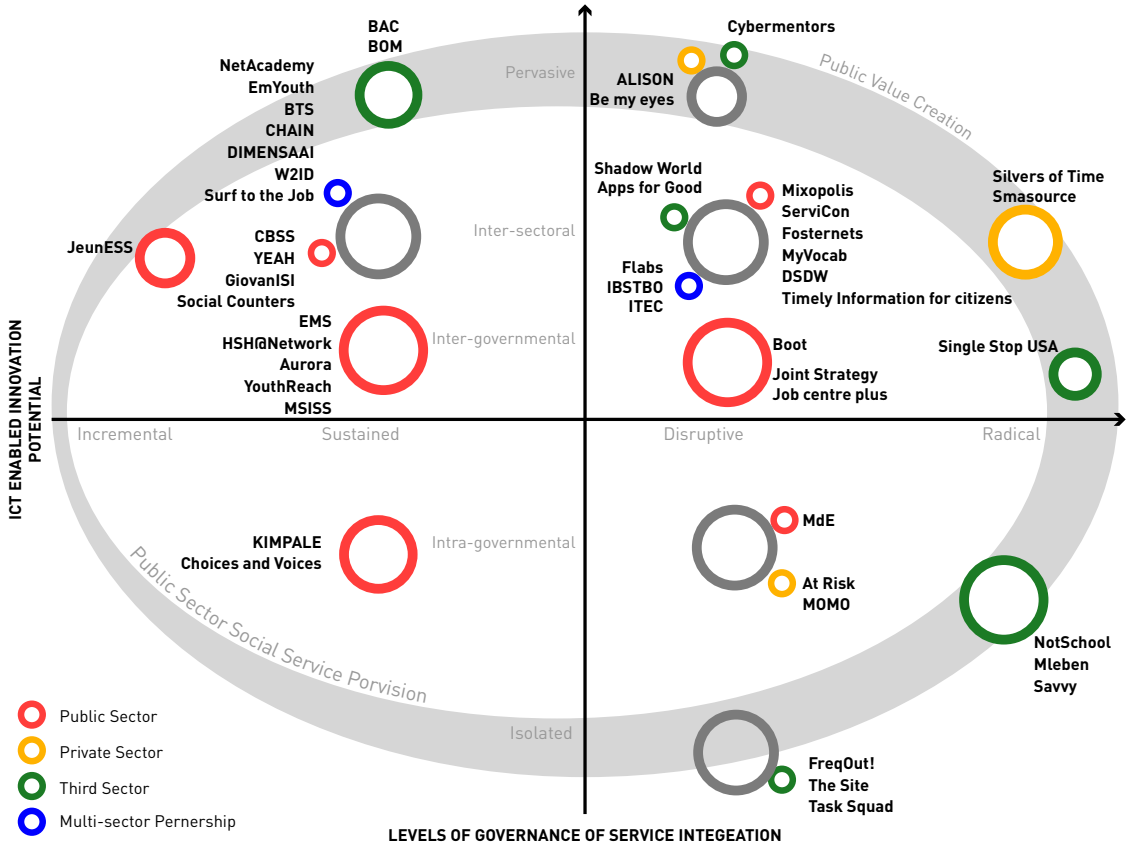
ping is based on an embedded case study approach that combines qualitative in-depth case study analysis with «quali-quantative comparative meta-analysis» (Søgaard Jørgensen *et al*., 2014). Initially, in-depth case studies of 20 transnational networks – that work on social innovation to co-create new social practices with the aim to contribute to societal transformation – plus 40 local manifestations in Europe and Latin America were conducted. These have been classified according to the three transformative discourses «New Social Economy», «Low Impact Living» and «Open Source» that are linked to the game changers «Financial Crisis», «Climate Change» and «ICT-revolution». They are related to (a) social innovations in ownership, business models, methods of exchange, (b) innovations in life-styles, daily practices and consumer habits and (c) innovations in research, production, sharing of information. After a first theoretical iteration, in-depth case studies are complemented by a meta-analysis of 200 local TSI cases. Data for each local initiative (transnational network) is collected by 5 to 10 (3 to 5) semi-structured qualitative interviews, 10 to 80 (2 to 12) hours of participant observation and the review of 10 to 30 (5 to 10) documents (primary and secondary sources, media analysis).

2.5. IESI

The project. «ICT-enabled Social Innovation in support to the Implementation of the Social Investment Package» (IESI) strives to support the implementation of the EU Social Investment Packages (SIP) by addressing how ICT-enabled social innovation can support social investment policies. Results enhances understanding on how ICT-enabled social innovation initiatives can contribute to simplifying administrations: better targeting benefits and services (e.g. through simpler procedures, better information or one-stop-shops), improving the management, provision and coordination of services, designing high-quality and cost-effective services meeting the needs of citizens, and supporting access to and take-up of services.

Definition social innovation. According to the project's rational ICT-enabled social innovation is '[a] new configuration or combination of social practices providing new or better answers to social protection system challenges and needs of individuals throughout their lives, which emerges from the innovative use of Information and Communication Technologies (ICTs) to establish new relationships or strengthen collaborations among stakeholders and foster open processes of co-creation and/or re-allocation of public value' (Misuraca *et al*., 2015: 42).

Figure 2. IESI Knowledge Map.



Source: Misuraca (2015).

Mapping approach. Starting point for the analysis is to address Personal Social Services of General Purpose (PSSGI)[5]. Unit of analysis are initiatives that are policy relevant, which aim to simplify/modernise social policies, benefits and/or administrative procedures and service delivery through ICT-enabled innovations (Misuraca *et al*., 2015). With a focus on EU Member States, initiatives were identified through a review of state of the art and through scanning project databases and other direct sources. Policy relevance, ICT-enabled social innovation and evidence of policy outcomes served as selection criteria. Data was collected through a comprehensive 'template' of 44 variables (qualitative and quantitative) organised in categories such as description data, organisational data, resources, monitoring and evaluation, future prospects, lessons learned and challenges, and information sources. Variables are grouped in three sub-sets, to be collected during different phases: The first sub-set was collected in the analysis of state of the art review phase, the second during the mapping phase and the third will be collect in the case studies phase. Main dimensions of the mapping exercise were the following aspects: (1) typologies of ICT-enabled innovation potential (technical / incremental, sustained / organisational, disruptive, and radical), (2) levels of governance (isolated, intra-governmental, inter-sectoral, pervasive), (3) types of social integration (e.g. need-driven/outcome oriented), and (4) elements of social innovation (e.g. funding, organisation). During the first phase of mapping, 100 initiatives were identified of which 50 were included in the mapping process and subsequent analysis.

2.6. CASI

The project. Public Participation in Developing a Common Framework for Assessment and Management of Sustainable Innovation (CASI) investigates the scope of sustainable innovation as a societal phenomenon. It enables the elaboration of an assessment framework of sustainable innovation practices, which can be integrated into public policy developments.

Definition of social innovation. CASI utilises a traditional innovation model, where social innovation is one of seven types of innovation. The distinct innovation types are summarised under the term «sustainable innovation».

Mapping approach. CASI's mapping exercise focuses on sustainable innovation cases in EU-28 along three dimensions: (1) 22 HORIZON 2020 topics grouped in three innovation pillars: climate action, resource efficiency and raw material; (2) seven types of innovation: product, service, social, organisation, governance, system and marketing; (3) 22 sectors. Based on desk research in an initial step, 500 cases were nominated, of which the top six cases per country were selected. For each of the six cases an in-depth mapping was conducted through standardized interviews utilizing a theoretically deduced questionnaire.

2.7. LIPSE

The project. Learning Innovation in Public Sector Environments (LIPSE) identifies drivers and barriers to successful social innovation in public sector in 11 EU countries and 7 policy sectors. Five building blocks of social innovation in the public sector are investigated: (1) environments, (2) inputs, (3) tools and processes, (4) outcomes, and (5) feedback loops and innovative systems.

Definition of social innovation. LIPSE defines social innovation '[…] as innovation that is related to creating new services that have value for stakeholders (such as citizens) in terms of the social and political outcomes they produce' (Lewis *et al*., 2013: 8).

Mapping approach. LIPSE applied social network analysis to map, analyse and compare the innovation capacity of public sector environments in four European countries, where municipalities built the cases. The mapping focused on two closely intervened aspects: First, institutional environments to study the role of social capital, innovation champions and leadership and second citizens' engagement in public innovation processes. Methods applied are (1) document analysis of the organisational structures of the municipalities, (2) an online administered survey of administrators and politicians, and (3) interviews with community-based innovators. The survey covered the following aspects: innovation environment (e.g. significant innovations in the municipality, barriers and drivers, socio-economic challenges, self-rated innovativeness), networking, social networks and associated resources, leadership for innovation, and background information concerning the respondent. A second mapping exercise focused on the influence of feedback loops, accountability mechanisms and learning processes (FAL) within award winning public organizations (i.e. administrative projects or practices which were recognised as 'best practices') on the sustainability of social innovation in six European countries (van Acker *et al*., 2015). In particular, national and international awards of excellence, innovation and/or quality in the public sector were screened to map cases. In total 845 cases were collected.

2.8. SEFORÏS

The project. Social Enterprise as Force for more Inclusive and Innovative Societies (SEFORÏS)[6] seeks to understand the potential of social enterprise in EU and beyond to improve social inclusion through greater stakeholder engagement, promotion of civic capitalism and changes to social service provision through (1) investigation of key processes within social enterprises (SE) for delivering inclusion and innovation, and (2) analysing formal and informal institutional contexts in support of SE.

[5] The following social services are investigated: childcare, education and training, social assistance, social care, social housing, employability, employment, social inclusion/participation, civic engagement, active and healthy ageing and long-term care.

[6] Social Entrepreneurs as Lead Users for Service Innovation (SELUSI, 2008-2012) as predecessor of SEFORIS mapped 600 social ventures and the attributes of 500 social entrepreneurs in Europe.

Definition of social innovation. Broadly, SE are understood as organisations that pursue a social mission through the use of market mechanisms, i.e. through generating own revenues to sustain themselves. In accordance with the project's rational, no unique definition of SE was adopted. Rather SEFORÏS refers to the country-specific understandings of SE.

Mapping approach. To expand and enrich understanding of social enterprises, SEFORÏS combines SE field and lab experimentation with in-depth case studies and the collection longitudinal survey data across 9 countries in Europe, Russia and China. Conceptually based on the project's predecessor SELUSI, the mapping follows a three-step procedure: First, 27 in-depth case studies (3 in each country, 236 interviews) were conducted and documented in a qualitative dataset. The cases gather information about governance, finance, innovation, impact and context, which build the 5 core research areas of SEFORÏS. Second, through surveys and standardized telephone interviews, a dataset of 1'000 SE across Europe, Russia and China is collected during the next six months. Third, it is envisaged to link datasets with the Community Innovation Survey.

2.9. ITSSOIN

The project. Impact of the Third Sector as Social Innovation (ITSSOIN) investigates the impact of the Third Sector and civic engagement on society. For the purpose of the project Third Sector impact is narrowed down to the priority of social innovation.

Definition of social innovation. Treating social innovation as «quasi-concept», ITSSOIN refers to social innovation as '[…] one of the third sector's primary contributions of social impact. This covers both sides of the reasoning: (1) one of the main social impacts of the third sector is the creation of social innovation […]; (2) the third sector's social impact arises from social innovation, i.e. social innovation is one of the primary mechanisms that generate social impact' (Anheiner *et al*., 2014a: 21). Forasmuch, social innovation is understood '[…] as the capacity of non-profit organizations to generate novel ideas, ways and means of doing things, of addressing public and social problems of many kinds' (ITSSOIN, 2015).

Mapping approach. The project's mapping exercise is based on theoretically deduced hypotheses that are investigated empirically by identifying dominant social innovation streams in selected fields. The formulated hypotheses cover (1) organisational properties, (2) effects of volunteering, (3) institutional frameworks, (4) citizens perceptions and (5) media perceptions (Anheier *et al*., 2014c). In total 20 case studies are conducted in seven fields of analysis, which will result in a cross-country comparison of roughly 3 countries per selected dominant social innovation in the respective field of activity, by means of «qualitative comparative analysis» (QCA). «Process tracing» is used as method to track phases of the emergence of social innovation and the entities involved. The in-depth analysis of involved entities is expected to allow determining of whether the hypothesised characteristics and properties drive the emergence of social innovation in reality. In addition, civic engagement in form of volunteering is explicitly considered, making use of survey data.

2.10. BENISI

The project. Acting as a «network of networks», Building a European Network of Incubators for Social Innovation (BENISI) aims to identify and highlight 300 of the most promising, impactful and employment-generating social innovations and create conditions for the transfer and scaling of social enterprises. Therewith, it is envisaged to expand the reach and impact of social innovation, and generate positive cascading effects across Europe (BENISI, 2013).

Definition of social innovation. According to BENISI's understanding social innovation refers to '[…] a new idea, product, service or model that simultaneously meets social needs and creates new social relationships or collaborations. Social innovations are not only important for the new specific solutions to societal needs, but they can furthermore impact on society's capacity to innovate' (BENISI, 2015a).

Mapping approach. BENISI's mapping comprises more than 300 cases from around 30 countries. The cases are categorised by six societal trends to which they are referring. As the opportunities for scaling is a leading question in BENISIS's approach, the scaling trajectory is another important criterion for the categorisation of the cases. The approach is based on the theoretically grounded framework by Weber, Kröger & Lambrich (2012) and distinguishes between four kinds of trajectories, namely (1) capacity-building (scaling alone, no need for adaptation), (2) branching (scaling alone, adaptation necessary), (3) dissemination of knowledge (scaling with partners, no need for adaptation) and (4) affiliation (scaling with partners, adaptation necessary). The single case is characterised by pointing out its social purpose, social impact and innovative character (BENISI 2013b).

2.11. EFESEIIS

The project. «Enabling the Flourishing and Evolution of Social Entrepreneurship for Innovative and Inclusive Societies» (EFESEIIS) overall mission is '[t]o produce new knowledge enabling the European people to fully understand the conditions under which social entrepreneurship starts, develops and can contribute effectively and efficiently to solving societal challenges in a sustainable way' (EFESEIIS, 2015). Forasmuch, the project aims to (1) provide advice to stakeholders on how to foster social entrepreneurship and social innovation, (2) elaborate an evolutionary theory of social entrepreneurship, (3) identify features of an enabling eco-system for social entrepreneurship, and (4) identify the «new generation» of social entrepreneurs.

Definition of social innovation. Neither a common definition of social innovation nor of social enterprise is provided. Rather the project draws on the country-

specific understandings of the terms, which are reflected in the respective country reports.

Mapping approach. EFESEIIS' mapping focuses on in-depth analysis of about 70 pre-selected «New Generation Social Enterprises» from 10 European countries making use of a narrative approach (Benadusi & Sapienca, 2015). The aim is to explore differences and similarities within and between cases. Data collection techniques comprise desk analysis, dialogic methods and shadowing/participative observation (Benadusi, 2015). Using narrative interviews, the entrepreneur is (a) asked to talk about himself (background, education, style of leadership, professional experiences, relational skills, social capital), (b) provide a snapshot of the organisation (e.g. business model, revenue capacity, sources of income, innovation level etc.), and (c) take a look at the future (e.g. vision, challenges, trends, future growth). Next to the European case studies, five rapid appraisals outside Europe are conducted.

2.12. Third Sector Impact (TSI)

The project. The Contribution of the Third Sector to Europe's Socio-economic Development (TSI) aims to create knowledge that will further advance the contributions that the Third Sector and volunteering can make to the socio-economic development of Europe. Countries covered have been strategically chosen to capture the major regions in Europe that differ significantly with respect to scale, structure and character of the Third Sector.

Definition of social innovation. TSI's main focus lies on the nature of the Third Sector, not on social innovation. However, social innovation is one important aspect of the impact Third Sector organisations might have on their stakeholders and society as a whole. In this context, social innovation is understood as an approach to find new solutions to unattended social problems. By this means, social innovation can initiate and contribute to social change (TSI, 2014).

To define the Third Sector, the project made use of the five criteria 'breadth', 'clarity', 'comparability', 'operationalisability' and 'institutionalisability' (Salmon & Sokolowski, 2014). According to the TSI consortium, "the third sector, consisting of civil society associations and foundations, volunteers, and other citizen organisations and activities, offers unique renewable and sustainable resources for social and economic problem-solving, democracy, and civic engagement in Europe" (TSI, 2015).

Mapping approach. In order to map current challenges and opportunities of Third Sector Organisations, for each country an online survey will be conducted. The first survey «What moves the third sector in the Netherlands» was launched in June 2015.

The survey aims at stakeholders of third sector organisations such as volunteers and employees but also participants or users. The survey is structured along five categories, namely (1) well-being and quality of life, (2) social innovation, (3) civic engagement, empowerment, advocacy, community building, (4) economic impacts and (5) human resource impacts. On the basis of the survey results, the most promising approaches to third sector impact assessment ought to be identified (TSI, 2014).

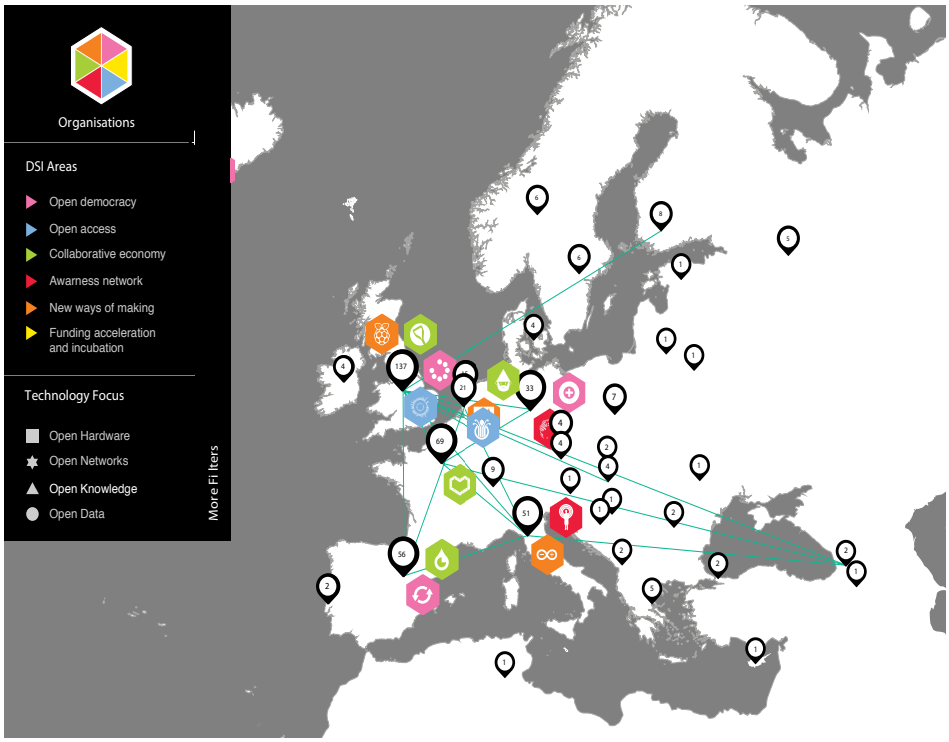
2.13. DSI

The project. «Digital Social Innovation» (DSI) aims to define and understand the potential of digital social innovation and to elaborate a living map of organisations that use digital technologies for the social good. More specifically, both the economic and societal potential, and the specific impact and added value of the innovation enabled by the Future Internet, and Digital Social Innovation, are assessed (Bria, 2014).

Definition of social innovation. Digital social innovation is defined as '[…] a type of social and collaborative innovation in which final users and communities collaborate through digital platforms to produce solutions for a wide range of social needs and at a scale that was unimaginable before the rise of Internet-enabled networking platforms' (Bria, 2014: 5). Here, DSI activities and collective awareness platforms are understood as «Digital Commons». Their building and governance '[…] honours participation, inclusion, empowerment, equal access

Mapping approach. Based on a multi-disciplinary theoretical grounding of the field, a mixed method approach including field-based case studies of DSI organisations and projects, together with quantitative analysis underpinned by open data gathered though a generative European-wide survey was applied. Triangulation was used to compare and corroborate evidence (Bria, 2014). To classify as DSI, organisations and their activities had to meet the following five criteria: (1) generates social impact, (2) adopts new technology trends in a novel way, (3) aims at empowering citizens, (4) demonstrates a clear network effect, and (5) is driven by grassroots or bottom-up initiatives. From the initial list of 100 cases 35 met the above criteria and were analysed by means of in-depth semi-structured interviews. In addition, secondary data was used to understand the position and significance of the organisation. For data collection a generative open online survey was conducted.

Figure 3. Screenshot DSI CROWDMAP.



Source: Bria (2015: 11f).

By January 2015 a total of 1'000 DSI organisations and 630 collaborative projects were mapped. Data is categorised by «type of organisation», «type of project», «technology trends», and «areas of society» (Bria, 2015).

2.14. CITISPYCE

The project. «Combating Inequalities through Innovative Social Practice of, and for, Young People in Cities across Europe» (CITISPYCE) builds on research that shows the disproportionate impact of the economic crisis on young people across Europe. Against this backdrop, the project strives to investigate the current state of the art and ideas concerning social innovation addressing inequalities faced by young people (16-24), to explore socially innovative practices being developed by and for young people in urban areas.

Definition of social innovation. Within CITISPYCE social innovation are understood as '[…] addressing social inequalities' drawing on questions such as why, what, who and how (Jubany & Güell, 2015: 5). More precisely, social innovation refers to '[…] a practice that in innovative ways counteracts/changes the cause of inequalities, affecting young people' (Grander & Alwall, 2014: 3). Practices are regarded socially innovative as far as they (1) meet new social needs or better meet existing ones, (2) find new ways of meeting social needs which are more effective, efficient and/or sustainable than alternatives, (3) empower people, (4) promote awareness of rights and active citizenship, (5) turn social challenges to opportunities, and (6) increase social capital, trust and capacity to take action.

Mapping approach. Following a potential-oriented approach, in the initial step CITISPYCE mapped the policy frameworks in 10 European cities. Having identified the neighbourhood as an important level, in which inequalities are manifested, their social structure (i.e. composition of population) and infrastructure (i.e. public services) were mapped. For each of the 10 cities two areas were selected. Document analysis was combined with site visits and 15 expert interviews. In total 146 interviews were conducted, focusing on the socio-spatial characteristics of the neighbourhood, the local infrastructure, the relation of infrastructure to inequalities, and incidences of social innovation (Güntner, Gehrke, Seukwa, 2014b). Subsequently, young people's perceptions, experiences and social practices in relation to social inequalities were mapped through interviews and participant observations. In total 607 people participated, 445 interviews were conducted and 26 focus groups organised (Hussain & Higson, 2014).

2.15. SocIEtY

The project. Overall objective of «Social Innovation – Empowering the Young for the Common Good» (SocIEtY) is to improve the quality of life of disadvantaged young people through social innovation. Specifically, the project aims to (1) improve the quality of life of disadvantaged young people, (2) identify opportunities to reduce inequalities, and (3) extend and build knowledge and tools in support of the policy goal 'good life for all'.

Definition of social innovation. Within SocIEtY social innovation refers to '[…] new ideas that work in meeting social goals and brings increased social value to

society' (Rosendal Jensen, 2013: 124). Social value is understood as '[a] combination of absence of focus on profit and the contributions from the volunteers/professionals, makes it possible to create social value. At the same time social value in certain cases can be converted to reduce economic transaction costs' (Rosendal Jensen, 2013: 126).

Mapping approach. Mapping activities within SocIEtY cover two major blocks: First, the analysis of the socio-economic political context within which decisions are made through mapping current policy processes and social support measures in 11 countries, and by a capability-oriented statistical analysis of measures of inequality. Second, the analysis of local social support networks by (1) investigating social practices and mechanisms, (2) collecting young people's aspirations, wants and experiences, and (3) elaborating an experimental participatory research methodology for social innovation. With regard to the latter participatory research by means of regional case studies, it builds upon and deploys the theoretical, conceptual and previous empirical work. Participator research is understood as '[…] practice of reflection in which some questions should be addressed concerning how our research relates to democracy and participation' (Vandekinderen & Roose, 2014). Pilot workshops with young people, researchers and other stakeholders have been conducted, where concrete methods of investigation have been prepared and discussed.

2.16. ImPRoVE

The project. «Poverty Reduction in Europe: Social Policy and Innovation» (IMPROVE) strives to enhance the basis for evidence-based policy making in the areas of poverty, inequality and social innovation in Europe. Research is lead by the questions, (1) how Europe can achieve social cohesion and (2) how social innovation complements, reinforces and modifies macro-level policy and vice versa.

Definition of social innovation. Drawing on The Young Foundation (2006) and Ilie & During (2012), social innovations are understood as '[…] innovations that are social in their ends as well as in their means' (Oosterlynck *et al*., 2013: 2). It is assumed that social innovation '[…] implies a particular view of poverty and social exclusion. […] poverty and social exclusion are defined in a much broader sense than pure lack of material or financial resources' (ibid).

Mapping approach. ImPRoVE's mapping exercise aims to develop a database of local socially innovative policies and practices that address new and growing inequalities. Particular attention is given to the governance dimension of successful socially innovative policies and actions. More precisely, governance challenges that are rooted in the complex interrelationships between actors, instruments and goals of local forms of social innovation and redistributive policies of the national welfare state are investigated. The focus is on policies and actions that have (successfully or not) experimented with policy mixes, that include socially innovative instruments (e.g. social learning, awareness raising, mobilisation/collective action) and also with multi-level governance. In total, 30 case studies will be conducted covering distinct welfare and governance models, of which nine are already documented. Cases have been sourced in collaboration with SOCIAL POLIS, Eurocities, EUKN and URBACT. Data analysis uses comparative and transdisciplinary methods.

2.17. TEPSIE

The project. «Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe» (TEPSIE) aimed to lay the ground for developing tools, methods and policies as part of the EU strategy for social innovation. Its purpose was to strengthen social innovation's foundation for other researchers, policymakers and practitioners to help advance the field. Hence, TEPSIE mapped the field, reviewed theories, models and methods and identified gaps in existing practices and policies, as well as pointed towards the priorities for future strategies (TEPSIE, 2014).

Definition of social innovation. Within TEPSIE social innovation has been defined as '[…] new solutions (products, services, models, markets, processes etc.) that simultaneously meet a social need (more effectively than existing solutions) and lead to new or improved capabilities and relationships and better use of assets and resources. In other words, social innovations are both good for society and enhance society's capacity to act' (The Young Foundation, 2012: 18).

Mapping approach. According to the project's rational, rather than collecting a large dataset, TEPSIE made use of a case study approach, i.e. case studies were conducted as exemplification of the issue researched. Themes covered among others the state of social economy, citizens' engagement in social innovation, the spread of social innovation as well as online collaboration and the networking tools for social innovation. The mapping of citizens' engagement in social innovation, for example, started with extensive desk research on the distinct methods of engagement along the three theoretically deduced functions of (1) providing information and resources, (2) problem solving, and (3) taking and influencing decisions (Davies & Simon, 2013; Davies *et al*., 2012). For each function two methods were identified, for which a case study at global scale (12 in total) was conducted by the means of telephone and face-to-face interviews, using a semi-structured interview guide. For each case the following issues were examined: brief description of the engagement activity, origins including background information, key resources, value of the approach, and outcomes and impact. To investigate the theoretically informed spread of social innovation (beyond organisational growth) focusing on new programmes, practices and organisational structures, 3 in-depth case studies were conducted by means of 8 to 10 interviews per case (Davies, 2014). Four criteria were applied to select cases: (1) involvement of an intermediary in the spread, (2) one global example, one which spread between two countries, and one which spread within the national context, (3) in-

tervention in the field of education, and (4) feasibility of carrying out the research.

3. Similarities & Differences

The synopsis of mappings summarised in this article illustrates the variety of objects, means and results of the scrutinized mapping processes. The subsequent similarities and differences became apparent.

3.1. Understanding of Social Innovation

The 17 investigated projects illustrate a wide bandwidth of understandings of social innovation. Or even more – with the words of Jenson and Harrison: 'but in several projects the authors declined the invitation to propose their understanding of social innovation' (European Commission 2013: 15). While there are projects that explicitly do not apply a definition of social innovation for their mapping but try to embrace different notions of this term (e.g. EFESIIS, SEFORIS), others initiate their mapping by a fixed understanding of what counts as a social innovation. Among these, huge differences can be observed. Whilst some (e.g. SIMPACT) put the target group of vulnerable people at the heart of their definition, others (e.g. LIPSE) understand social innovation from a perspective of origin (in the case of LIPSE: public administration) or in the context of entrepreneurship. Meanwhile, for example, SI-DRIVE applies a more abstract and open concept of social innovation and defines SI by the term of 'social practice' (Howaldt *et al.* 2014). The idea to collect «what counts as a Social Innovation in a specific region» can be found in two mappings – opening up the mapping exercise for a multi-notional research.

A quite recent development is the focus on digital technology: DSI and IESI are focused on social innovations that are either initiated by digital means or are using them.

3.2. Methods of Data Collection

The prevailing instrument of collecting data for mapping social innovations is the case study, making qualitative research the dominant approach. In the identified case, study-based projects cases are retrieved from repositories – predominantly online databases. Only few projects apply quantitative data, whereas this data is usually complemented by qualitative data, mostly retrieved from case studies. Interviews are the second most frequently used scientific method to collect data for mappings. Only few projects apply other methods such as network analysis, or even tailored instruments such as «Social Innovation Biographies» applied by SIMPACT or the narrative approach developed by EFESEIIS.

3.3. Mapping Dimensions

Most of the described mapping endeavours are applying the addressed societal challenges as one mapping dimension. Unemployment, demographic change and education seem to be the most prominent topics that count as selection criteria. Very explicitly CASI is adopting Horizon 2020's challenges as selection criteria, addressing their research 1:1 to the EU research framework programme. Other mappings apply between 3 and 7 topics as a first dimension of mapping. For the second mapping dimension various criteria can be found; spatial criteria (like in CITISPYCES, LIPSE, DSI or CASI) are employed as well as welfare regimes (e.g. SIMPACT) or criteria referring to the quality, lifecycle stage or spread of the social innovation (e.g. IESI). Most common is the ambition to relate social innovations to a local or regional context (e.g. CITISPYCES, LIPSE, DSI or CASI). This strongly links to the debate on the role of the local context to foster social innovations (Innobasque, 2013).

4. Conclusion

Taken together, the identified mapping approaches reveal some gaps in the process of collecting data as well as on the layer of results.

4.1. Missing Users' Perspective

The most striking result from our synopsis is the rare orientation of the existing mappings towards the dimension of target groups or users of social innovations. While many of the applied definitions of social innovation comprise specific target groups as a component, the distinct mapping approaches do not actively involve these in the mapping activities. To some extent this is attributable to the tensions between the demands of academia and the needs of, for example, vulnerable or young. As Aldrige (2014: 112) emphasises «[t]his is particular the case in research governance and practice terms when 'top-down' pressure (e.g. from academy, from funders) are often odds with need for 'bottom-up' approach to vulnerable (young) research participants who often require adaptive, more inclusive and sometimes individualistic (case-by-case) qualitative methodological approaches».

SIMPACT, for example, explicitly focuses on «vulnerable» as a target group and mapped them by means of social innovation ID cards, business case studies and biographies. However, no mapping activities were carried out in cooperation with the target group. Instead small-scale stakeholder experiments are conducted with representatives of vulnerable populations to grasp the target groups' view on the economic underpinning of social innovation. Focusing on the «young», CITISPYCE, in contrast, applied ethnographic observation of and in-depth interviews with the target group in the framework of its mapping activities, which delivered valuable insights.

Drawing on such experience, future mappings should to a larger extend apply approaches in which the target groups/users of social innovation are an integral part of research. Such an approach would significantly contribute to a better understanding of (1) target groups' behaviour patterns, demands and problems, (2) how these are met by social innovations, (3) what role the context and framework conditions (e.g. welfare system) play, and (4)

how to orchestrate target groups in providing innovative solutions. Such insights are expected to fuel the development and spread of tailored social innovations across Europe.

4.2. Missing Impact Dimension

Although many of the identified mapping approaches claim themselves to be explorative, seldom the mapping activities include reflections on social innovations' impact. As an exemption IESI indicates a first attempt to map features as «sustained» or «isolated» social innovations. Likewise, SIMPACT through its Social Innovation Biographies tried to capture the innovations impact. The missing impact assessment in the actual mapping approaches is not at least attributable to the lack of measures that reflect the multiplicity of social innovation and related impact (e.g. social, economic, political, for the target group/the society). However, the impact dimension plays a pivotal role for social innovators, for example when it comes to finance, as well as for policy makers (e.g. legitimacy) or investors.

4.3. Generalisation from Case Studies

As has been shown in the previous sections, the majority of mapping efforts apply qualitative methods and in particular case studies for data collection resulting in small-N (mostly below 300 cases). We find the collection of quantitative data to be an exception in recently finalised and ongoing mapping activities. Combining qualitative and quantitative data in mixed method research designs by means of triangulation has the potential to enhance the validity of the data collected. Moreover, it is apparent that a cross-project comparison of case studies is difficult, if not impossible due to the various understandings of social innovation and methods applied.

Notwithstanding the above, many projects establish strong links between the production of theory, empirics and tools. This in turn raises the question of generalizability. Concerning theory development, case studies are often criticised based on the assumption that their findings are not generalizable to other settings. On the contrary it is argued that case studies are most appropriate to study the «how» and «why», in particular in the form of multiple case designs (Tsang, 2014; Yin, 2014). This aspect is crucial to social innovation which, so far lacks a common theoretical grounding.

To overcome the outlined limitations of project-specific case studies, from the authors perspective it would be worthwhile to undertake the attempt to build a unique case study database based on openly accessible data. This would on the one hand enhance the possibilities of generalisation and on the other contribute to a more efficient use of the data collected.

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MAPPING AND CONCEPTUALIZING THE MEASUREMENT OF ORGANIZATIONAL SOCIAL VALUE USING SYSTEMS THINKING

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Abstract: Studies about social value have been devoted to issues or phenomena, projects, or activities of organizations but none have evaluated the organizational social value as oppose to economic value. Our question is: in the field of business and economics, how has organizational social value been scholarly or academically analyzed? By performing a systematic literature review of articles, and using scientometric analysis of 45 articles. 34 out of the 45 articles were mapped into the extended systems thinking: input, process, output and environment (IPOE) framework. Our results indicate that: a) input and environment dimensions have been most researched while process and output have been least researched; b) applicability of the IPOE framework as a mapping tool for organizational social value but requires further confirmation; and c) social value creation non-profit, hybrid and for-profit organizations may be linked together. Our research would be helpful for organizations interested in measuring their social value.

Keywords: Social Value, IPOE, Organizational Social Value, Social Value Creation.

1. Introduction

"Social value: a sustainability buzzword without a meaning?" a question posed in a Guardian article (Henriques, 2014). Having read the article, is it indeed a buzz word? In this research article we address the topic of social value of an organization or organizational social value (OSV). We will refer to it in the rest of the article. In the business and management discourse on social value, it is widely accepted that there is no single accepted definition. However an insight can be provided by answering the question: where does social value occur? And how is social value produced? Social value occurs in non-governmental organizations (NGOs), social enterprises, social ventures, and social programs. Social value is "the product of the dynamic interaction between supply and demand in the evolution of markets for social value." (Mulgan, 2010, p. 40). Knowing that the market is where value can be produced (Mulgan, 2010), earlier recognized in the blended value proposition where financial and social return are balanced (Emerson, 2003). However, organizational social value is not a black and white topic, a non-profit oriented conception of social value (Mulgan, 2010) can also be found in for-profit organizations. There are some evidence that social value and economic value are related: a) organizational innovation "the effort to create purposeful, focused change in an enterprise's economic or social potential" (Drucker, 1998, 2002). This is also mentioned in social economy literature (Bouchard, 2010; Defourny & Develtere, 1999); b) social entrepreneurship producing both social and economic value (Acs, Boardman, & McNeely, 2013); and c) entrepreneurship itself with social value as means to assesses performance (Clark & Brennan, 2012).

So social value in addition to economic value can be achieved by non-profit, hybrid and for-profit organizations. Hybrid means organizations aiming to achieve both social and economic value, for example the social enterprise (Mair & Martí, 2006). Pursuing both social and economic value is the essence of the blended value proposition framework, where value is created by combining economic, social and environmental component

(Emerson, 2003, p. 45). Stating that life is not driven by social or financial realities only that is why further analysis of the core value of organizations needs to be done (Emerson, 2003). It is important to understand organizational social value because it is considered as one of the business value drivers (Wendee, 2011). To help organizations interested in measuring organizational social value, the Global Reporting Initiative (GRI) recommends sustainability reporting measures, which include economic, environmental, and social aspects (GRI, 2015). The social aspect of GRI states the following social aspect sub-categories: labor practices and decent work; human rights; society; and product responsibility. What the GRI captures is an aspect or a brief aspect of the social value of an organization Therefore our study focused on the entire aspect of an organization's input, process, output and environment (IPOE). Using the IPOE systems thinking, we can now categorize the various research publications that pertain to social value, produced for non-profit, hybrid and for-profit organizations. Our research question: how has organizational social value been scholarly or academically analyzed in the field of business and economics?

Our research approach involves evaluating the social value literatures from organizational studies, then conceptualized our initial understanding of the organizational social value, and then collected the data using systematic literature review, analyzed the data using scientometric analysis.

2. Theoretical Framework

2.1. Relating Organizations With Social Value

Organizational studies utilize the disciplines of psychology, sociology, and economics. We will mention some of their respective perspectives on social value. In psychology, social value is the "social motive or value to refer to individuals' consistent preferences for particular distributions of outcomes to self and other" (Kramer, McClintock, & Messick, 1986, p. 578). In Sociology, social values is synonymous to shared standards (Kitsuse & Spector, 1973). Current construction of social value, normally utilizes social value as supplementary to economic value. Examples of such research are: modelling of parking a car (Arnott & Rowse, 1999) benefiting car park users; or research on a proposed framework for valuing health improvements (Kevin M. Murphy & Robert H. Topel, 2006). Social value of urban woodlands and green areas in a residential area in Finland. The research methods emphasized the participation of the local citizens in constructing the social value (Tyrväinen, Mäkinen, & Schipperijn, 2007) without accounting for social value from a psychological point of view. Other research just deliberately mentioned social value without expanding on its meaning. The researchers assumed that readers share a common understanding on what it means for them e.g. research about legal studies on assessment of damages (Dant, 2006; Gyrd-Hansen, 2004; Kaplow & Shavell, 1996; Morck, 2014).

2.2. Trichotomy of Organizational Social Value

Relating all this brief analysis of literature is an article about the "social value of a person" referring to social desirability and social utility (Beauvois & Dépret, 2008). The dichotomous perspective provides an insight into how we should evaluate the organizational social value. Organizational value has been closely linked to resources held by the organization and is said to be valuable when the resources are utilized to address external threats/ opportunities, respond to customers, and when the organization is able to improve its own efficiency and effectiveness (Bowman & Ambrosini, 2000). Taking the systems perspective in constructing the elements of OSV we have inputs, outputs, and environments (Von Bertalanffy, 1972) akin to an information systems design. Some literature utilizing systems thinking specify input, process and output (Bowman & Ambrosini, 2000; Hitt, Ireland, Sirmon, & Trahms, 2011). As a theoretical framework for analysis, the input, process output framework has been extended by Ilgen, Hollenbeck, Johnson, and Jundt (2005) to research teams with in an organization. Hitt et al. (2011) included in the input the environmental factor in their proposed concept on how to create value for individuals, organizations and society, but this construction does not fully explore the OSV and is far too parsimonious. An extended version of the input-process-output perspective to includes the environment dimension (Jones, 2007, p. 3). As indicated in the previous studies of social value non-systemic thinking would not provide a clear outcome and would miss out on the overall detail, hence we employed a systemic approach in the form of the organizational value framework has input, process, output, and environment (IPOE) dimensions. The IPOE has been mainly used to determine the organizational economic value. The four major dimensions of an organizations are: 1) inputs - organization obtains inputs from its environments; 2) conversion process - organization transforms inputs and adds value to them; 3) outputs - organization releases outputs to its envi-

ronment; 4) environment - sales of outputs allow organizations to obtain new supplies of inputs.

2.3. Proposed Conception of Organizational Social Value

Prior to detailing the methodology of our study, we want to present our conception of organizational social value. Actions from organizations (non-profit, hybrid and for-profit) can produce a value that is beneficial to the society, value that addresses societal issues, needs or challenges. These societal concerns that we refer to could have been elicited and recognized already by various institutions, however in some cases there are societal needs that are implicit and only visible to opportunity driven individuals or organizations. Although GRI reporting has clear measures of social concerns it does not fully encompass what is happening within an organization. Therefore our study focusses on OSV by means of the IPOE framework.

3. Methodology

Our qualitative study performed a state-of-the-art literature review of organizational social value. For data collection we utilized the Scopus scholarly database instead of Web of Science, because Scopus allows keyword search and allows batch downloading of csv files and articles. Keywords for articles identify what the article is about. In addition to the Scientometric analysis that gives a research overview, we also conducted a systematic literature review on two subjects or disciplines: 1) Economics, Econometrics and Finance; and 2) Business Management and Accounting. The articles were collected between September 2015 – and October 2015.

As our study relied on scholarly articles, developing the keywords was of crucial importance in this study, so we modified the concept of Emerson (2003) to reflect the different concepts that can lead to understanding organizational social value. Alone the concept seems to be unrelated as it represent a *means to an ends*. End being the aim of generating social value. Therefore most of the research has been expounding on the means rather than encapsulating and wrapping up the *ends* that form *social* value. Referring to the goal of producing social value. Resulting to 10 keywords, these keywords are not exhaustive but rather representative on what we think is essential in understanding an organizations construction of social value. It draws together non-profit, hybrid, and for-profit organizational practices or concepts, employed to pursue social value. These three organizations actively, active-passively, and passively pursue social value respectively.

1. *active,* pursuit of social value represents the body of knowledge or research topics being utilized by non-profit organizations. Non-profit organizations such as: social enterprise. Keywords: 1) social enterprise, 2) social business, 3) social entrepreneurship, 4) social entrepreneur*
2. *active-passive,* pursuit of social value represents the body of knowledge or research topics that organizations utilize to pursue social value. This can be true for profit and non-profit organizations. Keywords: 1) Social innovation, 2) responsible* innovation, 3) business model.
3. *passive,* pursuit means that social value is pursued by organizations The raison d'ê·treof passive organizations such as a for-profit organization is to create economic value while social value is of a secondary concern. Keywords: 1) corporate social responsibility, 2) social accounting, 3) corporate social reporting

Steps in data collection were elaborated in Appendix 1: Details of the data collection. Our data set is composed of 45 articles, coded with a corresponding number as shown in Appendix II: Article codes, the symbol # was added to the number of the article. E.g. Article 1 is equal to #1. Complete details of each article is shown in Appendix 2: Article details.

For the data analysis, there are two parts of our data analysis: a) scientometric analysis and b) mapping of the literatures into the IPOE Framework. In analysis the bibliographical data from Scopus we employed scientometric analysis and used a visualization tool called VOS Viewer (Van Eck & Waltman, 2009). Studies that utilized Scientometric analysis deal with bibliographical data however these studies go beyond analysis of bibliographical data they also include finding publication patterns and term occurrences (Heilig & Voss, 2014) Term and co-citation analysis were performed (Nederhof, 2006). Co-term or co-word analysis is also said to be able to discover non-connected topics or terms that be essential for future research (Braam, Moed, & Van Raan, 1991) while co-citation analysis would give an idea on most co-cited journal article and in turn would also indicate the name of the author (White & McCain, 1998). Having succeeded in narrowing down to 45 articles, we proceeded to perform analysis systematic literature review (Pittaway, 2008) and implemented grounded theory (Strauss & Corbin, 1997) in analyzing the data set.

4. Results and Discussion

4.1. Scopus Summary

Utilizing the Scopus analyze search result. There are 44 articles and 1 review article. Below are the details of the year, subject area, and country publication. Under the subject area, an article may have been investigated in an interdisciplinary manner but the dominant discipline of the articles is in line with Business, Management and Accounting; and Economics, Econometrics and finance.

Table 1. Summary of Scopus analysis: year, subject area and country

Year		Subject area		Country/territory	
2014	10	Business, Management and Accounting	40	United States	12
2013	11	Economics, Econometrics and Finance	18	Australia	4
2012	6	Social Sciences	11	United Kingdom	4
2011	2	Computer Science	2	Canada	3
2010	8	Decision Sciences	2	France	3
2009	1	Energy	2	Germany	2
2008	3	Environmental Science	2	Italy	2
2005	1	Medicine	2	Romania	2
1999	1	Arts and Humanities	1	Spain	2
1993	1	Engineering	1	Switzerland	2
1983	1	Nursing	1	Turkey	2
		Psychology	1	Other countries	11

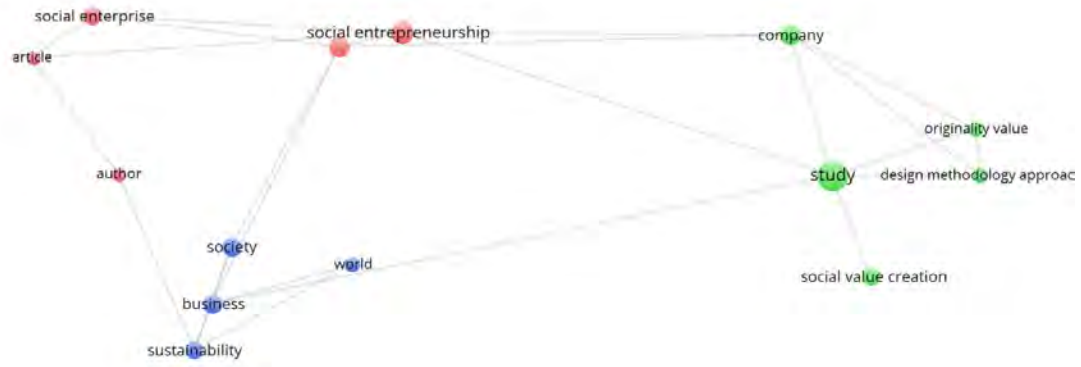
Source: Author's own elaboration.

4.1.1. Term Co-Occurrence Map

We created a term-co-occurrence (shown Figure 3) map based on a 45 article abstracts and title section. The term scores were based on the publication year field. There are three interrelated clusters in the figure below that can be labeled as: 1) green cluster as methodological, 2) red cluster as entrepreneurship, 3) as stakeholder orientation. It is noteworthy that the terms within the articles the most prevalently addressed or used are the terms (term = weight): 1) social entrepreneurship = 22; 2) company = 18; 3) sustainability = 16, 4) social value creation = 16, and 5) social enterprise = 15.

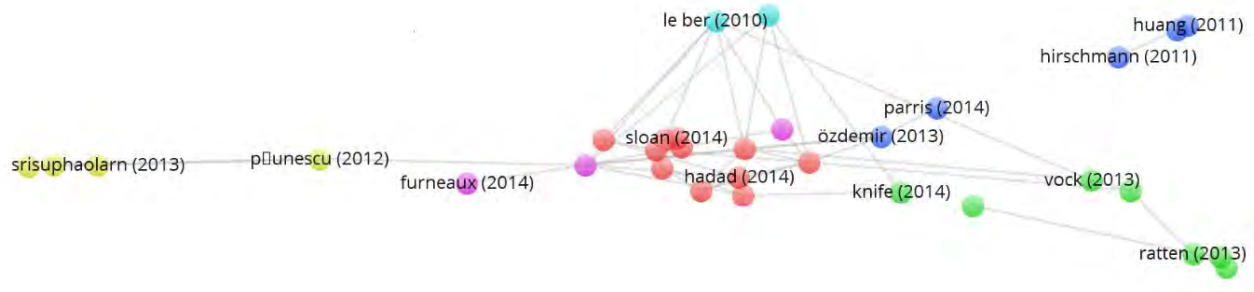
Bibliographical coupling (shown in Figure 2) was composed to show the similarity of the studies based on the two articles commonly cited reference. This means that Meyskens (2010), Sundaramurthy (2013), Borzaga (2014), Acs (2013), Millar (2013), Sloan (2014), Clark (2012), Sinkovics (2014), Hadad (2014) and Sakarya (2012) are closely related. Refer to Appendix II and Appendix III for details.

Figure 1: Term co-occurrence in the articles (red- heavier)



Source: Author's own elaboration.

Figure 2: Bibliographic coupling network map of articles



Source: Author's own elaboration.

4.1.2. Co-Citation Analysis

There is only one article that showed collaboration across two different article, so we decided not to perform a co-authorship. We then opted to execute co-citation analysis, using the VOS Viewer, resulting to the identification of three major articles. These article were the most cited references by the authors of the reviewed articles. These are as follows:

- 11 citations - Mair, J. and Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business* 41(1), 36-44.
- 4 citations - Austin, J., Stevenson, H. and Wei-Skillern, J. (2006). Social and Commercial Entrepreneurship: Same, Different, or Both? *Entrepreneurship Theory and Practice* 30(1), 1-22.
- 4 citations - Berger, I.E., Cunningham, P.H. and Drumwright, M.E. (2004). Social Alliances: Company/Nonprofit Collaboration. *California Management Review* 47(1), 58-90.

4.2. Four Parts of Organizational Social Value

Individual analysis to the articles indicate that there were six unrelated articles - unrelated #3, #29, #38, #40, #41, #45. These articles were unrelated for reasons such as: advocates including social value education in university curriculum, sustainable consumption, elaborates about Citizen Science Foundation, and philosophy of science. There were also five articles that is out of university subscription coverage – inaccessible #4, #11, #18, #20, and #24. The authors of each article were e-mailed twice and the researchers waited for 3 weeks, however we did not receive any reply from them.

We then categorized the remaining 34 articles using the IPOE framework on how an organization creates value, as seen in Table 2. The input and the output parts have been researched and discussion, while the process and environment are least researched.

Table 2. Data set categorization

1. Organization's input		**2. Organization's Conversions Process**
organization obtains inputs from its environments		organization transforms inputs and adds value to them
Customers of service organizations		Computers
Human resources	#39	Human skills and abilities
Information and knowledge	#1 #2 #5 #6 #9 #10 #12 #14 #16 #17 #19 #21 #22 #23 #25 #27 #28 #30 #32 #33 #34 #35 #36 #42 #43 #44	Machinery
Money and capital	#31 #37	
Raw Materials		
4. Organization's environment		**3. Organization's outputs**
Sales of outputs allow organizations to obtain new supplies of inputs		organizations releases outputs to its environment
Competitors		Dividends
Customers	#13 #15	Finished goods
Distributors		Salaries
Government	#7 #8 #26	Services
Shareholders		Value for stakeholders
Suppliers		

Source: Author's own elaboration.

4.2.1. Input Dimension: Information and Knowledge

The organizations input dimension's scholarly contribution are as follows: Information and knowledge (26 articles), money and capital (2 articles), and human resources (1 article). The organization's environment dimensions scholarly contribution are as follows: customers (2 articles) and government (3 articles).

4.2.1.1. Social enterprise and social entrepreneurship

Social entrepreneurship can start from either of these types: where profit can be made, begins with passion, with the recognition of social problem. One example that reflects the first type is the Clean the World, USA social enterprise that recycles and distributes soaps and shampoos. Clean the world utilizes waste as a resource, thereby rethinking a new business model for the business that encompasses national as well as international actors and needs #1**.** Social entrepreneurship is perceived by non-profit social organization/social enterprise, in Portugal, as having positive effect on social value #12.

Analyzing social entrepreneurship in the tourism industry, indicates the social entrepreneurship may not only be about solving social problem or issue, but can also include the local or community: a) who benefits from the company profit, and b) who participates in the business operation (e.g. employment of local citizens). These two factors can be included in making social enterprise sustainable. Social enterprise in the tourism industry has been found to be successful in combining commercial and social value #2.

On the other extreme of social entrepreneurship, software pirates. Software pirate entrepreneurship happens because of the social value consumption, meaning there is a demand for a cheaper or free software to use. The entrepreneurial activity doesn't always have to take an organizational form for the activity to prosper. For example software pirates, their primary goals is to use the software or share, and the secondary goal or the accidental consequence is participation in a pirate community #6.

A new form of social enterprise is the social e-enterprises or social electronic enterprise are established by social entrepreneurs that utilizes technological innovations on information and communication technology and has a component of financial, social and environmental objectives. These enterprises are based on mobile online services #16.

4.2.1.2. Performance measurement

A social impact measurement model, with axis on scalability, added value and sustainability, may express or show the social value of a social enterprise. As of 2014, there were no legislations or organizations in-charge of Social Impact measurement of Social Enterprise #9**.** Social enterprise or citizen sector is a setting that requires an appropriate performance measurement, e.g. balance score cards and Whaley's logic model #22 and social return on investment #14 may be useful. Although balance score cards and Whaley's logic model have been heavily utilized in a particular sector and industry they can be customized and may avoid high implementation cost, as observed in SROI #14.

4.2.1.3. Social value creation (SVC)

In Latin America, the higher the entrepreneurial career considerations, the higher the perceived social value of entrepreneurship. Meaning that entrepreneurship is a desirable career choice #25. Social value creation via social entrepreneurship or social enterprise contributes to social value. For example: the bottom of the pyramid businesses, in India, indicates that social value creation and business model are interrelated. The social value line between disadvantaged customers and societal problems may not make sense in a developed country context since entrepreneurs, employees, consumers, and sometimes even investors qualify. Social Enterprise business model have an impact on the local community. Social value creation as an input (is an integral part of the organizations business model) or as an output (providing product service package for disadvantaged individuals in exchange for a monetary contribution). Social objectives are not pre-requisite for social enterprises since in most cases the raison d'être for social businesses is to serve the bottom of the pyramid. Trigger constraints and business-related constraints can be a source of business opportunity #10**.** Social entrepreneurship is a source of social value creation and that social innovation is closely linked to social entrepreneurs #32.

4.2.1.4. Observations in operationalizing social value creation

Social enterprise's wealth creation is a path for social value creation and incorporates community into its governance. In developing further understanding how social enterprise contribute to social value creation, there are three aspect that can be

evaluated: social, entrepreneurial and inclusive ownership-governance #5.

Social value in the innovation process using external idea contest through crowdsourcing projects might lead to a higher social value creation. Higher social value creation can be attributed to the higher ratings on intrinsic motivation to participate in a crowdsourcing project and lower perceived stress because the participants perform tasks on their own volition. By allowing other, non-employee, to participate in the ideation process the company is taking first steps to capturing social value while contributing to social value creation #28. Social entrepreneurship in India have three types: 1) market makers – provides economic solutions to social problems; 2) system innovators – seeks to address the inefficiencies of current system (e.g. education, public health) and cater to marginalized groups; and 3) innovative campaigners – provides information dissemination, awareness and education #17.

Social entrepreneurship creates both social value and economic value e.g. Microsoft Corporation and Grameen Bank. Business model and social innovation are key dimensions to social entrepreneurship. Social entrepreneurship and philanthropy overlaps in terms of voluntarily creating opportunities and addresses sustainability. Propositions in increasing social and economic value may entail reduction of charity and an increase on social entrepreneurship #21. Non-profit organizations seems to have lost sight of long terms goals and has been prone to short term goals. It has been unable to stay relevant to the society that it's serving, this might explain the current trend of non-profit organizations trying to be socially entrepreneurial: managed by a social entrepreneur. There are sequence of events or cause for a non-profit organization or social enterprise to address sustainability: 1) environmental dynamics, leading to, 2) adoption of operational strategies paving way for financial stability, and 3) multiple innovation strategies #30.

Achieving social innovation by forming relations, interactions, or collaboration #23, #34, #36 gives rise to a new form of temporary structure that addresses social problem. Such as cross sector collaboration or social alliances in addressing social problems or social pressures. The impetus for such alliances can be resource dependence or institutionalization of social alliances. Social enterprises normally provide more labor workforce in a social alliance #23.

Elaborating on lessons learnt from cross sector collaboration's social value creation: anticipating some hiccups of cross-sector collaboration supports the concept of changing role and ongoing-shifts and negotiation. Identifying an actor or partner centric role for the success of a collaboration partnership #36. If all goes well, value creation need not be based on silo approach of exclusivity for-profit or non-profit approach. Clarifying the frames or the silo approach of each sector, towards social value creation, and analyzing the frames based on the cross sector partnership allows value frame fusion. Value creation that relies on cross sector collaboration may allow co-construction of social value. #34.

4.2.1.5. Organization's departments: marketing and corporate social responsibility

The business process and the business department of marketing can produce social value by advocating the questioning of the ideologies of marketing itself. For example: overconsumption, citizens as consumers, and the effect of overconsumption on our environment. #35.

Historically the practice of corporate social responsibility is said to be directly linked with the neo-liberalism, meaning less regulation for capitalism, to prove that business can self-regulate in sharing their earnings and not be only driven by the need to serve their shareholders, companies promoted corporate social responsibility. The UK government then institutionalized, not regulated, the corporate social responsibility through the Companies Act of 2006. However for businesses, corporate social responsibility (CSR) still remains an option due to the primacy of shareholder value rather than social value for stakeholder #27. Some examples of CSR are: corporate social actions led by big corporations, including small medium enterprises #43. And ethical business managers #44. In the early days of CSR, it was enough to be altruistic and give something back to the society however, in recent times companies have been more strategic, these means that companies now align CSR activities with the core business activity. This also entails some companies utilizing their products or services to pursue social innovation. Making social innovation part of CSR or business agenda. Social contribution or for society is synonymous to CSR and doing well by doing well is accepted in Thailand #19. An example of a social enterprise is the Seventh Generation, founded in 1988, produces plant based products #42 to address pollution.

4.2.2. Input Dimension: Money and Capital

Catholic social teachings can guide individuals, in an organization, to counteract the individualist and capitalistic nature of businesses. The teachings are said to advocate more desirable social outcome, pro-social, and an ethical move to doing business and not profit centric #37. Temporal approach to social entrepreneurship, in the form of social ventures, can be facilitated by social engagement network such as government, corporations, and social venture capitalists. Social engagement network are groups of actors that aim to create social and economic value. The network enables sharing of resources to achieve a goal that would have been impossible without the network. Social and economic value are currently best pursued by social enterprises or social ventures. Social Value is the benefits to the society in the form of work, employment, community and personal development #31.

4.2.3. Input Dimension: Human Resources

Employee engagement with corporate social responsibility will likely succeed if individual values orientation can be considered and cultivated. These values orientation are human relationship, employee involvement and personal development #39. For managers, they can manage a business by doing good for society #33.

4.3. Environment Dimension: Customers

Consumers that are prosocial seem to favor low social alliance, between a company and the cooperating non-profit organization while proself consumers seem to disfavor high social alliance, between a company and the cooperating non-profit organization. The usage of social value orientation can lead to understanding the customers of the company. Planning to form a social alliance based on the social value orientation of the customers may get the most out of the collaboration. Companies may also utilize social marketing to strategically inform customers of their respective social activities #13. In addition customers (bank) consider social value to be influencing their loyalty to the company. Social value from a customer perspective can be something that is expected or approved from an individual or by the community a customer belongs #15.

4.3.1. Environment Dimension: Government

As previously mentioned of UK legislating companies act, it is also legislating the Social Value or Public Services Value act to support social enterprises. Wherein companies contracted by public organizations have to provide provisions about the social value before being awarded the contract. In the legislation, social value was not defined but was elaborated using examples. Although there are still some debate about the details of the legislation bill, it is a clear sign that support for generating social value is in the agenda of the government #26.

In the government procurement, achieving social value through social procurement. Its focus is on social outcomes –contract/tender form, and social business; outcomes – direct and indirect. For a small and medium enterprise procurement might be synonymous to purchasing and commissioning, in public agencies they differentiate each terms, these shows that conducting regular business routine can intentionally generate social value #8.

Supporting policy discussions with government, society and Information Technology companies encouraged companies to produce privacy enhancing technology and be more conscientious, and aware that privacy is a social issue that is undervalued #7.

5. Conclusions

As mentioned in the methodology section, understanding the *means* of creating social value rather than on the *ends*, helped us understand the current scholarship about social value. Much of the research about social value has been about the organization's input dimension of information and knowledge. There were dominant concepts that seem to be interrelated which can be referred to as actor/entity and the process/activity in generating social value.

- Actor/entity: social enterprise, social entrepreneur, customers, government
- Process/activity: social entrepreneurship, social innovation, social value creation, corporate social responsibility

Having fully explored the *means* in creating social value, common studies has been devoted on identifying the social value from the perspectives of an individual, a group or a phenomenon, but few or none from the perspective of an organization. Organizations that pursue social value whether fully or partially in the form of non-profit, hybrid, and for-profit. The literatures that researchers have produced are organizational-form-centric, meaning that if corporate social responsibility has been mainly observed in for-profit companies while social entrepreneurs set up non-profit. The organizational-form centrism, limited the application and understanding of the means, whatever form an organization takes, whether it be non-profit, hybrid, and for-profit, they respond to society's needs or issues.

Therefore we can now propose that understanding the OSV through the IPOE framework may lead to measurement of social value. With the idea of measurement, an organization may create social value based on these four dimensions: input, process, output and environment. Each dimensions contains elements that has potential to produce social value. Our current dataset partially covered these elements, but a simple research question can be drawn for each of this elements, how can we create social value - in this element? For example: process - computers, and machinery; human skills and abilities. Forming a question would be what practices of the company to manage efficient usage machine and energy? Of course this can be insignificant for small companies but scaling it up can have dramatic effect. If this is not applicable then move on to other elements.

The major contribution of our study is that proposed the IPOE framework for measuring and possibly creating organizational social value.

For further research, we want to: a) expand the state-of-the-art to include other research fields; b) perform a practical application of OSV framework on non-profit, hybrid and for-profit organizations; and c) research about social e-enterprise.

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Appendix I. Details of the Data Collection

1. Data collection entails running keywords "social value" into the SCOPUS.
    a. Resulting to 17,493 articles.

    b. Applied filter limit to: document type as Article and Review. Resulting to 15,428

    c. Applied filter limit to: Language = English. Resulting to 14,417. We applied three various filters options to determine the best focus of this research.
        i. Select subjects areas: 1) Economics, Econometrics and finance; 2) Business management and accounting; 3) Social sciences; 4) Environmental sciences; 5) multidisciplinary. Resulting to 4,450 articles

        ii. Filter out the subject areas Social sciences. Resulting to 3,997 articles.

        iii. Filter subject areas: 1) Economics, Econometrics and finance; and 2) Business management and accounting. Resulting to 573 articles.
        1. KEY ("social value") AND PUBYEAR < 2015 AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "BUSI"))
        d. We then decided that it is best to focus on the 573 articles. To further develop the topic under set of organization we zoomed in on the set:

        e. Zooming in Term occurrence map of the 573 articles and close evaluation of the term closely related to non-profit, hybrid and for-profit social value creation also confirms our assumption to the silo approach in the study of the organizational social value.
2. Cleaning and merging the bibliographical data (eliminate duplicate entries). Resulted to 45 articles.

3. Each csv entry was checked, for relevance, discard unrelated studies.

4. Provide basic: summary information on: a) authors, b) countries, c) document type, d) organizations, e) publication years, f) research areas, and g) source title(journal, etc.),

5. Utilizing the VOS viewer a co-citation and term map (may also include co-citation of authors) analysis will be generated. Each relevant article will be entered in a spreadsheet and would serve as initial themes that will be later on provide an in-depth analysis for the grounded theory.

Appendix II. Article Codes

#1	(Parris & McInnis-Bowers, 2014)
#2	(Sloan, Legrand, & Simons-Kaufmann, 2014)
#3	(Sidiropoulos, 2014)
#4	(Knife, Haughton, & Dixon, 2014)
#5	(Borzaga & Galera, 2014)
#6	(Chaboud, 2014)
#7	(Büschel, Mehdi, Cammilleri, Marzouki, & Elger, 2014)
#8	(Furneaux & Barraket, 2014)
#9	(Hadad & Drumea Găucă, 2014)
#10	(Sinkovics, Sinkovics, & Yamin, 2014)
#11	(Özdemir, 2013)
#12	(Felício, Martins Gonçalves, & da Conceição Gonçalves, 2013)
#13	(Vock, van Dolen, & Kolk, 2013)
#14	(Millar & Hall, 2013)
#15	(Roig, Guillén, Coll, & Palau i Saumell, 2013)
#16	(Ratten, 2013)
#17	(Sundaramurthy, Musteen, & Randel, 2013)
#18	(Jelen, Robb, & Kamboj, 2013)
#19	(Srisuphaolarn, 2013)
#20	(Mnykh & Dalyk, 2013)
#21	(Acs, Boardman, & McNeely, 2013)
#22	(Clark & Brennan, 2012)
#23	(Sakarya, Bodur, Yildirim-Öktem, & Selekler-Göksen, 2012)
#24	(Păunescu, 2012)
#25	(Guzmán-Alfonso & Guzmán-Cuevas, 2012)
#26	(Teasdale, Alcock, & Smith, 2012)
#27	(Kinderman, 2012)
#28	(Hirschmann & Mueller, 2011)
#29	(Huang & Rust, 2011)
#30	(Weerawardena, McDonald, & Mort, 2010)
#31	(Meyskens, Carsrud, & Cardozo, 2010)
#32	(Munshi, 2010)
#33	(Meynhardt, 2010)
#34	(Le Ber & Branzei, 2010)
#35	(Varey, 2010)
#36	(Ber & Branzei, 2010)
#37	(O'Boyle, Solari, & Marangoni, 2010)
#38	(De Janasz & Whiting, 2009)
#39	(Strautmanis, 2008)
#40	(Richardson, 2008)
#41	(Krambia-Kapardis & Zopiatis, 2008)
#42	("Becoming a better citizen: The value of corporate social responsibility," 2005)
#43	(Marinetto, 1999)
#44	(Stark, 1993)
#45	(Toren, 1983)

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DEVELOPING A HUMAN CENTERED BUSINESS INDEX

Leading with Purpose, Empathy, Systems-Approach and Resilience in 'Business Beyond Sustainability'

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Abstract: The scope of contemporary global challenges demands new modes of problem-solving, and the process of identifying solutions requires a diversity of perspectives. Business plays a critical role in forging the path forward, yet siloed sustainability efforts are no longer sufficient in tackling and leveraging the complex web of relationships and stakeholders at play. This paper introduces the concept of *Human Centered Business*, including the methodology and applied research that resulted in the Human Centered Business Index –a framework that measures performance based on *purpose, empathy, systems-approach* and *resilience*– and its findings. It provides a methodological and empirical blueprint for highlighting future frontrunners of Human Centered Business, and encourages future application, development, and good practice. The expectation is that this pilot assemblage of methodology, applied research and good practice will ignite further discussion on the future of Human Centered Business.

Keywords: Human Centered Design, Human Centered Business, Sustainable Business, Sustainability, Purpose, Empathy, Systems-Approach, Resilience.

1. Business beyond sustainability – introducing a human centered approach

Few would dispute the claim that the size, scope and complexity of contemporary global challenges demand new modes of problem-solving. The process of identifying practical solutions requires a diversity of perspectives, approaches and capabilities. In forging the path forward, business plays a critical role, yet siloed sustainability efforts are no longer sufficient in tackling and leveraging the complex web of relationships and stakeholders at play in the current business context. At the same time, an ever-increasing availability of knowledge has changed the rules of the field.

This study introduces the concept of *Human Centered Business*, the methodology and the applied research through which the final Human Centered Business Index evolved, and its empirical findings. The Index measures performance based on the metrics of *purpose, empathy, systems-approach* and *resilience*, and facilitates comparing, tracking and communicating progress and development.

The aim of the study is to provide a methodological and empirical foundation for highlighting future frontrunners of Human Centered Business. The study, methodology, and final Index should not be seen as definitive; rather, they are intended to serve as blueprints for future application, development and encouragement of good practice. The expectation is that this pilot assemblage of methodology, applied research and good practice will ignite an ever-livelier discussion on the future of Human Centered Business.

1.1. The Current Gap

Thirty years of work in the sustainability field has closed the knowledge gap in a wide range of issues. In 1987, The World Commission on Environment and Development released a report commonly known as "The Brundtland Report", which defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). While the economic pil-

lar used to be the sole parameter of interest to business leaders, owners and investors, environmental and social sustainability considerations are now front and center (McDonough and Braungart, 2002; Esty and Winston, 2006; Birchall et al., 2014). Many have made the claim that reporting must be integrated, as 'financial' and 'non-financial' objectives no longer should be viewed separately (Eccles and Krzus, 2010; Eccles and Saltzman, 2011). The premise that sustainability no longer can be held apart from core business has also been reiterated in global frameworks, including The United Nations Guiding Principles on Business and Human Rights, also known as the 'Ruggie Principles' (United Nations Human Rights Office of the High Commissioner, 2011).

'Business beyond sustainability' requires a thorough integration of sustainability with core business, yet how do businesses and organizations maintain momentum and practice sustainability in their core operations when sustainability is to be mainstreamed everywhere? Instead of reaping the benefits and opportunities of bringing sustainability into their core operations, businesses and organizations run the risk of inundation by checklists when sustainability continues to occur in separate and isolated sets of policies. The current gap is therefore not one of knowledge, but one of practical skills. The question is therefore how to *do* sustainability in everyday business practice (Vogel, 2005), and what leaders need to do to approach sustainability in a holistic manner, or even to move *beyond* sustainability –that is, to allow sustainability to permeate all aspects of core business, and to create value in multiple dimensions. With an ever-growing number of perspectives and approaches – each of which has the potential to impact business– businesses, organizations and decision-makers need new sets of skills in order to remain agile and relevant in a shifting landscape.

1.2. Four Principles of Human Centered Business

Having established the need for a skillset for practicing sustainability, we sought to identify principles for leadership through an iterative and collaborative approach that drew on dialogues with, and input and ideas from, 14 experienced researchers, advisers and practitioners[1] in human centered design, systems change and social innovation, each of whom is at the forefront of their fields. Human centered design was widely recognized as an answer to the 'how' question, as well as a form of literacy that organizations need in order to tackle increasingly complex challenges in a meaningful way – and to do so with *people* in mind (Pete Maher, interview, October 12, 2015). The importance of adopting a 'people first' approach – as opposed to a 'technology first' approach – was underlined by several interviewees. The trouble with excessive reliance on technological solutions is the time that is wasted on discussing what a certain piece of technology is for; this is often due to an inadequate understanding of human cognition, emotional response, psychology and sociology – that is, what people want (Joseph Giacomin, interview, September 25, 2015; Chokdee Rutirasiri, interview, October 16, 2015). Human centered design is therefore a step towards testing the system implications of a solution or product; initiating a solution at a human level allows for further experiments that assess its scalability, both for the company and the ecosystem it operates in (Tim Ogilvie, interview, November 4, 2015).

This process resulted in defining Human Centered Business as characterized by ***four principles for leadership.*** Firstly, **purpose** is related to the meaning derived from carrying forward values-driven work; the purpose of the business activity is described and acted on in relation to core business, and the company's actions align with this purpose. The importance of purpose was widely acknowledged, viewed as something derived daily from relationships, and from serving needs greater than our own (Aaron Hurst, interview, December 1, 2015). Initially defined as the reason for which something is done or created, or for which something exists, purpose in the 'purpose economy' – an economy driven by peoples' quests for purpose in their lives – goes beyond serving others and the planet by encompassing the opportunity for community-building, self-expression and personal development (Hurst, 2014). In accordance with this definition, 28 per cent of the U.S. workforce is deemed to be purpose-oriented (Imperative and New York University, 2015). Organizations can do a great deal to infuse their work with purpose, and to help employees understand that customers are appreciating their business for a reason (Tara Sophia Mohr, interview, December 14, 2015).

Secondly, **empathy** – the ability to place oneself in the shoes of the stakeholder – should be embraced as a foundational element of better business. A human centered business is aware of the significance of empathy delivered to the entire marketplace – from customers to employees and the public. This principle was widely recognized as crucial; empathetic human connection compels people to act on others' behalf, and innovation

[1] Listed in a section in the reference list.

that stems from empathy becomes more meaningful on the market (Tim Urmston, interview, November 10, 2015). Respecting the knowledge of people whose experiences differ from our own requires a recognition of our own inability to fully know the subjective experiences and aspirations of others (Valerie Fletcher, interview, October 5, 2015). This form of respect, humility and empathy has clear implications for businesses and organizations, who must remain conscious of the fact that they themselves are not the audience for their solutions; ultimately, the goal of bringing solutions and products to the marketplace is to improve peoples' lives, not to simply make organizations more profitable or efficient (Chokdee Rutirasiri, interview, October 16, 2015). This increased awareness of how customers may inhabit entirely different worlds means that businesses can no longer operate solely for their own financial success, and that the skill of empathy and understanding must be added to decision-making processes. Deep knowledge of people, places and contexts – which is required for systemic change – comes from human centered design, as complex challenges cannot be solved from afar; instead, they must be understood through co-learning and empathetic encounters with customers, meaning that businesses and organizations must change their mindsets by abandoning the idea that they already possess all the answers (Debbie Aung Din, interview, September 29, 2015; Christian Madsbjerg, interview, October 15, 2015). Consequently, a human centered approach that embraces empathy as a skill is one that acknowledges the ground level of our humanity, our access to emotional encounters, and our ability to connect or disconnect with fellow human beings. Using empathy thus allows us to shift away from quick fix approaches, and instead focus on that which creates meaning for the stakeholder (Ray Fleury, interview, September 23, 2015).

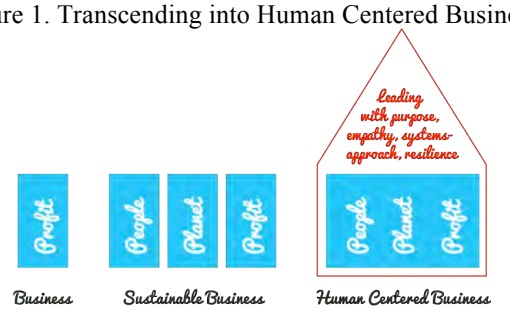
Thirdly, in order to move away from 'linear' forms of thinking – where the emphasis is on 'fixing' isolated problems – towards a holistic view of sustainability, businesses and organizations must embrace a **systems-approach**. Interviewees made references to McDonough and Braungart (2002), stressing how simply making a product more efficient is insufficient to face challenges related to environmental damage; rather, we must rethink how products are created altogether, and avoid 'closed system loops' (Heather Fleming, interview, November 4, 2015). Many 'old school corporations' still view sustainability and social missions as segregated pieces, rather than as keys to their identity as an organization (Maria Redin, interview, October 18, 2015); however, there is a growing awareness of the fact that customers experience *full* experiences, not siloed segments of experiences (Chokdee Rutirasiri, interview, October 16, 2015). Having said that, stakeholders will not be able to embrace a system unless systems-thinking stems from a human-centered level (Tim Urmston, interview, November 10, 2015). It is imperative to connect systems-thinking to human centered design, and to not lose sight of the people and communities that are being impacted (Scott Shigeoka, interview, October 1, 2015).

Finally, **resilience** is defined as adaptability and flexibility, and a willingness to innovate and iterate in situations that demand problem-solving. This involves ensuring the self-sustenance of the company's core operations (Chokdee Rutirasiri, interview, October 6, 2015), but also the importance of learning through engaging with a diversity of stakeholders, in particular those who break comfort zones. One of the most challenging tasks for businesses and organizations is to reject comfort and embrace a certain level of vulnerability, that is, to refrain from professing that your own perspective is adequate for problem-solving, and to recognize the critical role of the user (Valerie Fletcher, interview, October 5, 2015).

1.3. Mastering the Skills of Human Centered Business

A human centered business is a forward-thinking organization that has moved beyond mainstream notions of sustainability using the skills of Human Centered Business, which entail leading with *purpose, empathy, systems-approach* and *resilience,* and allow for more connectedness in a rapidly changing world. These principles are rooted in the belief that problems are solvable, and that their solutions are located in people and relationships; furthermore, having 'champions' and role models within leadership is key (Googins, Mirvis and Rochlin, 2007; Herrera, 2011). Adopting this approach requires problem-solving and targeted efforts to prioritize a more diverse range of stakeholders. This does not suggest re-imagining or re-defining sustainability altogether, but rather to *transcend into* Human Centered Business. The key is to master the skills to assemble and integrate lessons from a variety of stakeholders across the traditional understanding of sustainability, and to leverage these lessons in strategy and business development.

Figure 1. Transcending into Human Centered Business



Source: Lumen Behavior, 2016.

1.4. Leveraging Human Knowledge: The 'Stakeholder' as a Key to Human Centered Business

Previous research has emphasized the importance of stakeholder engagement throughout the whole process, as well as a continuous evaluation of the process, from design to producers and consumers (Esty and Winston, 2006; Herrera, 2015b). Stakeholders generally expect businesses and organizations to behave sustainably and responsibly (Porter and Kramer, 2011; Smith, Drumwright and Gentile, 2010), and those who commit to real efforts to address this dimension will also improve their competitive advantage (Herrera, 2015a). Responsible innovation is supported through clarity in purpose and stakeholder engagement (Pfitzer, Bockstette and Stamp, 2013), and companies are more likely to respond successfully to challenges – and create foundations for collaboration – when knowledge-sharing and co-creating opportunities are enabled through active stakeholder engagement (Svendsen, 1998; O'Sullivan and Dooley, 2009; Pfitzer, Bockstette and Stamp, 2013; Herrera, 2015a). These ideas have also been reiterated by practitioners in the field, who emphasize that stakeholders must be understood *as well as* brought into the conversation (Scott Shigeoka, interview, October 1, 2015). Thus, while affected by the actions of companies, stakeholders also affect the ability of businesses and organizations to bring new products, services and solutions into being; this makes the ability to involve stakeholders with divergent backgrounds, ideas and positions –and to embrace this heterogeneity as an opportunity to identify innovative solutions through co-learning– truly crucial for enacting change (Pete Maher, interview, October 12, 2015). Embracing stakeholders –the individuals, groups and systems that impact and are impacted by business– is therefore key to transcending into Human Centered Business, and the reason why sustainable business must be *human* centered.

Furthermore, innovation requires an understanding of both the stakeholder *and* the macro-environment (Ferauge, 2013), as human beings constitute parts of both the problem and the solution. A powerful way to engage in stakeholder dialogues is to acknowledge each individual as someone possessing a unique value, and whose testimonies must be understood with empathy. It is also imperative to consider how these individuals are embedded in wider structures. This way of conceptualizing stakeholders – as both individual agents and parts of systemic processes – certainly brings its challenges. Stakeholder interests are not necessarily aligned with business aims at all times, and every so often this will generate friction and conflict. However, change and progress is enabled when businesses and organizations draw strength from subjective realities and experiences, and understand the contexts that both produce, and are produced by, personal narratives.

2. Methodology

Having identified the four principles of Human Centered Business, and given the need to develop practical ways of *doing* sustainability in a shifting business landscape, Human Centered Business Index was developed as a tool for identifying front-runners of Human Centered Business. The Index can be applied as an instrument for analyzing an individual company, as well as a benchmark for a national market or sector in its entirety.

Empirical research was conducted between 2014 and 2016, resulting in the first annual Human Centered Business Index Report, which was published in March 2016. The Index will be revised and updated periodically as a continued support for businesses and organizations. It was also validated in an iterative stakeholder-inclusive process, meaning that stakeholders to this study – from customers to advisers and businesses – were involved and consulted throughout the working process, from the initial stages of concept development, to the final feedback gathering. Future updates and revision will continue to employ stakeholder-inclusive validation processes, as well as extend the range of stakeholders involved. The following sections provide a review of the material, as well as a breakdown of the different phases of the study leading up to the Index.

2.1. Material Use

2.1.1. Interviews With Customers

In order to identify recurring patterns and themes, interviews were conducted with our clients' customers. The stakeholder dialogue with customers consisted of 887 qualitative interviews – half of which were conducted in Sweden, while the rest were conducted with customers globally[2] – as well as 6610 respondents in an extensive survey study. This sums up to 7497 customers between the ages of 2 and 94. This phase took place between January 2014 and February 2016.

Seeing that our clients work across diverse markets that involve a large number of customers, an iterative sampling of participants was made, largely based on existing networks, snowballing techniques and chain-referrals. Although well aware of the possible bias that the use of snowballing and chain-referrals may entail, the study sought to ensure diversity in terms of gender, age, ethnicity, and profession. The 'field' of key participants was large enough for this to be possible. Interviews were conducted either in person or by phone; however, the mode of interviewing was not determined by geographic location as many of the interviews took place during field trips. All the respondents have been anonymized in the final study.

The length of interviews with customers ranged from 15-20 minutes to 45-60 minutes. Recurrent interviews –with respondents who participated more than once– added up to more than 120 minutes each. Interviews were open-ended and not based on previously prescribed questions –this was to create space for adaptation and allow for difference, but also to align the interview process with the empathetic and dialogical elements that characterize Human Centered Business. Human Centered Business is not premised on seeking 'correct' or 'desirable' answers to pre-determined questions, but to read for detail, difference and unexpected possibilities by capturing the subjective experiences of the respondent. Asking precise yet open-ended questions helps the respondent to visualize their own narrative, and allows us to avoid leading questions and generic answers. Consequently, as part of this methodological approach –of entering each encounter with empathy– each interview was adapted to the respondent's age, situation and cognitive abilities. The interviews were conducted either in Swedish, English, or with the help of translators. Thematic data analysis of the statements of the 7497 participants provided insights that fed into the development of Human Centered Business Index.

2.1.2. Interviews With Researchers, Advisers and Practitioners

In the iterative process of identifying the four principles of Human Centered Business, the study drew on input and ideas from 14 experienced researchers, advisers and practitioners[3] in human centered design, systems change and social innovation, each of whom is at the forefront of their fields. Interviews were conducted either by phone or on Skype.

2.1.3. Interviews With Frontrunners

After the Index was developed and used to identify ten frontrunners[4] in Human Centered Business, interviews were conducted with their representatives, either in person or via phone and email. This provided detailed insights into their practices, as well as the business implications of Human Centered Business.

2.1.4. Publicly Available Materials

The study also drew on publicly available materials from each business and organization. However, this was not limited to what organizations typically classify as 'sustainability information', seeing how Human Centered Business is rooted in the principle that successful companies will have integrated their corporate responsibility into the core of their operations, not as a separate set of policies. Publicly available information about the operating frameworks of the organizations provided a comprehensive picture of how the skills of *purpose, empathy, systems-approach* and *resilience* are implemented into strategy and everyday business.

2.2. Phase I: Qualitative Customer Analysis

This phase –consisting of interviews and survey studies involving customers– identified gaps and was a collective step towards establishing Human Centered Business as a solution. It was during this phase that the importance of capturing stakeholder knowledge and the value of engaging 'the critical customer' emerged.

[2] Respondents came from the following countries: Belarus, Cambodia, Estonia, Gambia, India, Kazakhstan, Latvia, Lithuania, Mozambique, Russia, Senegal, Sweden, Thailand, United States, and Zimbabwe. Surveys were sent to respondents in: Brazil, Chad, the Democratic Republic of Congo, Ghana, Mozambique, Nepal, the Philippines, Rwanda, Senegal, South Africa, Tanzania, and Zimbabwe.

[3] Listed in a section in the reference list.

[4] Listed in a section in the reference list.

In situations where the stakeholder map is diverse, obtaining knowledge carried by individuals is an effective and innovative way to inform decision-making. The key is to capture that which is said beyond the boardrooms. Albeit having the initial appearance of being time-consuming or challenging, there is added value in engaging stakeholder groups that have no or little formal influence over the decision-making processes of an organization. This stems from the fact that these individuals have no particular vested interest in preserving existing structures, meaning that they have the potential to challenge, develop and expand knowledge. This is why a large portion of this study was dedicated to extensive dialogue with stakeholders, all of whom represent customers in both specific and general terms. The process allowed us to gauge customers' expectations of sustainable business in the future, and strongly validated the gaps in the current operating framework of sustainable business.

2.3. Phase II and III: Developing the Framework in Partnership with Advisers, Identifying Business Actors and Screening the Index

This phase further developed and refined the Human Centered Business framework by taking stock of input, ideas and advice provided by 14 experienced researchers, advisers and practitioners in human centered design, systems change and social innovation from across the world.

The first test of the framework was conducted in the Swedish market, which had been identified as an early adopter market by the 14 aforementioned individuals. 250 Swedish companies were identified for the first screening of the Index. This was completed through the support of a qualified nomination network that considered for-profit ventures of all sizes. The nomination network itself was composed of 20 individuals (eight men and 12 women) representing non-profit organizations and NGOs, research institutes and enterprises of various sizes, ranging from social enterprises to multinational companies.

2.4. Phase IV: Constructing the Final Index

The Human Centered Business Index is the outcome of *a three-dimensional analysis* of each company. The three dimensions are:

1. **Principles** – The four principles of Human Centered Business
2. **Indicators** – 12 indicators of the standard operating framework
3. **Criteria to determine score** – Criteria based on GRI definitions of content and quality in disclosures

In this final stage, the Human Centered Business framework was indexed through a summary measure of its four principles (*purpose, empathy, systems-approach* and *resilience*) and the 12 indicators of a standard business-operating framework. These indicators enable a more complete capture of core business and the standard operating framework of a given company, thus moving away from the emphasis traditionally placed on policies specifically pertaining to 'sustainability' or 'corporate social responsibility':

Table 1. 12 indicators of a company's standard operating framework

Indicator	Indication
Mission	The aims of the organization.
Vision	What the organization aspires to achieve.
Values	The core beliefs of the organization.
Priorities	What is deemed necessary, important or needed in the near future.
Approach	How challenges are tackled in practice.
Key assets	The resources key to performance.
Strategy	The choices made to bring about a desired future.
Services/products	What the organization offers.
Value chain	The chain of activities conducted to deliver products or services to the market.
Sustainability context	Placing the company's performance in a wider context. How the organization impacts economic, environmental and social conditions, developments and trends at the local, regional and/or global level.
Stakeholder inclusiveness	How the organization responds to stakeholder expectations and interests.
Transparency (materiality and completeness)	Whether material, reasonable and appropriate information is provided.

Source: data adapted from Lumen Behavior, 2016.

The Index is then created through the scored assessment of how *each indicator* of the operating frameworks relates to *each principle* of Human Centered Business. To assess how strongly the four principles of *purpose, empathy, systems-approach* and *resilience* were expressed in the operating framework, businesses were scored on a scale of 1 to 4[5] against the following criteria:

Table 2. Criteria to determine score

Criteria	Description
Balance	Does the reporting reflect both positive and negative aspects of the organization's performance to enable a reasoned assessment of overall performance?
Comparability	Is information selected, compiled and reported consistently in a manner that enables stakeholders to analyze changes in the organization's performance over time?
Accuracy	Is information sufficiently accurate and detailed for stakeholders to assess the organization's performance?
Timeliness	Is information reported on a regular schedule so that information is available in time for stakeholders to make informed decisions?
Clarity	Is information available in a manner that is understandable and accessible to stakeholders?
Reliability	Are information and processes gathered, recorded, compiled, analyzed and disclosed in a way that they can be subject to examination, and that establishes the quality and materiality of the information?

Source: data adapted from Lumen Behavior, 2016.

This set of criteria serve as a guiding tool to how the indicators should be scored vis-à-vis each of the four principles, and were based on the reporting principles for defining report quality in the Global Reporting Initiative (GRI, 2015), a framework for corporate sustainability reporting. This was applied to each company. The following is a schematic example of how an assessment of an individual company can take shape:

We were able to identify frontrunners on the Swedish market using this final Index. The Index distils what the concept of Human Centered Business entails more broadly; therefore, it does not claim to capture the specifics of strategic choices or thematic emphasis, challenges or risks. The tool can offer valuable and more context-specific insights when applied to an individual company. However, a composite Index will allow for benchmarking, highlighting the frontrunners and supporting communication. On company level, the three-dimensional analysis can also be visualized as a literally three-dimensional topography, which can be an even more powerful tool in a process of becoming a Human Centered Business.

2.5. Methodological Considerations

The purpose of launching this study has been to provide a blueprint for further studies within the area of sustainable and human centered business. It does not profess to be re-inventing the wheel; the research and analysis that resulted in the Index builds on previous research, existing frameworks and on-going conversations, but it also contributes to this body of knowledge, and encourages more research within the field. By being an applicable tool for measurement, the Index also encourages good practice by enabling action and practical work within individual businesses and organizations.

As already proposed, the methodology and the Index should not be seen as definitive. The Human Centered Business Index is a tool under validation and development, a work in progress, and an invitation to further dialogue and research. It is ultimately through collaborative methods –in which business actors, stakeholders, and additional researchers engage in dialogue– that meaningful learning and knowledge can continue to be created.

3. Key insights from businesses and customers

3.1. Main Insights from Businesses and Organizations:

A number of themes emerged in the interviews that were made with the Swedish companies assessed as frontrunners in the first application of the final Human Centered Business Index. Firstly, being successful in sustainability has moved the highest ranking companies beyond traditional understandings of sustainability, into *a new understanding of their core business as a vehicle –in and of itself– for multidimensional value creation*. Furthermore, by remaining committed to their core purpose, the frontrunners have mobilized momentum to move from single standalone issues into *a nuanced understanding of issues as being interconnected*. Thirdly, entrepreneurship –or 'intrapreneurship'– is key. By *taking agency beyond one's own operations and standing firm in a belief in one's own significance*, the frontrunners have been able to create change within and for their respective fields. Finally, frontrunners have made a shift from a fo-

[5] 1 = low implementation, 4 = very strong implementation

cus on *being right,* to a focus on *being transparent and mobile.* This means that they can openly share information, and engage in dialogue about challenges and improvements.

Table 3. Illustration of how a Human Centered Business Index can look like for an individual company

Human Centered Business Index for Company X	Purpose	Empathy	Systems-approach	Resilience
Mission	2	3	2	3
Vision	2	3	2	3
Values	1	3	2	4
Priorities	2	3	3	3
Approach	3	3	4	3
Key assets	2	3	2	3
Strategy	1	2	2	3
Services/ products	1	3	1	2
Value chain	1	2	2	1
Sustainability context	2	2	1	2
Stakeholder inclusiveness	1	1	2	1
Transparency (Materiality, Completeness)	1	1	1	1
TOTAL	**19**	**29**	**24**	**29**

Source: data adapted from Lumen Behavior, 2016.

3.2. Main Insights From Customers

Involving stakeholder perspectives in this study has provided important insights about decision-making and the market. An iterative process has been used to identify recurring patterns and themes from the interview study.

It is clear that critical customers want businesses and organizations to be aligned with humanity in their operations. They are not necessarily interested in companies with 'right answers', meaning that occasional missteps can be accepted and forgiven, as long as the company expresses an ability to learn. What matters is therefore *how* a company responds in situations when mistakes occur and values are challenged.

Moreover, the critical customer wants to engage in meaningful and empathic dialogue, where their voices are truly heard. For businesses, this means that real answers can be found in real conversations. Mastering the skills of empathy, and understanding different realities, is a key step towards gaining useful information; it is no longer possible let alone fruitful to generically categorize customers according to age, gender, geographic location and other factors. Customers demand individualization, and this is also where trust can be built.

Finally, the critical customer should be regarded as an asset and a friend, not as a burden; expressing dissatisfaction is a way of showing commitment and supporting improvement. There is value – and potential to build strong and trusting relationships – when organizations stand tall in situations where customers address uncomfortable issues. The customer does not demand perfection, but they do value having their voices taken into consideration in problem-solving and decision-making processes.

4. Concluding Remarks

Based on the key findings, it is evident that it is no longer possible to position a business simply by talking about sustainability. Sustainability has been mainstreamed, which has clear implications for business decisions. As an increasing range of perspectives and knowledge becomes available, it is essential for businesses and organizations to continue learning. Operating in a fast-paced state of flux requires that organizations cultivate an ability to stand firmly in their purpose, while also engaging in dialogue and partnerships with stakeholders. Solid and empathetic communication – one that is both ongoing, multi-stakeholder and multi-channel– plays a critical role.

The research resulting in the Human Centered Business Index is firmly rooted in the idea that businesses and organizations need to lead with purpose and resilience, employ a systems-approach, and obtain a solid understanding of stakeholders. Rigorous and thoroughly conducted stakeholder mappings are essential for new knowledge. However, in order to create the additional value that makes businesses truly human centered, there is also a need to consider all stakeholders *simultaneously,* even where stakeholders are a heterogeneous group with a variety of differing opinions. As a result, businesses and organizations should never be satisfied with flippant trade-

offs, or with compromising core values. Decisions should generate value for multiple stakeholders at once; value that is created for one stakeholder at the expense of another will be costly. Rather than separating different groups from each other, businesses and organizations must be able to take the whole system into account. In order to avoid losing track of the knowledge generated by stakeholder dialogues, the principle of empathy must be applied in each meeting.

As room is made for more individuals, groups, interests and other constellations to voice their opinions, experiences and visions, some of these opinions may appear incompatible with current business operations at first sight. However, this study has shown that insights that are valuable in the long run stem from constructive dialogue. For future leaders, this means that they must live with –even embrace– the discomforts and the delights of dialogue.

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AREAS OF FOCUS IN DESIGNING ONLINE PLATFORMS FOR SOCIAL INNOVATION DIFFUSION

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Abstract: From the starting point of existing online platforms that provide collections of social innovations and, through their actions, encourage the diffusion of their featured initiatives, the purpose of this paper is to put forward a set of areas of focus that, if implemented, would form the basis of an online platform tailored specifically to accommodate and foster social innovation diffusion. With a focus on grassroots social innovations that cater to citizens' everyday needs, existing platforms are analysed through relevant theory on diffusion and design for social innovation, drafting three main areas of focus: creating an enabling environment, offering flexible entries and ensuring the visibility of adaptations. These areas are then detailed, supported by examples and possible paths to follow, concluding with a call for further research and an invitation to start a conversation about the need to design and develop online platforms for social innovation diffusion.

Keywords: Social Innovation, Diffusion, Online Platform, Adaptability, Context Consideration, Citizen Empowerment

This paper is based on the findings from Gaftoneanu's previous work (2016) which explores the defining features of online platforms in terms of their potential to aid the diffusion of social innovation. For the purpose of this paper, social innovation is understood both as outcome and process, following the European Commission's definition according to which social innovations represent the "development and implementation of new ideas to meet social needs and create new social relationships and collaborations" (Policy, 2013:3).

Diffusion, another key term in this paper, refers to the social innovation process step that, alongside scaling, leads towards social and systematic change (Murray, Caulier-Grice & Mulgan, 2010: 12-13). As diffusion alludes to personal rather than organizational efforts of spreading social innovations, careful consideration of context is required, from geographical adaptability to compatibility with value systems (Davies & Simon, 2013). The complexity of social innovation diffusion lies in its "flow-like process of interaction and modification" (Murray et al., 2010:82), chaotic spread and lack of linearity and rationale (Davies & Simon, 2013).

Platforms that offer collections of best-case practices or ongoing initiatives with a social outcome are an important contributor to the wide spread of social innovations in recent times. The platforms with the widest outreach are the ones that use ICT and specifically the internet as a means to spread knowledge. Murray et al. (2010:95) defines them as "the nodes of a new economy, and other ways in which users and originators can engage in the evaluation and adaptation of innovations" whilst a more precise definition comes from the European Commission which refers to such platforms as Collective Awareness Platforms for Sustainability and Social Innovation (CAPS). CAPS, according to Armani et al. (2014:9) are "ICT systems leveraging the emerging network effect by combining open online social media, distributed knowledge creation and data from real environments in order to create awareness of problems and possible solutions requesting collective efforts, enabling new forms of social innovation". Regardless of how they are referred to, many of these platforms recognize the importance of social innovation diffusion and, though it is not necessarily in their stated purpose, the features they offer support the diffusion process.

1. Areas of Focus

The purpose of this paper is to put forward a set of areas of focus that can act as the basis for potential online platforms built around the process of social innovation diffusion. By taking a closer look at several existing online platforms which, albeit often indirectly, aid the diffusion of social innovations, and contrasting them with relevant theory on diffusion and design for social innovation, the following areas of focus were drafted:

- enabling environment
- flexible entries
- visibility of adaptations

These areas of focus do not presume to be anything more than thought-provoking proposals, in the hopes of opening and encouraging conversation and inviting further research into the matter. Though inspired by a wide variety of existing platforms, the areas are presented in the context of a conceptualized online platform specifically designed for the purpose of aiding social innovation diffusion.

Special attention is also given to what types of social innovations the following areas of focus cater to. Existing online platforms address a whole spectrum of social innovations, from daily concerns of urban citizens, to activism or even tackling some of the Millennium Development Goals. According to Everett Rogers' theory on diffusion of innovations, easy to understand, compatible and straightforward innovations increase rates of adoption, whilst the ability to have them changed or modified by the user in the process of adaptation and implementation makes the innovations easier to be diffused (Rogers, 2003:17). Murray et al. (2010) make similar remarks about social innovations, noticing a higher diffusion rate of simple, modular innovations that do not require new skills to be adapted. It is with this in mind that the areas of focus argued for below revolve around the diffusion of social innovations addressing problems of everyday life.[1]

Whether they are referred to as social innovations in the household economy (Murray et al., 2010), everyday diffused social enterprises and creative communities (Jegou & Manzini, 2008; Meroni, 2007) or grassroots social innovations to name a few, there is a clear movement of innovations stemming from active citizens that become aware of needs or opportunities in their communities and put forward innovative initiatives, creating social value in both their process and outcome. Distinct from social enterprises or governmental institutions, this type of social innovations are known to loosely collaborate with them if the case be. Lastly, the social innovations for which the areas of focus are designed, through their local community nature, direct citizen interaction and catering to everyday needs, require few resources in terms of time, money, technology, people or skills needed for their implementation.

1.1. Enabling Environment

The way social innovations are portrayed and the levels of interaction offered to users vary greatly across platforms. A typical approach is presenting the social innovation as a product that the user can support in various ways. MakeSense (2016) offers the possibility for social entrepreneurs to pose their ideas and needs on which users can act through organizing hold-ups[2], joining existing ones or leaving messages and ideas on the inspiration wall. Similarly, Red Bull's Amaphiko platform allows users with accounts to add their projects or contribute to the projects featured by offering their skills, which can range from fundraising to profession-specific tasks such as marketing, graphic design, web development or accounting (Amaphiko, 2016). Ioby, an online platform for neighbourhood level social innovations, follows the presentation of the project with a crowdfunding option, as well as the ability to volunteer for the user's neighbourhood projects (Ioby, 2016).

What these examples have in common is a red thread of pitching a project and receiving help and support from a community. The project originator holds a specifically important position and can be anyone from citizens to social entrepreneurs or organizations, with some platforms, such as Red Bull's Amaphiko, inquiring about details like the legal status and developmental stage of the project when submitting a new entry (Amaphiko, 2016). In other cases, reducing the importance of the project originator (i.e. less information required, no need to create a user account) correlates with the reduced relevance of the entry on the platform, for example by not offering the possibility for potential implementers to interact with these entries. CIVICS is one such platform where anyone can enter a project or initiative that is taking place in their community which becomes visible for all through crowdmapping, but with no option of directly interacting with the entry via the platform (CIVICS, 2016).

[1] Throughout the paper, the social innovations for which the areas of focus are proposed are referred to as grassroots social innovations, proven solutions or innovative initiatives.

[2] Hold-ups are 2 hour workshops aimed to help social entrepreneurs develop their initiative (MakeSense, 2016).

There is incontestable benefit in making a large variety of social innovations public and engaging the audience to somehow get involved in these initiatives. Nonetheless, when it comes to grassroots social innovation, though some eventually turn into social enterprises or take different forms, a large part of them remain within the community or spread through the weaker ties of the community to new ones, in a natural, chaotic dissemination process. In the case of an online platform built for the purpose of diffusing such ideas as opposed to the growth or maintenance of a social enterprise, more attention should be given to the relationship that the user and originator of the idea have with each other, the innovation and the platform respectively.

Keeping in mind that the individual is at the basis of the diffusion process when compared to scaling, the first area of focus that this paper puts forward is creating an enabling environment for users by changing the focus from the social entrepreneur or originator of the idea to the future implementer. Designing the platform with the implementer as the main character of the diffusion process can be done by passing over the control to him/her when it comes to entries and their functionality, tailoring social innovations to cater to the user's needs whilst empowering him/her to take ownership of the diffusion process.

Vivero de Iniciativas Ciudadanas (VIC), an online platform that looks to promote, diffuse and support citizen initiatives (VIC, 2016), offers an editable collection of social innovations by using wikis, thus encouraging any user to edit and adjust the featured entries. According to Scearce, Kasper and Grant (2010), wikis and other networking tools work best in an environment where power is pushed to the edges, prioritizing trust, openness and transparency, thus allowing people to self-organize and diffuse information. On a platform designed for minimum implication of external influencers and for decentralization, users can take both the role of originator of the idea and implementer of an existing entry, thus blurring the boundaries between the two.

Other elements, such as free, non-restrictive access, can contribute as well to increasing the diffusion potential of the online platform by reaching wider audiences. The inclusion of a fee for online platforms is often necessary for its sustainability but it also reduces the number of its potential users. Meetup is a great example of an online platform that enables neighbours to organize meetups with the purpose of sharing and learning (Meetup, 2016). Nonetheless, accounts are needed to join or organize a meetup in your neighbourhood, and the associated monthly fees for organizing are only revealed once a whole new entry is filled in.

Further on, offering support for the implementer throughout the diffusion process plays a crucial role in creating an enabling environment. Everett Rogers talks about the five stages of the innovation-decision process, from learning about an innovation, to forming an attitude towards it, deciding to adopt it, putting it to use and finally seeking reinforcement for one's decision (Rogers, 2003). With the main focus around the implementer, the platform would need not only to offer information that sparks curiosity and interest, but also support the user throughout the rest of the innovation-decision process.

In the knowledge stage, the user discovers the innovation that addresses his/her needs or interests and gathers information about what it consists of and its functionality (Rogers, 2003). The information should be structured and presented keeping in mind the end reader. In this sense, filters, keyword search and suggested entries based on location are some of the manners in which the user can find suitable solutions. In terms of the information offered, alongside the description of the solution and the problem it answers, the context and potential questions the user may have should be addressed as well.

Shareable's "how to's" are good examples of short presentations and loose rules of implementations for popular grassroots social innovations, most commonly written by the original implementers of the ideas (Shareable, 2016a). Though one of few which tailors to the needs of the future implementer, there is no possibility to contribute or interact with the entries, nor to give feedback on potential questions that might arise.

In the case of the persuasion stage, Rogers (2003) stresses the importance of subjective evaluations when it comes to considering adapting a certain innovation. Knowing the status of the innovation, its success and other people's experiences related to it can guide the user in taking a decision regarding its implementation.

Citymart, an online platform which focuses on government-to-government social innovation exchange, used to have a publicly available database of their solutions including their track record, covering, among others, how many times a solution was successfully adopted by other governments and including photos and videos to support their claims (Citymart, 2016). Apps4citizens, an online platform that promotes mobile applications for collective social and political engagement, offers for each entry a list of advantages and disadvantages, as well

as personal opinions from former users and scores for content and functionality, social and political impact, design and usability, and innovation (Appteca, 2016). Whereas in the case of Citymart the track record is automatically generated, Apps4citizens's evaluations are based on "expert" entries, representing other users of the platform that have previously used the mobile application in cause (Citymart, 2016; Appteca, 2016).

The decision stage can also be actively integrated in the platform, offering needed tools and features for the adaptation and implementation of the entry. Individual adaptable duplicates of social innovations that are being implemented in different contexts allow the user to adapt an entry to his/her own needs, encouraging the success of the implementation.

Due to the offline local nature of the grassroots social innovations, the implementation stage of the innovation-decision process often takes place outside the premises of the platform, though support should still be offered for inspiration or potential problems that could arise[3]. In relation to the confirmation stage, within which the user acknowledges the level of success of the implementation and further promotes it (Rogers, 2003:199), Von Hippel (2005) remarks the tendency of users to reveal and discuss their contributions and input in a certain innovation in their search for suggestions for improvements, thus working towards a common benefit whilst going against the expected action of claiming ownership and patenting their contributions. Some of the ways in which the platform could build on and integrate this tendency is though keeping a track record of the innovation and offering the ability to add materials documenting the implementation or support other similar adaptations. In the case in which the user is the originator of the initiative, it is in this stage that he/she is encouraged to share his/her experiences on the platform.

1.2. Flexible Entries

Due to the widespread accessibility of the internet, most online platforms have the potential to reach a global audience. Nonetheless, despite their availability in English, global *lingua franca*, the majority of online platforms offering social innovation collections promotes initiatives originating or being funded and supported by the Global North. Priya and Marras (2008:133) notice the tendency to transplant Northern solutions in emerging economies, sometimes at the cost of better local options embedded in centuries of tradition and experience. It is important to remark as well that grassroots innovations do not depend on the development stage of the country or its geographical location. Jegou and Manzini (2008:34) note in this sense that ideas and experiences can move in all directions, including back and forth between the Global South and North.

Acknowledging this potential and "building a two-way bridge" between the two worlds could greatly enrich the existing diversity of grassroots social innovations (Gaftoneanu, 2016). Nonetheless, such transfer is not always straightforward. In a modern post-industrial Europe where people are aware of their individualistic lifestyle, grassroots social innovations focus on areas such as community solidarity, whilst such actions in emerging economies are part of daily life, when their needs revolve around different social issues (Priya & Marras, 2008:136).

Moreover, a truly global reach is debatably unachievable due to technological, economic and cultural limitations, from the great firewall of China to first and second digital divides (MacKinnon, 2011). These said, there is still untapped potential when it comes to diffusing social innovations in different parts of the world, as well as in harnessing the individual local knowledge of implementers to be able to adapt a social innovation to their specific needs.

Waitzer and Paul (2011:144) make an important observation when it comes to the scalability of social innovations as opposed to business ideas, stating that because of their social nature, the majority of such initiatives remain local, so the focus should be changed from trying to scale them, to instead scaling their impact, allowing ideas to travel. Locality should be understood in this sense as a balance between "being rooted in a given place and being open to global flows of ideas, information and people" (Manzini, 2015:202).

Jegou and Manzini (2008:111) further argue for the benefits of the social innovations' local character and the need to make them more accessible whilst preserving their original quality and appeal that are essential to insure the success of the solution when implemented by adopters with differing socio-demographic profiles. Keeping the local character of social innovations when diffusing across borders represents a daunting task which requires a heightened context awareness and adaptability.

Diffusion of social innovations constantly occurs naturally among individuals from different backgrounds, suffering changes and modifications

[3] Suggestions for how this support can be integrated in the platform are offered in the following sections.

throughout this process. To stimulate diffusion, Priya and Marras (2008:136) note that social innovations "have to be sensitive to social, cultural and economic differences and be based on local priorities and feasibility" whilst Weber, Kröger and Lambrich (2012) stress the undermining of cultural differences when it comes to scaling social innovation. With all this in mind, the importance of context adaptability becomes evident.

The second area of focus stems from acknowledging the balance needed between local character and global reach as well as the need for adaptability, proposing flexible entries that take the context of the implementer into consideration.

To better understand this flexibility, a closer look needs to be taken at the structure of a social innovation entry. Due to deep local roots and strong dependence on its originators, grassroots social innovations suffer changes throughout the adoption process. Nonetheless, the idea behind the individual adaptations created is often self-standing. Following this line of thought, Manzini observes that when talking about diffusing a social innovation, the discussion can be formulated as "how these ideas may spread and how different groups of people may recognize, adopt and localize them" (2015:180).

To enable contextual consideration for different instances of social innovations, a popular option is developing toolkits. Amplifying Creative Communities (2016), whose activities include "broadcasting good ideas for others to adopt" offer specialized packages of tools for potential implementers of a specific idea called "Recipes for Change"[4]. Though successful when properly implemented, creating toolkits is a time and resource consuming activity, keeping in mind that they are specially tailored for a small number of social innovations. This, in turn, prompts for an option that would allow context adaptability for a large range of social innovations.

Catch 22, in their focus piece offering insights for the ongoing Realising Ambition Programme, propose a hypothesis in which the innovation to be replicated is split between its core, representing the key elements of the initiative that address the need or opportunity under discussion, and the adaptable surface, comprising of flexible elements that could be moulded according to the context and characteristics of the implementer (Realising Ambition, 2015). This distinction, as well as the degree of the changes needed, may be dictated and then moulded by the user, in an attempt to simulate how the diffusion process would take place outside the online platform.

Face-to-face interaction, community involvement, resource availability and several other external influences are encouraged, both in terms of protecting the local quality of the social innovation and offering complementary support for implementers, outside the platform's reach.

By preserving the core of the social innovation, the value behind the solution is maintained, allowing the rest of the elements to be adapted across different geographical, cultural, political or religious boundaries by those who understand the context best: the users themselves. Online platforms featuring flexible entries would be a strong step forward towards facilitating social innovations to cross borders and diffuse globally. Further research is needed in order to better understand how entries on the online platform should be presented to ensure the user's comprehension and involvement in accordance with his/her context.

1.3. Visible Adaptations

As argued above, though locality is a key feature of grassroots social innovations, it also represents a huge downside in terms of their diffusion potential, as their relevance to the local community and lack of outside help mean that they tend to remain within the communities that initiated them.

There have been several attempts by passionate researchers to explore the diversity of grassroots social innovations and create collections of best case practices. One such example is Hand Made: Portraits of Emergent New Community Culture, a very engaging collection of unique initiatives from "Men-Sheds" to "Fallen Fruit Jam" (Britton, 2010). An online version of such work is EMUDE (Emergent User Demands for Sustainable Solutions) featuring a wide range of everyday social innovations such as the Living Room Restaurant (EMUDE, 2016). Though such collections are fascinating and insightful, they remain out of reach for most citizens, due to a lack of either information, tools or support to implement them.

Keeping in mind that the first step of diffusion is observing a new innovation and gaining interest in learning more about its functionality (Rogers, 2003), the visibility of existing proven solutions outside their originating communities is crucial to their potential to spread.

Mapping of initiatives has been widely used to promote participation or to raise awareness about existing initiatives, from the Green Map System, mapping environmentally sustainable projects since 1995 (Manzini, 2015:123) to crowdmapping

[4] http://www.amplifyingcreativecommunities.org/RecipesforChange.pdf

for disaster relief (Dennenmoser, 2013). Most of the online platforms mentioned in this paper incorporate a form of mapping, from an alternative to a list-view, to designing the whole platform around a map of initiatives.

An interesting example of an online platform that focuses on mapping is Geographies of Innovation (2016), which offers a view of innovative initiatives in Barcelona, professionally analysed through different layers such as socio-demographic context, urban fabric, functional indicators and spatial organization. Focusing on fostering community involvement in mapping, Shareable's Map Jam is a two week long periodic sprint where a relatively small group of people called map-jammers gather to map social initiatives from over 80 cities at once (Shareable, 2016b). Perhaps the ideal strategy for mapping social initiatives for an online platform focused on diffusion is CIVICS' approach, where citizens are invited to enter information about initiatives and activities in their community that are later on featured on the map generated for their city (CIVICS, 2016). Such an approach actively welcomes the contribution of users not only as adapters but also as original diffusers of an idea, thus contributing to creating the feeling of ownership and subsequent engagement detailed in the first section.

Furthermore, Jegou and Manzini (2008:112) argue for how local visibility can be enhanced through search engines for users to be able to identify entries that are in their geographical proximity which, arguably, ensures a level of homophily with the implementers of those initiatives, easing a potential adaptation. Proximity features can also be used to offer the platform's users a view of social innovations that are taking place in the area. Moreover, by understanding the needs that led to those initiatives, platforms could offer suggestions for the area in terms of proven solutions that have addressed similar needs.

Besides giving visibility to such initiatives, online platforms for social innovation diffusion should maintain an ecosystem around the user that encourages an active, collaborative behaviour (Manzini, 2015:121). This can be done by widening and harvesting the benefits of mapping, which brings this paper to the third area of focus: visible adaptations.

Previous sections have discussed the ability to duplicate an original entry following the decision stage, as well as the flexibility of the surface in relation to the core. Adaptations, in this sense, refer to the duplicated original entry whose surface is edited by the new implementer, adapting it to his/her own context. By allowing this adaptations to be part of the online platform, users have the opportunity to visualize the track record of an entry, as well as how different past or current adaptations have been edited and influenced, creating an enabling environment around the potential implementer.

This added feature has the potential to also contribute to current issues of toolkits such as not being able to cater to unforeseen problems the implementer might deal with, as well as not having any way of ensuring its proper use, that could be the result of lack of knowledge or motivation (Manzini, 2015:182-184). In this sense, older adaptations could act as sources of inspiration for new ones. Users would have the ability to decide to duplicate either an original entry or a closer adaptation to their local situation, depending on its suitability.

An outcome of such connectivity is the possibility of forming communities of practice among users. Von Hippel (2005:72), in his discussion on democratizing innovation, notices that "direct, informal user-to-user cooperation" and the innovation communities it fosters increase the speed and effectiveness of innovation diffusion. Connecting implementers of different adaptations through the online platform creates a network within which users could support each other throughout the different stages of the implementation, whether it is done through chat, email or social media, incorporated in or external to the platform itself.

2. Concluding Remarks

From the starting point of current online platforms offering a wide range of services related to social innovation collections, this paper proposes a series of features for a conceptualized online platform built for the purpose of enabling the diffusion of social innovations, structured around three main areas of focus: creating an enabling environment, offering flexible entries and ensuring the visibility of adaptations. It is also theorized that implementing the suggestions offered in this article, in line with areas of need of existing platforms or as the basis of new platforms, would lead to a steep increase in the diffusion of featured social innovations, determined by the sheer number of engaged users, as well as by the ability to customize, improve and receive support during the implementation stages. Such a highly sought increase may in turn lead to new and interesting outcomes with consequences that deserve to be further scrutinized.

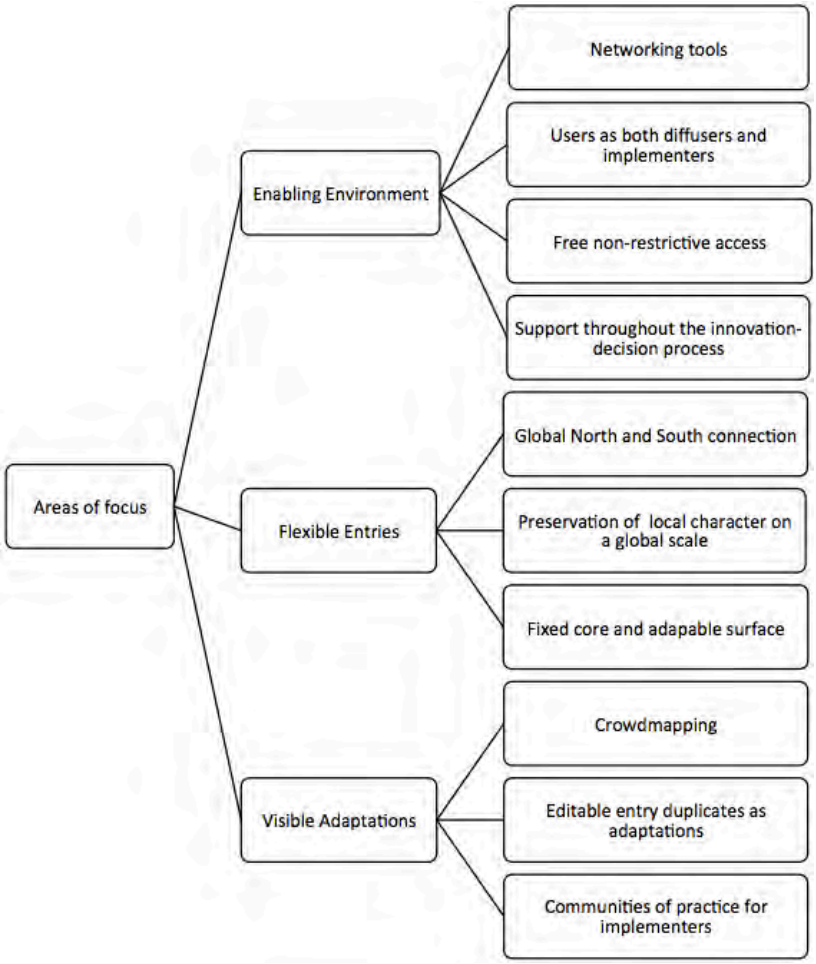
It is also important to stress that these areas of focus represent just few of many other ways in which the development and implementation of such platforms can be tackled. More precisely, the proposed areas should be further developed, adapted and complemented by other relevant areas, depending on the character of the online platform under development. Further research is needed to ensure their validity and efficacy, as well as consolidate a model for social innovation diffusion.

Figure 1 proposes a fundament for such a model, built on the arguments and suggestions put forward by this article. For each area, the figure outlines approaches or tools based on theory and the study of existing platforms that, if implemented, would aid the diffusion process of social innovations on online platforms.

Towards developing a model for social innovation diffusion through online platforms, further case study analysis, critical reflection, and practical implementation are strongly welcomed. The latter could lead to interesting observations regarding the implications and outreach of the featured areas of focus, offering concrete data to support the proposed ideas. Furthermore, if their validity and effectiveness is proven in relation to online platforms focused around grassroots social innovations, the specific type chosen for their development, extrapolating the results or using them as a basis of discussion to be implemented for other types of social innovations could also yield very interesting outcomes. One direction could be extending the platform to accommodate social innovations with greater social impact but that also require more resources (time, money, participants, expertise, infrastructure, materials) and stronger communication efforts.

Lastly, the aim of this paper is to put forward thought-provoking ideas, thus welcoming feedback and encouraging conversation related to the need to design and develop online platforms for social innovation diffusion as well as to the implications such platforms would have in the future, from the sustainability of social innovations to new public policies, cooperation and ways of living.

Figure 1: Areas of focus in designing online platforms for social innovation diffusion



Source: Author's own elaboration

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SOCIAL INNOVATION CHAINS
A Nanovaccine as a Case of Social Inclusion

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Abstract: The benefits of nanotechnology could be traced across different industries and, with a responsible governance, could help with social problems. This paper engages with the contingent nature of social innovations, proposing a narrative chain that explain why the production of a new brucellosis nanovaccine in Patagonia, could have positive impact in social inclusion in the Argentine context. In particular, the mentioned nanovaccine will help reducing ovine brucellosis, increasing local production and local labor. This work argues that promoting this micro policy, would increase social inclusion in Patagonia.

Keywords: Social Innovation, Social Inclusion, Nanovaccine, Brucellosis, Rural Poverty

1. Introduction

> Nanotechnologies are the design, Characterisation, production and application of structures, devices and systems by controlling shape and size at nanometer scale.
> (The Royal Society & The Royal Academy of Engineering, 2004 p.5)

> Social innovations are regarded as new products, processes and methods that, in a creative and sustainable manner, offer a better solution to one or several social demands.
> (Unceta, Castro-Spila & García-Fronti, 2016 p.2).

Benefits of nanotechnology could be traced across different industries, promising new solutions to social problems. These aggregated promises, which are in permanent interaction with public policies, sustain future expectations, pressuring the process of allocation of national public resources, and defining the future of society in its whole (Van Lente, 1993; Van Lente & Rip, 1998). One of the most important and promising area is the use of nanocarriers to increase the efficient of vaccines and drug treatments.

The idea of social innovation is a concept taking a number of different meanings (many of them discipline-specific). Four general conceptions of the term are noted by (Pol and Ville, 2009), which we now reproduce in summary. The first conception emphasizes social innovation as a driver of institutional change (taken to be any cultural, normative, and regulative change from the previous structure). The second one is that of the Young foundation which is that a social innovation is an innovation that seeks to resolve a social need (Mulgan, Tucker, Ali, and Sanders, 2006). The third one, forwarded by the Centre for social innovation, takes a social innovation to be anything that works for the public good (i.e. resolving social needs), although this definition does not seem to add anything to the debate, the same paper adds that a *true* social innovation is one that permanently alters the behaviours and structure of the relevant agents in question. The last conception is that of social innovation as addressing needs ignored by the market.

In line with (Unceta, Castro-Spila, and Garcia Fronti, 2016) we take for the working definition of social innovation to be a way of resolving market or State failures, (i.e to resolve social needs) that also changes the behaviour of the agents involved in a meaningful manner. The authors argue that this definition takes several of the most important ideas from the previously presented general conceptions.

Social innovation many times emerges as a *chain* that starts with a technological innovation and, after various links, impacts positively in social inclusion. Appealing to the contingent nature of innovation, this paper analyzes the chain that allows to understand why promoting the production and use of a new brucellosis nanovaccine is a social innovation that is socially desirable in the Argen-

tine context. The mentioned nanovaccine will help reducing ovine brucellosis in Patagonia, which increases local production. In the particular context of this regional economy, this will increase local labor and will benefit small local producers. This chain of events, will activate the regional economy, several studies demonstrate the high efficiency of these micro policies to increase social inclusion.

Regional economies are crucial for a socially inclusive growth in Argentina (Bekerman & Dalmaso, 2014; Casparri, Fusco, & García Fronti, 2014; Miguez, 2014). One of them -linked to the ovine production- has grown considerably reaching a production of 14.859.486 heads on a national level in March of 2013 (Mueller, 2013b). However, one disease - the ovine Brucelosis - is threatening the industry by producing economic loss to both the producers and the State. The application of a nano-vaccine developed and patented by INTA prevents this disease, having a positive local impact on ovine production (INTA, 2013, 2015; Manazza, Spath, & Paolicchi, 2006; OIE, 2012; SENASA, 2014).

This paper argues that a new nanovaccine against brucellosis in Argentina will boost regional ovine economies, responding to social needs in Patagonia. To achieve this goal, the next section analyses the importance, in economic and social terms, of agrobusiness in Argentina. It intends to use descriptive statistics to ground our hypothesis that there are significant unaddressed social needs in rural Argentina. Section two, describes ovine stockbreeding in Patagonia and its associated social vulnerability issues. Then, this paper examines the new nanovaccine for preventing ovine brucellosis and how it could be implemented in Patagonia.

2. Agro-Industry in Argentina

The agriculture, stockbreeding, forestry, and hunting[1] sector in Argentina accounted for roughly 6.5% in terms of gross added value in 2014 according to the National Institute of Statistics and Censuses (INDEC). According to the 2010 national census, about 8.9% of the population lives in a rural setting, defined as those localities with a population lesser than 2,000. Of them, 36.3% live in small towns (defined as grouped rural population) and 63.7% live in open fields (disperse rural population).

Argentinean poverty measures are restricted to urban areas (Guardia & Tornarolli, 2010). Nevertheless, there is a number of independent studies that have been performed over the years. A survey performed by the World Bank in 2002[2] found that there is a significant gap in well-being among rural and urban households (Mathey, 2007; Haimovich & Winkler, 2005). While 23.5% of the urban population was living under the poverty line, the number went up to 40.2% in rural areas (Fiszbein, Giovagnoli, & Adúriz, 2003). It should be noted that at the time of the survey, Argentina was not only at the bottom of the economic cycle, but rather undergoing one of the worst crisis in its recent history (Conconi & Ham, 2010), and that income based measures of poverty are highly sensible to these events. Yet there is no reason to believe that this gap between urban and rural households has declined, as poverty reduction programs are more easily and often performed on urban, rather than rural areas.

Non income based poverty measures also show significant differences between rural and urban areas, using an unsatisfied basic need (UBN) focus under which any household with at least one UBN is classified as poor. The study finds that 32% of the rural population was poor in 2001, while the measure declined to 16% for the urban population (Demombynes, Metzler, & Verner, 2010). Since 2002, the government has heavily taxed agricultural exports which has had strong positive effects on reducing overall poverty (Cicowiez, Díaz-Bonilla, & Díaz-Bonilla, 2010) while subsidizing utilities and public transport in cities (most notably Buenos Aires metropolitan region) which has had a strong effect on urban poverty and seldom in rural. Also as (Demombynes et al., 2010) note, expenditure and provision of public goods has been inferior in rural areas relative to urban ones. This gap is caused mostly by a lower per capita income in rural areas (95% of the difference explained) rather than differences in income distribution (explaining the remaining 5%). Among the causes of this, the same authors point out lower levels of education among rural areas, which are in time associated with lowered productivity levels, hence the lower per capita income (Haimovich & Winkler, 2005).

In the line of (Verner, 2006) the authors propose that the policy focus should be to increase the productivity of labor and promote employment in rural areas. Historically, poverty reduction has been more effectively reduced by micro-level productive development policies such as the nanovaccine developed by INTA, rather than aggregate level macroeconomic policy (Sánchez, Butler, & Rozemberg, 2011). In the next section the social vul-

[1] Fishing not included.

[2] "Impacto Social de la Crisis en Argentina", methodological information on the survey can be found at http://siteresources.worldbank.org/INTARGENTINAIN SPANISH/Resources/Documento_de_informacion_ basica03.pdf.

nerability of the target population and the importance of ovine production will be studied.

3. Ovine Stockbreeding and Social Vulnerability in Patagonia

The stock of ovine cattle in Argentina is estimated to be between 14 and 15 million heads distributed among 80,000 households (Mueller, 2013b). Ovine production was central to the correct functioning of Argentine economy on the eighteenth century (the country entered the world economy aided by the exports of wool and leather for the European textile industry) but at the turn of the century, the emergence of bovine and agricultural exports displaced ovine production from the Pampa region towards more marginal areas, such as the Patagonia. After this, the relevance of ovine production to Argentina's economy followed at steep, yet inconstant, decline. The last important decrease in stocks came in the early 90's (with stocks declining from 20 to 13.6 million heads) when the prices of wool collapsed (Mueller, 2007). In response to this, the government passed in 2001 a law aiming at the reactivation of ovine production[3], which has been instrumental for a moderate sector recovery.

Although the ovine stockbreeding sector has lost its historical importance, it remains relevant to producers in terms of self-consumption, in supplying local consumers, and for the conservation of forage resources (Mueller, 2013b). As for the uses of Ovine production, both meat and wool production are relevant with milk and its by-products performing only a marginal role in the total. Producers tend to use dual purpose breeds and extensive production methods with allow for low use of inputs, but disallow high reproduction nor high growth rates (Mueller, 2007).

Meat production is estimated to be 55,700 tons per year of which only 9.3% (5,200 tons), the Patagonia is free of foot and mouth disease and mad cow disease which gives great growth potential for exports, especially since the European Union assigns an export quota of 23,000 tons per year which the country severely underuses. The remaining production is devoted to internal consumption of which the great majority (64.7% of the total) corresponds to informal self-consumption, and with only 26% finding its way to the internal market. When it is not used for self-consumption meat production usually accounts for 50% of the producer's income (Mueller, 2013b).

Wool production varies according to climatic conditions, yearly output averaged around 58.3 million of tons for the period 2005-11, of which 90% is exported mainly to Europe, China, Turkey, and Mexico. Producers rely intensely on INTA issued quality certificates (Mueller, 2013b), the same organism offers an ovine genetic evaluation service mainly aimed at breeders called PROVINO (Mueller, 2013a).

Ovine stockbreeding geographic distribution is uneven; 66% of the stock is breed in the Patagonia (Tierra del Fuego, Santa Cruz, Neuquén, Rio Negro, and Chubut) where production takes an extensive mono-production form. Two thirds of the producers have less than 1,000 heads while coexisting with bigger companies managing more than 50,000 heads. One company, Estancias Patagonia S.A, is responsible for half the country's ovine meat exports (Mueller, 2013b). The ovine activity is the most relevant within the agricultural sector in this region (Gatti, 2012).

The remaining 34% is distributed across the country. Here, production is subsidiary to agriculture (as is the case of Buenos Aires), or to other types of stockbreeding (bovine in the Mesopotamic provinces, and camelids and goats in the Northern provinces). Production here is typically smaller with most households managing less than 100 heads, and mainly for own consumption. Unlike its Patagonic counterpart, production in this region is much less sensible to climatic changes (Mueller, 2013b).

To match the diverse production methods with the quality of life conditions of the producers it would be useful to provide with a typology of the (disperse) rural population, even if this is provisory. Sociological studies find that the population may be divided into three types. The first type is that of land owners whose production is channeled within the formal market, this type of producer carries out the greater (relative) scale for its production as it is associated to the hiring of labor. This type is the better well off on its own of the three. It is not, nevertheless, a homogeneous group, as it allows for the distinction between those who produce for the external and internal markets. As for the former this sub-type is the richer one as exporting means that they have access to financing, infrastructure (as ports and roads), and that they have reached a scale that is sufficient to compete with more developed economies such as Australia and New Zealand. They are mainly located in the Patagonia to exploit the comparative advantages of this region. The latter sub-type is mostly not dependent solely (and therefore, not specialized solely) on ovine produc-

[3] http://www.leyovinabuenosaires.com.ar/docs/Ley%2025.422%20y%20Decreto.pdf

tion (such is the case of dual-production in Buenos Aires and the Mesopotamia), this responds to the fact that local demand for ovine products is highly seasonal.

The second type includes those who engage in production for self-consumption. This type is generally poorer than the former but its means of living is still associated to the ownership and/or some form of leasing of the land, which evidences the existence of savings in some form. It usually relies on informal unpaid labor associated to familiar ties and own labor to carry out its production (i.e., pre-capitalistic low-scale farming). Unsurprisingly, ovine producers of this type abound in the Northern provinces, which are the poorest in the country.

The last type is that of those who have no access to land, neither by ownership nor leasing and do not even have the means to start the low-scale farming of the former. It subsists by offering its labor to the other two types of producers (mostly to the first type since the second relies heavily on unpaid labor). This type can be found all over the country and often engages in migrant work as agricultural production in general is seasonal.

Ovine brucellosis (an infectious or contagious epididymitis ram) is an infectious disease, clinical or subclinical, chronic course which affects natural conditions for sheep (OIE, 2012). It is characterized by producing in the ram infertility, sperm abnormalities and secondary orchitis. In sheep, it interferes with pregnancy and retention of the fetus, causing reproductive failure, sporadic abortions, embryonic and neonatal death. In Patagonia the disease was first isolated in rams of Tierra del Fuego in 1963 (Robles, La Torraca, Sancholuz, Uzal, & Evans, 1993). The next section will study how the nanovaccine may increase productivity in the ovine sector, and which type of producer and geographic region would benefit from said increase.

3. A Brucellosis Nanovaccine as an Instrument for Social Inclusion

As it is mentioned before, ovine brucellosis is one of the major diseases of sheep in Patagonia. According to studies, about 60% of rural sheep breeding establishments have the disease, and it does not exist in the world a specific vaccine to prevent the disease, so the infected animal has to be sacrificed. After working for many years on the subject, finally, the National Institute of Agrotechnology of Argentina (INTA) internationally patented the first synthetic molecule that optimizes the prophylactic action of vaccines. The innovative technique is based on a molecule that allows to construct nanocarriers[4], which are routed to certain cells of the immune system to improve the efficiency of vaccines in animals.

Juan Sebastian Pappalardo (Animal Health Group INTA Bariloche, Argentina) was the leader of the project involving scientists from several universities. The patent in question is called "Compounds and Methods for Targeted Immune System Delivery"[5] and it was registered by Juan Sebastian Pappalardo (Escobar, Argentina), Micaela Toniutti (Udine, Italy), Stefano Salmaso (Abano Terme, Italy), Tatyana Levchenko (Revere, MA, US) and Vladimir Torchilin (Charlestown, MA, US). In vitro assays were performed in dendritic cells of different species, which proved the success of the molecule. Subsequently, with the Animal Health Group INTA Bariloche, which has the technology to produce antigens Brucellaovis, they began trials in mice and sheep. This vaccine could be a big key to attack sheep brucellosis, which is a contagious disease that affects the reproductive efficiency of sheep. Currently researchers are doing experiments in Pilcaniyeu province of Rio Negro (Argentina), with very good results. So this research and its results will contribute to the development of regional economies associated with sheep breeding.

If the government advances in the production and distribution of this nanovaccine, which type of producer will be benefited? To answer this, we should ask a subsidiary question. To which element of the value chain is the nanovaccine directed? The answer is provided in full by (Gatti, 2012) as the nanovaccine is directed at the same sector as the previously mentioned PROVINO program, which is the group of breeders and cottages in charge of genetics, and the breeding of animals for reproductive purposes. A technical inform of INTA claims that brucellosis should be wiped out of these establishments since the disease usually appears by buying an infected reproducer (Manazza et al., 2006).

This means that the vaccine is transversal to all producers as it is located on the very first stages of the ovine value chain. Nevertheless, if we ask the question of where would the introduction of the vaccine have the greater effect, we should note that the Patagonia, because of its extensive production modes, is the region with the lowest reproduction rates (Gatti, 2012) so the greatest ef-

[4] Nano-carriers are nanoscale elements that are introduced in the body and carry the drug to the place where the body needs it (Torchilin, 2012). To manufacture these products a patent is needed (Carbone et al., 2013).

[5] United States Patent Application 20150238621, Application Number: 14/431685. Publication Date: 27 August 2015.

fect would be located here. As we have said, both producers of type 1 and type 2 are located here. For the latter, increased reproduction levels justify themselves from the social point of view, and the increased productivity may let some of this producers reach the critical threshold where its production goes beyond its consumption capabilities (which would let them enter the market). For the former, poverty reduction achieved by the measure is to be moderate (as poverty is seldom prevalent on type 1 producers) unless the innovation translates on a higher demand for labor in the ovine sector. As type 1 producers are the heavier employers of labor in the sector, the innovation will have more profound effects as it increases exports and production destined to the local market, thus increasing employment of type 3 producers, this would in time, either increase employment levels in the sector, increase real wages, or both. In should be noted that, in any case, the effect on aggregate poverty measures will be small given the incidence of ovine stockbreeding on the country's income, in other words this is a micro-policy relevant to the objective population, yet prudency would dis-encourage any claims of spillover to other sectors of the economy.

It is hardly the case that a single organization undertakes a nano-medical project, usually joint investments are required. It is important to mention that the process of transforming patents into transactional goods starts with a process of singling out its properties, so it can enter the world of the business that uses it to produce nano-carriers. Once an interested company placed the patent into its network, the production process of the nano-carrier starts – which is then transformed into a good that would be exchanged by money in the market. However, there are clear asymmetries in the market, the future nanovaccine producer could be a large multinational pharmaceutical company. If this were to be the case, the role of the state in financing and regulating remains relevant, and its intervention justified.

4. Conclusion

This paper argues that a technical innovation (the development of a nano-vaccine against ovine brucellosis) can, through the productivity gains associated with it, change the behaviour of the heterogeneous beneficiaries of the innovation, most noticeably by encouraging many type 2 producers to transit from pre-capitalistic family-based self-consumption farming to simple low and medium scale farming for the internal market, and less notably, by increasing the demand for labor among type 1 producers. Thus resolving a social need, effectively reducing both rural poverty and urban-rural welfare differences in Argentina. In addition, the production of the nanovaccine is a highly effective state micro-policy that is contextualized, both in geographic terms, in terms of the objective population's social context, and in terms of policies historic performance.

Public policies must promote social innovation chains that have regional impact. On the one hand, it would achieve an immediate effect in helping counter ovine brucellosis in the Patagonia and in improving ovine production. On the other hand, it is a sustainable policy over time and it is coordinated according to the local productive and social dynamic. Future research will discuss the public and private incentives for this nanovaccine patent once it reaches the market.

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