XXVI. International RESER Conference

SOCIAL INNOVATION AND THE ENVIRONMENT:

How do social innovations add to change towards sustainability?[1]

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Abstract

Most social innovations are, in essence, service innovations with a social purpose. Windrum et al. (2016) identify three areas in which the conceptual understanding of social innovations is further specified beyond that of service innovations: incentives, empowerment and imitation. Based on this, the research questions of this paper are: In how far does the social innovation case presented in the following show these additional qualities that distinguish social innovation from mere service innovation? How does this generate additional quality to change towards sustainability? The results build on case study research in the area of social innovations with an environmental impact. Change, operationalized in the various forms of impact of the social innovation project, is enhanced by the additional features of social innovation.

1. Introduction

Numerous environmental challenges stand to negatively affect the lives of billions of people around the world. This paper focuses on social innovations with the potential to reduce the environmental stress caused by human activities. Such social innovations could address several environmental challenges such innovations to reduce CO2 emissions, more resource efficient production and consumption or the protection and conversation of nature.

[1] Acknowledgement: The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7 2007-2013) under the project Social Innovation: Driving Force of Social Change (SI-DRIVE); grant agreement no 612870. http://www.si-drive.eu/

There are a variety of definitions that emphasize differentiated aspects of social innovation. The Bureau of European Policy Advisers defines social innovation (SI) as *relating to new responses to pressing social needs and creating new social relationships or collaborations. Hence, social innovations are innovations that are social in both their ends and their means* (BEPA, 2010).

The SI DRIVE project outlines a comprehensive working definition for the first phase of the project in order to refine it in the course of the project on the basis of empirical evidence. Social innovation is seen as

- a new combination or figuration of practices in areas of social action;
- prompted by certain actors or constellations of actors;
- with the goal of better coping with needs and problems than is possible by use of existing practices.

Despite the variety of definitions, for this paper I would like to add

- solving needs is a first order goal (intentionality). Per definitionem needs must be satisfied for human beings in order to avoid serious physical or mental harm, where harm also comprises barriers to individual aspirations or social inclusion. In this sense, needs are objective, universal and transcultural (Hodgson, 2007: 7)

The field is practice-led. The aspiration to cover all aspects of the rich variety of social innovation projects we can find in practice explains the multitude of definitions that exist.

Intentionality seems important as many innovation projects have some social impact as a wider effect. But it is worthwhile thinking if innovation projects explicitly set up to to solve social problems (e.g. of marginalization, of social determination etc) encounter barriers in a systematic way as patterns instead of viewing them as the product of singular achievements and pure luck.

Change, in this paper, is operationalized in making explicit the various forms of impact the social innovation project, generates. In general, the empirical study of (social) change is based on qualitative research, which includes normative evaluations and value judgements (Wilterdink, 2014). This is often done in the form of case studies like in the present research.

So this paper presents a case study exemplifying the area of repairing, re-using and extending the life-time of products. After presenting the case in brief (section 4.2.1), an overview of the service innovations and related innovations is presented (section 4.3). After this, change is operationalised in the form of different impacts of the social innovation (section 4.4). In section 5. Discussion, the social innovation case is dicussed along the three dimensions that distinguish social innovations from mere service innovations (incentives, empowerment and imitation). Section 6 concludes.

2. Conceptual Background

2.1. Social innovation from an economic perspective

Most social innovations are, in essence, service innovations with a social purpose. The line of argument that relates the literature on service innovation to social change follows along three steps: First, the service innovation literature develops the special properties of services (see Gallouj and Savona (2009) for an overview) and – as a consequence - of service innovations, thus, providing a general analytical foundation for this discussion. Second, in this stream of literature, innovation scholars are mainly concerned with the challenge of grasping the differences between service innovation and social innovation as a particular form of services. Third, this has implications for the discussion on social change, which is actually not part of the service innovation literature because it is not concerned with social change as such. In this regard, the literature is usually restricted to matters of the diffusion of service innovations.

2.1.1. Discussion of service innovation in general in contrast to social innovation in particular

Although social innovations are basically new services, and services incorporate person-to-person interaction in development and/or delivery (note: services may also integrate the interface of technology-to-person interaction), the term social innovation is rather reserved to services that have additional qualities. The OECD LEED Forum on Social Innovations (2000)and the European Commission (2011) emphasised the connection between services and social innovation. Social innovators seek to develop new services that improve the quality of life of individuals and communities in labour market integration, social inclusion, health and wellbeing, education, and environmental challenges. In other words, social innovations are a sub-type of service innovation with a specific purpose. Still, service innovation and social innovation remain rather separate subfields (Gallouj & Djellal, 2010; Harrisson, Klein, & Browne, 2010; Reinstaller, 2013).

Windrum, Schartinger, Rubalcaba, Gallouj, and Toivonen (2016) argue that it makes sense to elaborate on the special features of social innovation, instead of arguing all service innovation equals social innovation because it is interactive in some form. Windrum et al. (2016) identify three areas in which the conceptual understanding of social innovations is further specified beyond that of service innovations:

Incentives. In the service innovation literature social innovation is a special type of service that does not conform to business rationality in that it is not driven by profit motives, but by principles of inclusion and well-being. This does not imply that commercial service innovations do not induce well-being, yet they are incentivised by expected profits whereas social innovation is incentivised by value created to society as a whole rather than to private individuals (i.e. *externalities*) (see also definition by Phills, Deiglmeier, & Miller, 2008).

Empowerment. Social innovations differ from commercial service innovations in that they seek to empower citizens. Where the consumption of commercial services is driven by demand based on prices, income, and preferences, the use of social innovations is more based on needs (which are different from demand, see Hodgson (2008)). Social innovations attempt to assign new roles and relationships (e.g. be-

tween the citizens and the state) to individuals or groups in need, they develop assets and capabilities and/or the more efficient and environmentally sustainable use of existing assets and resources (cf. Chiappero & Von Jacobi, 2015; Science Communication Unit, 2014).

Imitation. In innovation economics it is seen as given that fast imitation undermines economic returns of innovators. Hence, low appropriability regimes provide disincentives for innovators to engage in innovative activities, which results in less innovation and, therefore, a loss to society. In contrast to that, social innovators often seem to encourage imitation and the rapid dissemination of their problem solutions. The key to this problem is probably that weak competition and the scarcity of solutions in the areas of social innovation needs to be compensated for: When needs of a group or parts of society are overwhelming, and solutions to solve the needs are scarce, ideas to solve the needs are rather promoted (once they finally exist) by the actors, instead of being withheld for better commercial exploitation.

Based on this, the research questions of this paper are:

- In how far does the social innovation case presented in the following show these additional qualities that distinguish social innovation from mere service innovation?
- How does this generate additional quality to change towards sustainability?

3. Data and Methodology

The research leading to this paper comes out of the project Social Innovation: Driving Force of Social Change (SI-DRIVE), which investigates empirical data on more than 1000 social innovations in seven major policy areas. 70 of these 1000 social innovations are further scrutinized in in-depth case studies.

The following results build on one case study (RUSZ) in the area of social innovations with an environmental impact.

In the section Discussion selected features of this social innovation case (=case results) are contrasted

- to the existing conceptual literature in the field, and
- to results of the mapping of the 1000 social innovation cases (=mapping results).

4. Case Results

4.1. Practice field: Repairing, re-use, extending life time of products

There are a number of activities aiming to repair, re-use or extend the life time of different products taking place in a number of European countries. These are for in-

stance repair-cafés where people meet and exchange knowledge and help each other to repair broken products. Generally there is a focus on electrical and electronic equipment (EEE), but there are examples of other things such as clothes or toys as well. In some cases social innovation projects in this practice field combine the aim to repair and re-use articles with other societal impacts, for instance in the field of employment by hiring people who have difficulties to get a job on the 'regular' job market.

Relation to challenges: This practice field primarily addresses the challenge to achieve higher resource efficiency, often in combination with employment and educational aspects (e.g. providing opportunities for long-term unemployed or disabled people to repair electronics).

Role of RUSZ

RUSZ was constitutive for establishing the practice field of repairing, re-using or extending the life time of products in Austria. The below processes and features became effective in establishing the initiative and the practice field.

4.2. Case study results: Repair and Service Centre (RUSZ)

4.2.1. The social innovation project in brief

The overarching topics of RUSZ are the saving of resources, waste prevention, and waste management in general (*ecological goals*). RUSZ provides independent and reliable repair services for electronic household products of all sizes, ranging from radios to washing machines. RUSZ also conforms to *social goals* in that it creates jobs for disadvantaged persons and supplies household goods at reduced prices for the poor. Furthermore, RUSZ operates on the market and wants to ensure financial stability (not for profit), create places of work and contribute to regional added added (*economic goals*). (R.U.S.Z. GmbH, 2016a)

Table 1: The time line of innovation undertaking

1996	First idea
1996	✓ Writing of concept ✓ Negotiations with investors, contractors (Vienna Adult Education, AMS) ✓ Finding/renting premises, equipment
1998	Foundation of RUSZ, with support of Vienna Adult Education and AMS, starting with 15 transit employees
1999	Foundation of Vienna Repair Network
2003	Foundation of DRZ (Disassembling and Recycling Center), including TrashDesignManufaktur, also with support of Vienna Adult Education and AMS
2008	End of contract with AMS (140 employees before end of contract)
2008	Separation from Vienna Adult Education
2008	After closing of business, re-opening of business six months later
2016	23 employees (May)

Source: Based on interviews and desktop research.

The founder of RUSZ was employed at Eco-Counselling Vienna. This is an organization that provides independent and customized practical information about the many

dimensions of a sustainable life-style for private households, enterprises and communities. From his employment at the Eco-Counselling Vienna he knew that the fastest growing type of waste was electronic waste. The idea of repairing electrical and electronic appliances was then hinged to a social mission, i.e. re-employing long-term unemployed, so that the final concept serves ecological as well as social goals with a business operating not-for-profit on the market.

This concept was attractive to the AMS (=Public Employment Service Austria) and corresponded to the financing scheme of social-economic businesses (SÖB). SÖBs manufacture products or offer services at market prices. An important feature is that in addition to being contracted by the AMS, part of the total revenues of the company is generated through sales. The AMS is the central point for mediating the transit employees to the SÖBs. SÖBs roughly correspond to the notion of WISEs (= work integration social enterprise) on the European level (bdv Austria, 2009).

RUSZ grew in significance over the years – other organisations were founded (DRZ) and networks established, on the local (Vienna Repair Network) and national (REPAnet), additionally the RUSZ founder is very active within the European level network (RREUSE).

Within 10 years RUSZ grew from 15 employees to 140 employees. By the end of 2007, the AMS contract ended. After the end, RUSZ became independent in the form a combination of association (today merely for project handling) and a limited company for the operative business. This end of contract with AMS had severe consequences in terms of loss of employees, closing down business for half a year and consequently loss of customers. However, in May 2016 RUSZ has 23 employees who have repaired 9000 devices in 2015 (Interview E).

4.3. Dimensions of the novel solution

4.3.1. New services (product innovation)

Repair services: „The innovation was not that we offer repair services, the innovation was that we offer independent and reliable repair services.“ (Interview E).

RUSZ offers reverse logistics services, which comprise the acquisition of used products (=supply), subsequent disposition decisions and reprocessing and finally remarketing of reprocessed products (Lechner & Reimann, 2015). The white goods department is responsible for repair and maintenance of big household appliances like washing machines, dishwashers, laundry driers, electric kitchen stoves. It estimates costs of repair, provides technical advice, acquires spare parts necessary for repair and disposes of the device in case of damage beyond repair. In the department of brown goods, similar services are supplied for electronic entertainment devices (TV, DVD etc.). The grey goods department repairs and upgrades old computers and notebooks and sells them at low price to non-profit orgnisations, old people’s homes, student homes etc. (Meissner & Pladerer, 2005)

Product Service Systems (PSS): RUSZ also offers PSS to customers who do not want to own their devices (e.g. students). RUSZ owns and maintains these first-hand washing machines, 26 at the moment (2016). An annual check ensures technical

functionality of the device. In case of breakdown, RUSZ offers repair (or renewal) within three working days (Interview E).

Repair café: Repair cafes have diffused from the Netherlands through Belgium, France and Germany to Austria. The repair and service center R.U.S.Z offers repair cafes every Thursday, in order to give the opportunity to repair devices for which it would not be economical to offer repair services. Guests can fix toasters, blenders, irons, hairdryers, coffee filter machines, lamps and other electrical devices that can be carried in one hand. RUSZ offers a complementary infrastructure, like tools, and - coffee and pastries. Technically experienced personnel with different expertise is always present. (Vienna Municipality, 2016)

4.3.2. New process services (process innovation)

Transport services: RUSZ collects and delivers appliances from and to private households. Delivery includes a short on-site information about the device on part of the technician.

Training on the job: In the first 10 years, implemented as a SÖB, employment at RUSZ was limited to 12 months. During this time transit employees were trained and coached to be able to cope with the requirements of a regular jobs. In 2004, the training of 44 transit employees was done by 15, 25 key employees (Eisenriegler 2004, cited in Meissner and Pladerer (2005)).

4.3.3. New technologies

Energy upgrading of devices: RUSZ developed an energy saving method “Tuning washing machines”, which increases the energy efficiency category of washing machines from C to A. This is achieved in reducing the total water consumption in the process of washing, which in turn limits the energy demand for water heating (Lechner & Reimann, 2015). It is technically possible to adapt this technological innovation to dishwashers (R.U.S.Z. GmbH, 2016a).

Standardisation: R.U.S.Z together with the Austrian Standards Institute and other partners, has issued the eco-design label for durable and easy to repair new electrical appliances (ON Rule ONR 192102). The first appliances distinguished with this new label of excellence are already on the market. (R.U.S.Z. GmbH, 2016a)

Competence center: Beside repair service, RUSZ is active as a competence center for consumer protection, social economy and sustainability. (R.U.S.Z. GmbH, 2016a)

4.3.4. Organisational innovation

A social pedagogic department: A social pedagogic department was implemented with a focus on crisis intervention, debt settlement, vocational training and appraisal interviews (Meissner & Pladerer, 2005). Basically, a social pedagogic department belongs to the structural characteristics obligatory in SÖBs contracted by the AMS (hence, new to the firm, not new to the market). Also training in German language, debt counselling and support in withdrawal from drugs of all kinds (mostly alcohol,

but also e.g. heroin). The social pedagogic department as a structural characteristic is part of the model of a SÖB. It is responsible for coaching and initiation of job placement. “A lot happened there so that we were able to reintegrate people and send them to job interviews.” (Interview E)

Also the initiation of the repair network Vienna, the foundation of additional firms (DRZ, Trash manufacture) caused the spread of the new approach, repair instead of replace. See chapter on impacts.

4.4. Generating change: The impact of the social innovation-

4.4.1. Employment and re-integration

Social goals include the re-employment of longterm unemployed and/or people with special needs. At the beginning success was defined by the AMS. 30 per cent of the transit employees had to find jobs in the regular job market in their transit phase. RUSZ soon managed to have a share of 75 per cent of transit employees entering the regular job market.

Over ten years (1998 until end of 2007) 400 long-term unemployed were acquired as transit employees at RUSZ, 300 of them could be placed in unlimited employment contracts (R.U.S.Z. GmbH, 2013).

4.4.2. Waste avoidance

RUSZ gets around 1200 white goods and 2000 brown and grey goods donated per year which are repaired and reprocessed (R.U.S.Z. GmbH, 2013). In sum, 9000 devices were repaired in 2015 (a large amount is owned not by RUSZ) (Interview E).

Pladerer et al. (2001) estimate that in their survey year (2000) 155 bis 160 t of old electrical appliances were serviced and an ecological backpack 2.500 tons could be reduced in total for all kinds of appliances (Meissner & Pladerer, 2005). For washing machines the ecological backpack of water reduction accounts for 7.700 m3. Almost 75 t metals, 12 t plastics and 40 t glass and cement could be avoided, additionally reductions were achieved with avoiding waste of all other types of repaired and reprocessed devices.

Until 2016, it is estimated that RUSZ has prevented more than 10,000 tons of waste from electrical and electronic equipment (WEEE) since 1998. Following estimation results, by repair measures the lifetime of electric equipment is extended by 25 %. According to the MIPS concept (material input per unit of service) of Wuppertal Institute 20.000 tons of material inputs are prevented each year (Interreg IVC project, 2016).

4.4.3. Firm foundations

In 2003 a new firm was founded (Dismantling and repair centre, DRZ), which is a specialized organization disassembling and recycling appliances or sending them to RUSZ in case of possible reuse (Meissner & Pladerer, 2005). From this time onwards, the DRZ acquired appliances directly from the Vienna waste management (Wien Energie-Magazin für Unternehmen, 2014), whereas RUSZ acquires from pri-

vate customers. Both make then decisions about repairing and reprocessing, recovering spare parts and disposing of waste (Lechner & Reimann, 2015).

DRZ is also a SÖB, like RUSZ, under the auspices of the Vienna Adult Education and contracted by the AMS. The DRZ has a department specialized on designing furniture, decoration and jewelry out of electronic waste – the TrashDesignManufaktur. This is done together with people who have seeked employment for longer than six months (TrashDesignManufaktur, 2016).

4.4.4. New networks - regional

The Vienna repair network was founded in order to be able to draw on the distributed competences of repair service providers and thus be able to repair not only white goods, but all kinds of goods. In 1999, the Vienna Repair Network was launched with 23 companies and meanwhile counts around 80 specialist companies. (Reparaturnetzwerk Wien, 2016)

4.4.5. New networks – national

The establishment of the Repair Network Vienna was followed by the creation of three other repair networks in Austria (www.repanet.at). RepaNET was part of a development partnership within the EQUAL Community Initiative, part of the European Union's Structural Funds. RepaNET aims at connecting SÖBs, private service providers, public and private waste management facilities and other interested enterprises and organizations on regional and national level with one another in order to provide repair, rental and related services to increase re-sale significantly. A further goal is to impact on policy makers to alter the legal and economic conditions towards favoring longer product lives. The RUSZ founder is responsible for the foundation of this national network, he is currently part of the steering committee (RepaNET, 2016).

4.4.6. New networks – European

RREUSE has an office in Brussels and wants to exert influence so that a second life of devices becomes standard (RREUSE, 2016).

Box 1: RREUSE

RREUSE represents social enterprises active in reuse, repair and recycling. They want the EU and national governments to move from promoting just recycling and waste management to putting secondhand first. Approximately 77,000 employees and over 60,000 volunteers and trainees work within 30 member networks across 17 EU countries and one in the USA. The main activities of our members include collection, sorting and redistribution of used textiles and clothing, collection, repair and reuse of electrical and electronic waste (WEEE), furniture and other bulky waste, home and community composting projects, charity and second hand shops, collection and recycling of paper, cardboard, wood, plastics, paints, metals, books and toys, awareness raising campaigns, international projects, exchange of best practice and business support.

Source: RREUSE (2016)

4.4.7. Institutionalisation

Institutionalisation follows different pathways. One is that the RUSZ founder serves as consultant to the Austrian Ministry for the Environment on the topic of planned obsolescence, which led to a statement of the Austrian Ministry in the High-level group on planned obsolescence on the EU level (Interview E).

Another pathway is the Austrian standard (ONR 192102) for durable and easy-to-repair goods which was implemented in Austria, also promoted by the RUSZ founder. This standard is rather unusual so that it gained a lot of attention in Europe and was presented by the interviewee at 5 different large events within 6 months on the topic of the circular economy. A similar standard will now be developed by CEN/CENELEC, already commissioned by the EC (Interview E).

4.4.8. Prizes

RUSZ won different prizes over the years.

2016, Nomination for Trigos, category: social entrepreneurship. From Vienna University of Economics and Business (Trigos, 2016).

2013, Environmental prize from Vienna municipality (R.U.S.Z. GmbH, 2016b).

2009 Climate Protection Prize from Austrian Ministry of Life and Environment and Austrian Broadcasting Corporation (ORF) (R.U.S.Z. GmbH, 2016b).

2009 Winner of Social Business Award “Ideas Against Poverty” (Ideen gegen Armut, 2016).

2007 Winner of the Energy Globe Austria Award, category water (Energy Globe, 2016).

5. Discussion

5.1. The case as a social innovation

5.1.1. Incentives

RUSZ was incentivised by a win-win situation of re-integrating people into the regular job market who have difficult employment histories and at the same time promoting the social practice of having devices repaired instead of thrown away and added to the amount of waste. Although there was a strong social demand (unemployment) for the former service, the latter (repair) was more assumed or latent demand. It was perceived by the initiator as a tension or societal challenge (kickstarted by statitistics on amounts of electronic waste). Table 2 shows that this may be the case for the majority of social innovation projects in environment. Although the sustainability aspects are more and more in the focus of discussions and offerings, many social innovation projects promoting sustainability aspects operate on an agenda which is beyond concrete and local demands. Initiators of such projects start on the basis of assumed or latent demand that may become explicit and – in case of success -translate into

actual demand as soon as service offerings take concrete form. Thus social innovation projects have an important role as they provide real feasible alternatives to the existing ways of doing things.

Table 2: Incentives, level addressed

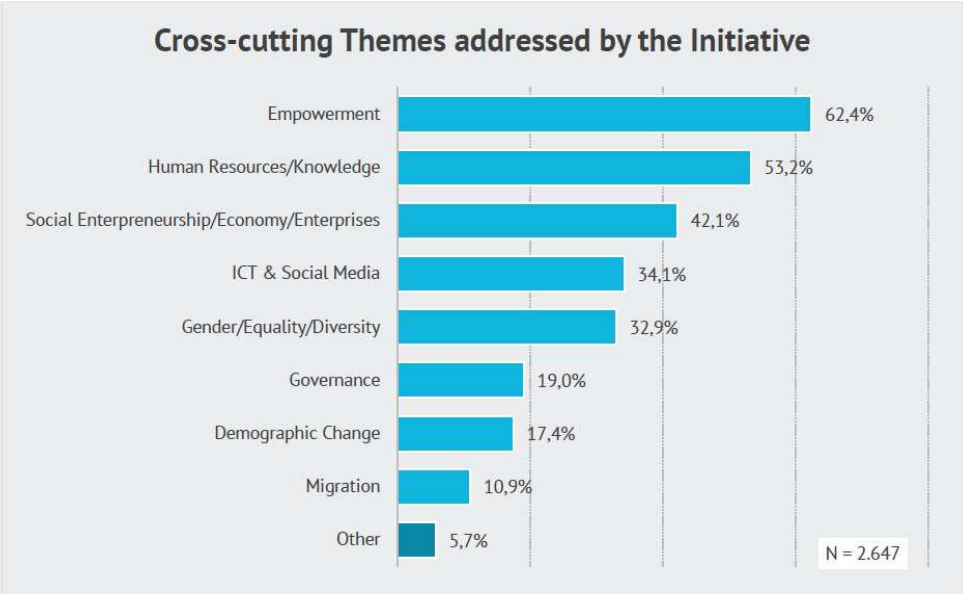
	Education	Employ-ment	Environ-ment	Energy Supply	Transport & Mobility	Health & Social Care	Poverty Reduction
	%	%	%	%	%	%	%
Social Needs	72,3	67,5	59,8	64,9	57,0	82,5	77,8
Societal Challenge	51,0	55,3	71,7	87,0	47,7	62,3	64,4
Systemic Change	48,1	18,7	45,7	24,7	19,5	29,9	29,4

Source:Howaldt, Schröder, Kaletka, Rehfeld, and Terstriep (2016)

5.1.2. Empowerment

The notion of empowerment has gained interest in several disciplines. As a general concept, it is characterized by following a strength-oriented perception in contrast to a deficit-oriented perception. In social work, empowerment presumes active, collaborative roles for client–partners, instead of viewing clients as weak, passive and ineffectual (DuBois & Krogsrud Miley, 2005). In health care, patient -empowerment is seen as central when it comes to chronic diseases like diabetes, where the patient does 95 per cent of diabetes care and manage their diabetes on a daily basis between other goals, family demands, jobs and other contingencies that make up their lives (Mitchell Funnel & Anderson, 2000). For Anderson (2011), “empowerment is not a technique or a strategy but a philosophy. We define empowerment as the discovery and development of one’s inherent capacity to be responsible for one’s own life”. This occurs when people have the knowledge to make informed decisions, are able to implement those decisions, and then evaluate their choices based on the outcomes (Anderson, 2011).

Figure 1: Cross-cutting themes



Source: Howaldt et al. (2016)

Originally coming from community psychology, the concept of empowerment has spread widely and is now also common in the discourses around civic engagement. Although empowerment has several dimensions, they all refer to informing about otherwise hidden features(which is crucial for informed decision-making), viable options and consequences, provide feasible alternatives.

In the mapping of social innovation initiatives within the SI DRIVE project empowerment was referred to in 62 per cent of all initiatives (Figure 1). However, considering that the next category – Human resources/knowledge – also refers to learning, which is essential in terms of empowerment as building up knowledge is crucial in order to be able to make informed decisions, a lot more initiatives probably incorporate issues of empowerment.

In the RUSZ case empowerment takes several forms:

Empower citizens (demand): One necessary insight was that people/households are actually unwilling to dispose of goods because of minor damages. Culture and values of preserving nature, avoiding waste and prolonging the use of goods exist, but shrivel without the necessary supply of services. So there is actually latent demand for repair services in case of just a broken switch or similar problems, but without the existence of repair services and moreover, without the information of the existence of repair services, appliances are passively stored in people's homes because they do not have the skills to repair themselves and not the knowledge about easy options of repair. In the case of RUSZ, media contributions about repair services immediately rose awareness and demand, before this latent, became apparent.

Empower citizens (competences):The most important feature of the repair cadfe is to empower citizens for self repair (Interview E).

Empower small repair firms (supply): A further insight was that craftsmen exist to carry out all these necessary repair services, however they are often small businesses in backyards, not visible to the public. "These craftsmen are often ingenious technicians, but quite bad at two things: self-marketing and account staff." (Wien Energie-Magazin für Unternehmen, 2014) Repair networks and a repair hotline helped to solve at least the self-marketing problem and, again, helped to engage otherwise passive resources – this time on the supply side, in making skills and competences available for the public.

Reduce asymmetric information: Furthermore RUSZ is very engaged in the discourse on planned obsolescence. This is based on competences of RUSZ: Repair service technicians are also the most likely to be able to detect (purposefully) in-built technical weaknesses.

"Purposeful obsolescence exists whenever manufacturers produce goods with a shorter physical life than the industry is capable of producing under existing technological and cost conditions; or whenever manufacturers or sellers induce the public to replace goods which still retain substantial physical usefulness." (Gregory 1947, cited in Hübner (2013)). For Slade (2006) planned obsolescence is defined an "assortment of techniques used to artificially limit the durability of a manufactured good in order to stimulate repetitive consumption" (Anderson, 2007).

Conceptually, a basic ingredient to planned obsolescence is asymmetric information (Akerlof, 1970). At first, only manufacturers know about differences in quality of fea-

tures unobservable to the buyers of goods. In informing a wider public about quality differences that are not easily observed by lay people, this is a crucial function of empowerment and enables consumers to make more informed decisions. A basic ingredient for more information and hence making consumers take the responsibility on the basis of informed decisions are labels. The eco-design label for durable and easy to repair new electrical appliances (ON Rule ONR 192102) shall distinguish appliances in making otherwise hidden differences in quality (durability) apparent.

Challenge incumbent business models: The subsector of repair services of electronic devices is populated by service suppliers affiliated to large producers of these electronic devices. Staff of the large producers (that in case of bigger devices like washing machines also pays local visits) is equipped to either carry out the necessary repair services or sell a new device. In the case of selling a new device there are generally price reductions so that clients do not have to pay 1. Travel cost, 2. Estimate of cost, 3. Repair services and 4. the new device in case the old one cannot be repaired.

Hence, in terms of prices repair services do not only compete with other repair services, but also with the purchasing price of buying a new device. As repair services are inherently labour-intensive, whereas production of new devices if often less labour-intensive, firms may encourage staff members to carry out less repair but instead sell more products in order to increase labour productivity, and in the end profits.

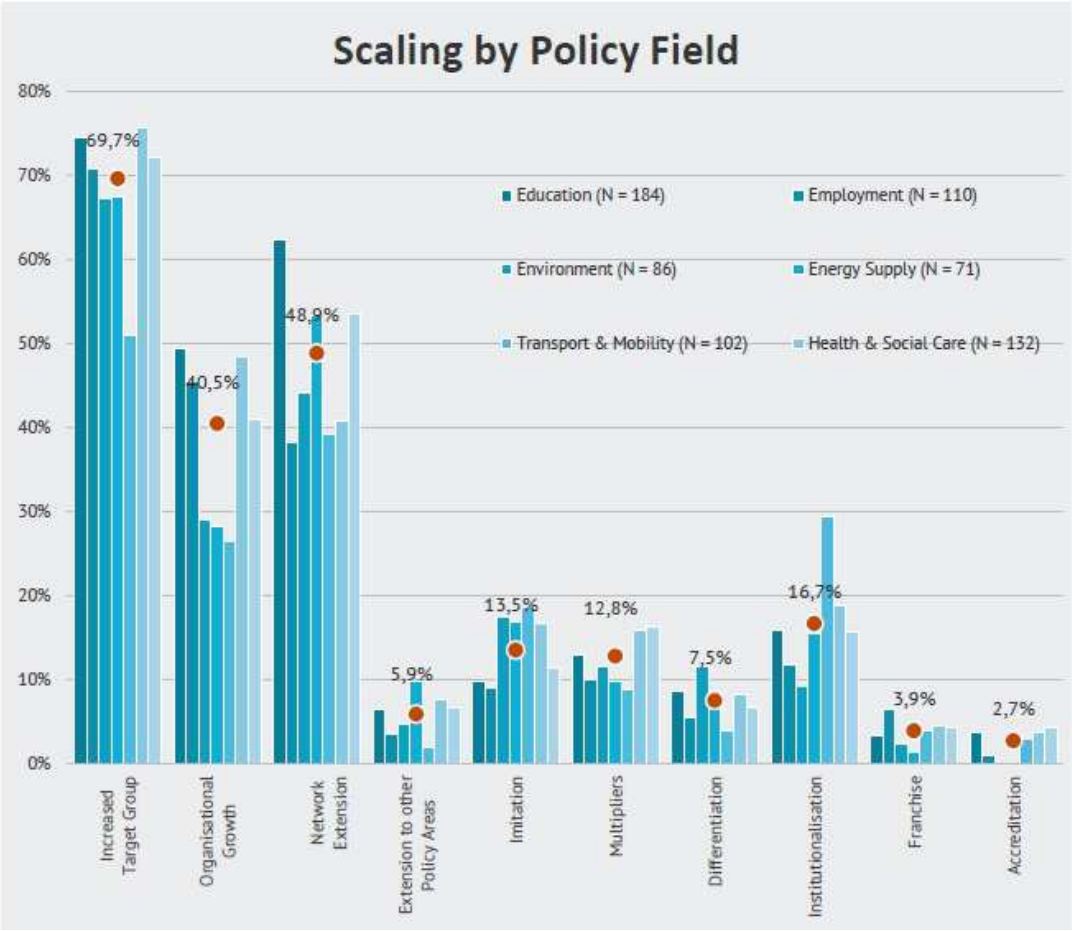
An accelerated cycle of buying-using-discarding a product inflicts additional cost upon society in terms of increased waste, energy and environmental cost of production and transport of products. As (at least) parts of these cost are not paid for by the producers and covered by the prices new devices can be bought for. They are external cost that have to be carried by others than the producers (*negative externality*), which is termed a market failure in economic theory.

5.1.3. Imitation

From the mapping of social innovation initiatives we can see (Figure 2) that imitation actually takes place and makes initiatives spread. The point here is, however, that in contrast to businesses, social innovation initiatives actually want their solutions to be imitated because competition is weak in areas of burning social problems.

RUSZ is an exemplary case here as in the practice field of repairing, re-use and extending the life-time of products, **competition is weak** among repair service providers. Actually, firm entries are welcome in case they provide independent and reliable repair services. (Interview E) Protection of intellectual property hardly occurs, rather knowledge and practices are spread among the like-minded. However, competition is fierce with retailers of electronic devices and their associated repair services which are seen as affiliates of the sales department. They are the real competitors because due to differential taxation of labour and energy, new appliances may be supplied at low prices that hinder (labour-intensive) repair services systematically.

Figure 2: Scaling



Taken from:Howaldt et al. (2016)

Protection of innovative solution

The firm name RUSZ was protected with a trademark years ago, but it was not renewed;as it causes additional cost and there does not seem the necessity to protect. There are no copyrights, patents or industrial designs. “We did not even protect our tuning of washing machines because apparently no one else is able to do it. We had to open our own laboratory for testing because big research organisations were not able to test according to this particular standard specification. So why bother? (Interview E)

Happy about competitors

“To be frank, I am happy about competitors – as long as they provide independent and reliable repair services. We have information in the internet about how to become a member of the Vienna repair network, and in that case a lot of information about how to do it is available. […] In the last years, so many interested firms addressed us that at the moment we develop a handbook on social franchising in order to be able to make our complete know-how public. ” (Interview E)

6. Conclusions

It seems that especially these three additional qualities of social innovations compared to service innovations in general – relating to incentives, empowerment, and imitation -, also yield special conclusions for the connection between social innovation and (social) change.

First, considering the direction of social change it is worthwhile thinking of innovation projects that are explicitly set up to solve social problems (e.g. of marginalisation, of social determination etc.) encounter barriers in a systematic way instead of viewing them as the product of singular achievements and pure chance. Intentionality is important considering that many innovation projects have some social impact as a wider effect.

Second, the very active roles of empowered citizens strengthened by social innovations may have an impact on new social practices guiding social change. They are able to make more informed decisions which hopefully contributes to bias tensions apparent in the system to smoothen more in favour of people and nature.

Third, imitation is a key aspect in the rapid dissemination of new service ideas and practices which are likely to accelerate change. In practice, the dissemination of new ideas and practices is challenging. This is due to two characteristics of social innovations. First, they tend to be very local in nature. Second, there is often a lack of codification (Harrisson et al., 2010; Windrum, 2014).

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